H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

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A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.

H. STANDARDS OF FOOD ARTICLES :

APPENDIX B
(See Rule 5)

DEFINITIONS AND STANDARDS OF QUALITY

A.01 BEVERAGES – NON-ALCOHOLIC

A.01.01—'CARBONATED WATER' means potable water impregnated with carbon dioxide under pressure and may contain any of the following singly or in combination.

Sugar, liquid glucose, dextrose monohydrate, invert sugar, fructose, honey , fruits and vegetables extractives and permitted flavouring, colouring matter, preservatives, emulsifying and stabilising agents, citric acid, ascorbic acid, fumaric acid and sorbitol, tartaric acid, phosphoric acid, lactic acid, ascorbic acid, malic acid, edible gums such as guar, karaya, arabic, carobean, furcellaran, tragacanth , gum ghatti, edible gelatin, albumin, licorice and its derivatives, salts of sodium, calcium and magnesium, vitamins caffeine not exceeding 200 parts per million, estergum (Glycerol ester of wood rosin not exceeding 100 parts per million , and } quinine salts not exceeding 100 parts per million (expressed as quinine sulphate. It may also contain Saccharin Sodium not exceeding 100 PPM or Acesulfame-K not exceeding 300 PPM, or Aspertame (methyl ester) not exceeding 700 PPM }

Provided that in the case of sweetened carbonated waters other than tonic water and dry gingerale the percentage of total sugar expressed as sucrose} shall not be less than five

It shall conform to the following requirements, namely:-

(1)	Total plate count per ml.	Not more than 50
(2)	Coliform count in 100 ml.	0
(3)	Yeast and mould count per ml.	not more than 2

Provided further that estergum used in carbonated water shall have the following standards, namely:-

"Glycerol esters of wood rosins commonly known as Estergum is hard yellow to pale amber coloured solid. It is a complex mixture of tri and diglycerol esters of rosin acids from wood rosin. It is produced by the esterification of pale wood rosin with food grade glycerol. It is composed of approximately 90 per cent resin acids and 10 per cent, neutrals (non-acidic compounds). The resin acid fraction is a complex mixture of isomeric diterpenoid monocarboxylic acids having the typical molecular formula of $C_{20}H_{30}O_2$ chiefly abietic acid . The substance is purified by steam stripping or by counter-current steam distillation.

Identification
Solubility

Insoluble in water, soluble in acetone and in Benzene.

Intra Red Spectrum

Obtain the infra-ted spectrum of a thin film of the sample deposited on a potassium bromide plate- Scan between 600 and 4000 wave numbers. Compare with typical spectrum obtained from pure Estergum.

Test for absence of Tall Pass the test as given below:

Oil Rosin (Sulfur test)

When sulphur containing organic compounds are heated in the presence of sodium formate, the sulphur is converted to hydrogen sulphide which can readily be detected by the use of lead acetate paper. A positive test indicates the use of tall oil rosin instead of wood rosin.

Apparatus- Test Tube: Use a standard, 10x75mm, heatresistant, glass test tube-Burner, Bunsen: A small size burner of the microflame type is preferred.

Reagents-Sodium Formate Solution : Dissolve 20g of reagent grade sodium formate, NaOOCH, in 100 ml of distilled water.

Lead Acetate Test Paper- Commercially available from most chemical supply houses.

Procedure – Weigh 40-50 mg of sample into a test tube add 1- 2 drops of sodium formate solution. Place a strip of lead acetate test paper over the mouth of the test tube. Heat the tube in the burner flame until fumes are formed that contact the test paper. Continue heating for 2-5 minutes. There must be no formation of a black spot of lead sulphide indicating the presence of sulphur containing compounds. Detection Limit: 50 mg/kg sulphur.

Drop softening point	Between 88 0 C and 96 0 C
Arsenic	Not more than 3 ppm.
Lead	Not more than 10 ppm
Heavy metals (as lead)	Not more than 40 ppm
Acid value	Between 3 and 9
Hydroxyl number	Between 15 and 45.

A.02- 'BAKING POWDER ' means a acombination capable, under conditions of baking, of yielding carbon dioxide, and consists of sodium bicarbonate, and acid-reacting material, starch or other neutral material.

The acid-reacting material of baking powder shall be-

(a) tartaric acid or it salts, or both,
(b) acid salts of phosphoric acid, or
(c) acid compounds of aluminium, or
(d) any combination of the foregoing

When tested, baking powder shall yield not less than 10 per cent of its weight of carbon dioxide.

A.03. STARCHY FOODS:

A.03.01- 'ARROWROOT' means the separated and purified starch from the rhizomes of the plants known as Maranta arundinaceaor from Curcumaaugustifolia).

A.03.02- SAGO shall mean small hard globules or pearls made from either the starch of the Sago palm or the tubers or tapioca (manihot utilissima) and shall be free from any extraneous matter 3 (including natural colours}

It shall conform to the following standards, namely:-

(i) total ash (on dry basis) shall not be more than 0.4 per cent;
(ii) ash insoluble in dilute hydrochloric acid (on dry basis) shall not exceed 0.1 per cent

A.04 ASAFOETIDA (Hing or Hingra) means the oleo-gum-resin obtained from the rhizome and roots of Ferula alliaces. Ferula rubricaulis and other species of Ferula. It shall not contain any colophony resin, galbonum resin, arnmoniaccum-resin, or any other foreign resin. Hing shall conform to the following standards, namely:-

(1) Total ash content shall not exceed 15 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 2.5 per cent by weight
(3) The alcoholic extract (with 90 percent alcohol) shall not be less than 12 per cent as estimated by the U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

Hingra shall conform to the following standards, namely:-

(1) The total ash content shall not exceed 20 per cent by weight.
(2) Ash insoluble in dilute hydrochloric acid shall not exceed 8 per cent by weight.
(3) The alcoholic extract (with 90 per cent alcohol) shall not be less then 50 per cent as estimated by U.S.P 1936 method.
(4) Starch shall not exceed 1 per cent by weight.

compounded asafoetida or Bandhani Hing is composed of one or more varieties of asafoetida (Irani or Pathani Hing or both) and gum arabic, (edible starches or edible cereal flour.

It shall not contain-

(a) colophony resin,
(b) galbanum resin,
(c) ammoniaccum-resin,
(d) any other foreign resin,
(e) coal-tar dyes,
(f) mineral pigment,
(g) more than 10 per cent total ash content,
(h) more than 1.5 per cent ash insoluble in dilute hydrochloric acid,
(i) less than 5 per cent alcoholic extract (with 90 per cent of alcohol), as estimated by the U.S.P, 1936 method

A.05 SPICES AND CONDIMENTS:

Note- See Note regarding extraneous matters after item A.05.23.

A.05.01 CARAWAY (Siahjira) Whole means the dried seed of the plant Carum carvi (L). Extraneous matter including foreign edible seeds, chaff, stem, straw, dust, dirt, stones and lumps of earth shall not exceed 5 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term insect damaged matter means spices that are partially or wholly bored by insects

A.05.01.01-CARAWAY (Siahjira) POWDER means the powder obtained from the dried seeds of Carum carvi (L). It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 13.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

It shall be free from added colouring matter

A.05.02- CARAWAY BLACK (Carum bulbocastanum) (Siahjeera) means the dried seeds of Carum bulbocastanum. It shall conform to the following standards.

Foreign edible seeds----------Not more than 5.0 per cent by weight
Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – the term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03- CARDAMOM (Chhotti elachi) WHOLE means the dried, nearly ripe fruits of Elettaria cardamomum (L). The percentage of extraneous matter shall not exceed 5.0 per cent by weight. The cardamom seeds obtained from the capsules shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 percent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.03.01- CARDAMOM(Chhotti Elachi) SEEDS means the seeds obtained by separating the seeds from the capsules of Elettaria cardamomum (L). The percentage of extraneous matter in the seeds shall not exceed 2.0 per cent by weight. The seeds shall contain not less than 3.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight

It shall be free from added colouring mater

Explanation-The term insect damaged matter means spices that are partially or wholly bored by insects.

A.05.03.02- CARDAMOM (Chhotti Elachi) Powder means the powder obtained from the seeds separated from the capsules of Elettaria cardamomum (L). It may be in the form of small pieces of the seeds or in finely ground from. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 3.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter

A.05.04—CARADMOM AMOMUM (Badi Elachi) WHOLE means the dried, nearly ripe fruit of Amomum subulatum Roxb, in the form of capsules. The proportion of calyx pieces, stalk bits and other extraneous matter shall not exceed 5.0 per cent by weight. The cardamom amomum seeds obtained from the capsules shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.01- CARDAMOM AMOMUM (Badi Elachi) SEEDS means the seeds obtained by separating the seeds from the cardamom amomum capsules of Amomum subulatum Roxb. The percentage of extraneous mater in the seeds shall not exceeds 2.0 per cent. Weight. The seeds shall contain not less than 1.0 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.04.02 – CARDAMOM AMOMUM (Badi Elachi) POWDER means the powder obtained from the seeds separated from the capsules of Amomum subulatum Roxb. It may be in the form of small pieces of the seeds or in finely ground form. It shall conform to the following standards:

Moisture----------Not more than 14.0 per cent by weight
Total ash----------Not more than 8.0 per cent by weight
Volatile oil----------Not less than 1.0 per cent (V/W)
Ash insoluble in dilute HCL----------Not more than 3.0 per cent by weight

It shall be free from added colouring matter.

A.05.05- CHILLIES (Lal Mirchi) [WHOLE] means the dried ripe fruits or pods of Capsicum annum / Capsicum frutescens (L). The proportion of extraneous matter including calyx pieces, loose tops, dirt lumps of earth , stones shall not exceed 5.0 per cent by weight. The pods shall be free from extraneous colouring matter, coating of mineral oil and other harmful substances.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation-The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.05.01- CHILLIES (Lal mirchi) POWDER means the powder obtained by grinding clean dried chilli pods of Capsicum frutescens L/Capsicum annum. The chilli powder shall be dry, free from dirt, mould growth

, insect infestation, extraneous matter, added colouring matter and flavouring matter. The chilli powder may contain any edible oil to a maximum limit of 2 per cent by weight under a label declaration for the amount and the nature of oil used. The chilli powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.3 per cent by weight.
Non-volatile ether extract----------Not less than 12.0 per cent by weight.
Crude fibre----------Not more than 30.0 per cent by weight.

A.05.06 --- CINNAMON (Dalchini) WHOLE means the dried pieces of the inner bark of Cinnamomum zeylanicum Blume. It shall not contain any other foreign vegetable matter of colouring matter. It shall contain not less than 0.5 per cent (v/w) of volatile oil.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.06.01- CINNAMON (Dalchini) POWDER means the powder obtained by grinding the dried inner bark of Cinnamomum zeylanicum Blume. The cinnamon powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 0.5 per cent (v/w)

It shall be free from added colouring matter.

A.05.06.02—CASSIA (Taj) WHOLE means the dried piece of bark of Cinnamomum Cassia Blume. Syn. Cinnamomum arometicum. Nees (Chinese Cinnamon, or Cassia lignea). It shall not contain any other foreign vegetable matter or colouring matter.

A.05.07- CLOVES(Laung) WHOLE means the dried, unopened flower buds of Eugenia Carryophyllus (C.Sprengel) Bullock and Harrison. The inorganic extraneous matter shall not exceed 0.5 per cent by weight and the organic extraneous matter, which includes vegetable matter of plants other than cloves, tendril cloves (peduncle), mother cloves or other matters of plants of cloves , shall not exceed two per cent by weight. (Headless cloves shall not be considered as extraneous matter). The amount of insect damaged clove shall not exceed 1.0 per cent by weight.

The clove (on dry basis) shall contain not less than 15.0 per cent (v/w) of volatile oil. It shall be free from added colouring matter.

Explanation—

(i) The term 'insect damaged clove' means the cloves that are partially or wholly bored by insects.
(ii) The term "headless cloves" means the cloves constituted only by the receptacle and sepals.

A.05.07.01—CLOVES (Laung) POWDER means the powder obtained by grinding the dried unopened flowers buds of Eugenia Carryophyllus (C.SPRENGEL) BULLOCK and HARRISON. The cloves powder shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.

Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than 15.0 per cent (V/W).

It shall be free from added colouring matter.

A.05.08---CORIANDER (Dhania) WHOLE means the dried mature fruits (seeds) of Coriandrum sativum (L). The proportion of extraneous matter including dust, dirt, stones, lumps of earth, chaff, stalk, stem or straw, edible seeds of fruits other than coriander and insect damaged seeds shall not exceed 8.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter ' means spices that are partially or wholly bored by insects.

A.05.08.01—CORIANDER (Dhania) POWDER means the powder obtained by grinding clean dried coriander fruits of Coriandrum sativum (L). It shall be in the form of a rough or fine powder. It shall conform to the following standards :

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.09—CUMIN (Safed Jeera) WHOLE means the dried seeds of Cuminum cyminum (L). The proportion of extraneous matter including dust, stones, lumps, of earth, chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin seeds shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation - The term 'insect damaged matter' means the spices that are partially or wholly bored by insects.

A.05.09.01—CUMIN(Safed jeera) POWDER means the powder obtained by grinding the dried seeds of Cuminum cyminum (L). The powder shall conform to the following standards.

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.5 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.

It shall be free from added colouring matter.

A.05.10—CUMIN BLACK (Kalonji) WHOLE means the dried seeds of Nigella sativaL. The proportion of extraneous matter including dust, dirt, stones, lumps of earth , chaff, stem or straw shall not exceed 7.0 per cent by weight. The proportion of edible seeds other than cumin black shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter

Explanation – The term ‘insect damaged matter’ means the spices that are partially or wholly bored by insects.

A.05.10.01---CUMIN BLACK (KALONJI) POWDER means the powder obtained by grinding the dried seeds of Nigella sativa L. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.5 per cent by weight.
Volatile oil----------Not less than. 0.5 per cent (V/W)

It shall be free from added colouring matter.

A.05.11—FENNEL (Saunf) WHOLE means the dried ripe fruits of Foeiniculum vulgare Mill. The proportion of extraneous matter including dust, dirt,stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fennel shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.11.01---FENNEL (SAUNF) POWDER means the powder obtained by grinding the dried ripe fruits of Foeniculum vulgare Mill. The powder shall conform to the following standards:

Moisture----------Not more than 12.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.12—FENUGREEK (Methi) WHOLE means the dried ripe seeds of Trigonella faonum-groecum (L). The proportion of extraneous matter including dust,dirt, stones, lumps of earth, chaff, stem or straw shall not exceed 5.0 per cent by weight. The proportion of edible seeds other than fenugreek shall not exceed 5.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation- The term ‘insect damaged matter’ means spices that are partially or wholly bored by insects.

A.05.12.01—FENUGREEK (Methi) POWDER means the powder obtained by grinding the dried ripe seeds of Trigonella foenum graecum L. The powder shall conform to the following standards:

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 7.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 2.0 per cent by weight.
Cold water soluble extract----------Not less than 30.0 per cent by weight.

It shall be free from added colouring matter.

A.05.13--- GINGER(SONTH,ADRAK) WHOLE means the rhizomes of Zingiber officinale Rose in pieces irregular in shape and size with peel not entirely removed, washed and dried in the sun. The proportion of extraneous matter shall not exceed 2.0 per cent by weight. It shall contain on dry basis not less than 1.0 per cent (v/w) of volatile oil. If the ginger is limited, the lime (Calcium Oxide) content shall not exceed 4.0 per cent by weight on dry basis.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation ----The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.13.01 ----GINGER (SONTH, ADRAK) POWDER means the powder obtained by grinding (Zingiber officinale Rose) whole . The powder shall conform to the following standards :

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Water soluble ash----------Not less than 1.7 per cent by weight.
Cold water soluble extract----------Not less than 10.0 per cent by weight.
Calcium (as CaO)----------Not more than 4.0 per cent by weight on dry basis.
Alcohol (90 per cent v/w)----------Not less than 4.5 per cent by weight.
Soluble extract
Volatile oil----------Not less than 1.0 per cent (v/w).

It shall be free from added colouring matter.

A.05.14------MACE (Jaepatri) WHOLE means the dried coat or arilus of the seed of Myristica Frangrans Houtt. It shall not contain the arilus of any other variety of Myristica Nalabarica of Fatua (Bombay mace) and Myristica argentea (Wild mace). The proportion of extraneous matter shall not exceed 3.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation---The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.14.01---MACE(JAEPATRI) POWDER means the powder obtained by grinding the dried coat or arilus of the seed Myristica fragrans Houtt. The powder shall conform to the following standards :

Moisture----------Not more than 10.0 per cent by weight.
Total ash----------Not more than 3.0 per cent by weight.
Ash insoluble in dilute HCL----------Not more than 1.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.
Non-volatile ether extract----------Not less than 20.0 and not more than 30.0.
Per cent by weight.

It shall be free from added colouring matter.

A.05.15- MUSTARD (Rai, Sarson) WHOLE means the dried seeds of Brassica alba (L) Boiss (Safed rai), Brassica compestris L. var. dichotoma (Kali Sarson), Brassica Compestris L.Var. yellow Sarson, Syn,Brassica compestris L, var, glauca (Pili Sarson), Brassica compestris L. var. toria(Toria), Brassica Juncea (L) Coss, et Czern (Rai Lotni) and Brassica nigra (L) Koch (Banarasi rai). The proportion of extraneous matter which includes dust, dirt, stones lumps of earth, chaff, stem,straw, edible foodgrains, edible oilseeds of any other variety or any other impurity shall not exceed 7.0 per cent by weight. It shall be free from seeds of Argemone Mexicana Linn.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.15.01- MUSTARD (RAI, SARSON) POWDER means the powder obtained by grinding the dried seeds of Brassica alba(L) Boiss (Safed rai), Brassica compestris L.Var. Dichotoma (Kali Sarson), Brassica compestris L.var. (Yellow sarson), Syn, Brassica compestris L.var glauca (Pili Sarson), Brassica compestris L. var, tosia (Toria), Brassica juncea (L) Coss et Czern (Rai, Lotni) and Brassica nigra (L.) Koch (Benarasi rai). The powder shall conform to the following standards :

Moisture---------- Not more than 7.0 per cent by weight.
Total ash---------- - Not more than 8.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W).
Non-volatile either extract---- ---------- Not more than 22.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight.
Crude fibre----------Not more than 8.0 per cent by weight.
Starch----------Not more than 15.0 per cent by weight.

The test for argemone oil shall be negative.

It shall be free from added colouring matter.

A.05.16—NUTMEG(JAIPHAL) WHOLE means the dried seeds of Myristica fragrans Houtt. The proportion of extraneous matter and infestration shall not exceed 3.0 per cent by weight.

It shall be fee from added colouring matter.

A.05.16.01----NUTMEG (JAIPHAL) POWDER means the powder obtained by grinding the dried seeds of Myristica fragrans Houtt. The powder shall conform to the following standards:

Moisture----------Not more than 8.0 per cent by weight.
Total ash----------Not more than 5.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 0.5 per cent by weight.
Non-volatile either extract---- ---------- Not less than 25.0 per cent by weight.
Crude fibre----------Not more than 10.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17---PEPPER BLACK(KALIMIRCH) WHOLE means the dried berries of Piper nigrum L.brown to black in colour with wrinkled surface. The proportion of extraneous matter including dust, stalks, leafy matter

and other foreign matter shall not exceed 3.0 per cent by weight. The proportion by weight of light berries and pinhead shall not exceed 10.0 per cent and 4.0 per cent respectively.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation—The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.17.01---PEPPER BLACK (KALIMIRCH) POWDER means the powder obtained by grinding the dried berries of Piper nigrum L. and shall be without the addition of any other matter. The powder shall conform to he following standards:

Moisture----------Not more than 12.5 per cent by weight.
Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.2 per cent by weight.
Non-volatile either extract---- ---------- Not less than 5.5 per cent by weight.
Crude fibre---------- Not more than 18.0 per cent by weight.

It shall be free from added colouring matter.

A.05.17.02---LIGHT BLACK PEPPER-Light black Pepper means the dried berries of Piper nigrum L. dark brown to dark black in colour. It shall be well dried and free from mould or insects and shall not contain more than 6 per cent extraneous matter including dust, stone lump of earth, stalks, leafy matters and other foreign edible seeds and 10 per cent pinheads.

It shall be free from added colouring matter.

A.05.17.03- PINHEADS- Pinheads shall be wholly derived from the spikes of Piper nigrum. They shall be reasonably dry and free from insects. The colour shall be from dark brown to black. The extraneous matter shall not exceed 6 per cent.

It shall be free from added colouring matter.

A.05.18—POPPY (KHAS-KHAS) WHOLE means the dried seeds of the ripe fruit of Papaver Somniferum L. The seed may be white or greyish in colour. The proportion of extraneous matter shall not exceed [5.0] per cent by weight. It shall contain not less than the 40.0 per cent by weight of non-volatile ether extract.

It shall be free from added colouring matter.

A.05.19—SAFFRON (KESAR) WHOLE means the dried stigmata or tops of styles of Crocus sativus L. It shall not contain any foreign colouring matter or any other extraneous matter. It shall conform to the following standards:

Total ash----------Not more than 8.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Volatile matter at 103 0 $\pm$ 1
degree C. ---------- Not more than 14.0 per cent by weight
Aqueous extract---------- Not less than 55 per cent by weight
Total Nitrogen (on dry weight basis)------Not less than 2 per cent by weight
Foreign matter such as sand,

earth, dust, leaf, stem, chaff
and vegetable matter----------Not more than 1 per cent
Floral waste defined as yellow
filaments, pollen, stamens, parts
of ovary and other parts of
flowers of Crocus sativus Linn----------Not more than 15 per cent

Saffron shall be free from living insects, moulds and shall be partically free from dead insects, insect-fragments and rodent contamination visible to naked eye.

A.05.20---TURMERIC(HALDI) WHOLE means the dried rhizome or bulbous roots of the plant of Curcuma longa L. It shall be free from lead chromate and other artificial colouring matter. The proportion of extraneous matter shall not exceed 2.0 per cent by weight.

The amount of insect damaged matter shall not exceed 5 per cent by weight.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A05.20.01-TURMERIC (HALDI) POWDER means the powder obtained by grinding the dried rhizomes or bulbous roots of the plant of Curcuma longa L. It shall be free from artificial colouring matter. The powder shall conform to the following standards

Moisture----------Not more than 13.0 per cent by weight.
Total ash----------Not more than 9.0 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Test for lead chormate----------Negative.
Total starch per cent by weight----------Not more than 60.0 per cent.

A.05.21----CURRY POWDER means the powder obtained from grinding clean, dried and sound spices belonging to the group of aromatic herbs and seeds such as black pepper, cinnamon, cloves, coriander, cardamom, chillies, cumin seeds, fenugreek, garlic, ginger, mustard, poppy seeds, turmeric, mace nutmeg, curry leaves, white peppe, saffron and aniseeds. The material may contain added starch and edible common salt . The proportion of spices used in the preparation of curry powder shall be not less than 85.0 per cent by weight. The powder shall be free from dirt, mould growth and insect infestation. It shall be free from any added colouring matter and preservatives other than edible common salt. The curry powder shall also conform to the following standards:

Moisture---------- Not more than 14.0 per cent by weight.
Volatile oil---------- Not less than 0.25 per cent (V/W) on dry basis.
Non-volatile either extract---- ---------- Not less than 7.5 per cent by weight on dry basis.
Edible common salt----------Not more than 5.0 per cent by weight on dry basis.
Ash insoluble in dilute HCI---------- Not more than 2.0 per cent by weight on dry basis.
Crude fibre----------Not more than 15.0 per cent by weight on dry basis.
Lead----------Not more than 10.0 p.p.m. on dry basis.

A.05.21.01—MIXED MASALA (WHOLE) means a mixture of clean, dried and sound aromatic herbs and spices. It may also contain dried vegetables and/or fruits, oilseeds, garlic, ginger, poppy seeds and curry leaves. It shall be free from added colouring matter. It shall be free from mould growth and insect infestation. The proportion of extraneous matter shall not exceed five per cent by weight , out of which the proportion of organic matter including foreign edible seeds, and inorganic matter shall not exceed three per cent and two per cent, respectively.

A.05.22- ANISEED or Saunf imported means the dried ripe fruit of Pimpinella anisum. Foreign edible seeds or matter shall not exceed 5.0 per cent by weight. It shall conform to the following standards :

Total ash----------Not more than 9.0 per cent by weight
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight
Volatile oil----------Not less than 1.0 per cent by (v/w)

The amount of insect damaged matter shall not exceed 5 per cent by weight.

It shall be free from added colouring matter.

Explanation – The term 'insect damaged matter' means spices that are partially or wholly bored by insects.

A.05.23---AJOWAN (BISHOP'S WEED) means the dried ripe seeds of Trachyspermum ammi (Linn) Sprague. The proportion of organic and inorganic extraneous matter shall not exceed 3 per cent and 2 per cent respectively. The seeds shall be free from living insects, insect fragments and rodent contamination visible to the eyes.

It shall be free from added colouring matter.

A.05.24- DRIED MANGO SLICES means the dried wholesome, edible part of raw mango fruit with or without the outer skin. It shall be free from fungus, moulds and insect infestation, rodent contamination, added colouring flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis. It shall have characteristic taste and flavour. The proportion of extraneous substance shall not exceed 4 per cent by weight out of which inorganic matter shall not exceed 2 per cent by weight .

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Damaged Slices---------- Not more than 5 per cent by weight.
Seed Coatings---------- Not more than 6 per cent by weight.

Explanation:

(i) Seed coatings shall be exterior covering of the seed.
(ii) Damaged slices mean the slices that are eaten by weevils or other insects and includes slices internally damaged by fungus , moisture or heating:

A.05.25- Dried Mango Powder (Amchur) means the powder obtained by grinding clean and dried mango slices have characteristic taste and flavour. It shall be free from musty odour and objectionable flavour, rodent contamination, mould, fungus and insect infestation, extraneous matter and added colouring, flavouring matter. It shall also be free from deleterious substances injurious to health. It shall not contain any preservative except edible common salt which may be added to the extent of 5 per cent by weight on dry basis.

It shall also conform to the following standards, namely:-

Moisture----------Not more than 12 per cent by weight.
Total ash(Salt-free basis) ----------Not more than 6 per cent by weight.
Ash insoluble in dilute HCI---------- Not more than 1.5 per cent by weight.
Crude fibre---------- Not more than 6 per cent by weight.

Acidity ash anhyd tartaric Not less than 12.0 per cent and not more.
Acid----------than 26.0 per cent by weight.

Note---- (1) The extraneous matter wherever prescribed under this item shall be classified as follows :

(a) Organic extraneous matter such as chaff, stems , straw.
(b) Inorganic extraneous matter such as dust, dirt, stones and lumps of earth.

(2) Of the permitted extraneous matters in terms A.05.01, A.05.03, A.05.04, A.05.05, A.05.08, A.05.09, A.05.10, A.05.11, A.05.12, A.05.14, A.05.15, A.05.16 A.05.17 and A.05.18 the inorganic extraneous matter shall not exceed 2 per cent by weight.

A.05.26----Pepper White Whole means the dried berries of piper nigrum linnacus from which outer pericap has been removed. The berries will be light brown to white in colour with smooth surface. The proportion of extraneous matter including dust, stalks, leafy matter and other foreign matter shall not exceed 1 per cent, by weight. Proportion of black berries whole shall not exceed 5 per cent by weight. Bulk density for determining proportion of while light berries shall not be less than 600 gm per litre.

The amount of insect damaged matter shall not exceed 5 per cent by weight it shall be free from added colouring matter.

Explanation – The term "insect damaged matter" means spices that are partially or wholly bored by insects.

A.05.26.01—Pepper White Powder means the powder obtained by grinding the white pepper whole and shall be without the addition of any other foreign matter. It shall conform to the following standards, namely:-

(i) Moisture ---------- -Not more than 14.0 per cent , by weight
(ii) Total Ash(on dry basis)---------- Not more than 3.5 per cent , by weight
(iii) Ash insoluble in dilute HCL---------- Not more than 0.3 per cent , by weight
(on dry basis)
(iv) Non-volatile ether extract---------- Not less than 6.5 per cent , by weight
(on dry basis)
(v) Piperine Content (on dry basis)---------- Not less than 4.0 per cent , by weight
(vi) Crude fibre insolube index---------- Not more than 6.5 per cent , by weight
(on dry basis)

It shall be free from added colouring matter.

A.06---Bean means dry kidney shaped or flattened seeds of the leguminous varieties used as food, either whole or prepared as dall. It shall not contain hydrocyanic acid exceeding 20 parts per million as determined by A.O.A.C Maceration method.

A.07—SWEETENING AGENTS:

A.07.01----"PLANTATION WHITE SUGAR" (commonly known as sugar) means the crystallised product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron fillings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Moisture (when heated at 105 0 ± 1 degree C for 3 hours) Not more than 0.5 per cent by weight.

(b) Sucrose — Not less than 98 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.01—MISRI means the product made in the form of candy obtained from any kind of sugar or palmyrah juice. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a) Total ash	Not more than 0.4 per cent by weight.
(b) Total sugar (called kwown or expressed as Sucrose)	Not less than 98.0 per cent by weight.

Sulphur dioxide shall not exceed 70 parts per million.

A.07.01.02---"REFINED SUGAR" means the white crystallised sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also confirm to the following standard, namely:-

(a) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 0.5 per cent by weight.
(b) Sucrose	Not less than 99.5 per cent by weight.

A.07.02----"KAHANDSARI SUGAR" obtained from sugarcane juice by open pan process may be of two varieties, namely:-

(i) Khandsari Sugar Desi; and
(ii) Khandsari Sugar (Sulphur) all known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight. It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:-

	Khandsari Sugar (Sulphur Sugar)	Khandsari Sugar (Desi)
(1) Moisture (when heated at 105 degree $\pm$ 1 degree C for 3 hours)	Not more than 1.5 Per cent by weight	Not more than 1.5 Per cent by weight
(ii) Ash insoluble in dilute hydrochloric acid	Not more than 0..5 per cent by weight	Not more than 0.7 per cent by weight
(iii) Surcose	Not less than 96.5 per cent by weight.	Not less than 93.0 per cent by weight.
(iv) Sulphur Dioxide	Not more than 150 parts per million	Absent

Note-Khandsari sugar can be distinguished from plantation white sugar on the following characteristics, namely:-

	Khandsari Sugar	Sugar
(a) Conductivity (10 6 mho/cm 2)	100-300 in 5% solution at 30 degree C.	Not more than 100 in 5% solution at 30 degree C

(b) Calcium oxide (mg/100gm)	Not more than 100	Not more than 50

A.07.02.01—"BURA SUGAR" means the fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:-

(a)	Sucrose	Not less than 90.0 per cent by weight.
(b)	Ash insoluble in dilute Hydrochloric acid.	Not more than 0.7 per cent by weight.

Sulphur dioxide, shall not exceed 150 parts per million.

A.07.03—HONEY means the food derived entirely from the work of bees operating upon the nectar of flowers and other sweet exudation of plants. It shall not contain more than (a) 25% of moisture, (b) 0.5 per cent ash, and (c) 5 per cent of sucrose except in the case of Carbia callosa and Honey dew where the maximum sucrose content shall be 10 per cent. The minimum reducing sugar content (expressed as invert sugar) shall be 65% except in the case of Carbia callosa and Honey dew where it shall be 60 per cent. Fructose/Glucose ratio shall not be less than 0.95. Fiehe's test should ordinarily be nagative.

A.07.04--- "ICE LOLLIES OR EDIBLE ICES" means the frozen ice produce which may contain sugar, syrup, fruit,fruit juices, cocoa, citric acid, permitted flavours and colours. It may also contain permitted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight. It shall not contain any artificial sweetner.

A.07.04.01---ICE CANDY means the frozen ice produce which may contain fruit, fruit juices, cocoa, nuts, citric acids, permitted flavours and colours. It may also contain permittted stabilizers and / or emulsifiers not exceeding 0.5 per cent by weight . The Total sugar expressed as sucrose shall not be less than 10 per cent. by weight. It shall not contain any artificial sweetner.

A.07.05--- GUR OR JAGGERY means the product obtained by boiling or processing juice pressed out of sugarcane or extracted from palmyra palm, date palm or coconut palm. It shall be free from substances deleterious to health and shall conform to the following analytical standards on dry weight basis:

(i) total sugars expressed as invert sugar not less than 90 per cent and sucrose not less than 60 per cent.
(ii) extraneous matter insoluble in water not more than 2 per cent.
(iii) total ash not more than 6 per cent.
(iv) ash insoluble in hydrochloric acid (HCI) not more than 0.5 per cent.

Gur or jaggery other than that of the liquid or semi-liquid variety shall not contain more than 10 per cent moisture.

Gur or jaggery may contain sulphur dioxide in concentration not exceeding 70 parts per million.
Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.06---CUBESUGAR means the sugar in the form of cube or cuboid blocks manufactured from refined crystallised sugar. It shall be white in colour , free from dirt and other extraneous contamination. It shall conform to the following standards :

(a)	Surcrose	Not less than 99.7 per cent by weight.
(b)	Moisture	Not more than 0.25 per cent by weight.
(c)	Total ash	Not more than 0.03 per cent by weight.
(d)	Sulphur dioxide	Not more than 70 p.p.m.

A.07.07---DEXTROSE is a white or light cream granular powder, odourless and having a sweet taste.

When heated with potassium cupritartarate solution it shall produce a copious precipitate of cuprous oxide. It shall conform to the following standards:-

Sulphated ash	Not more than 0.1 per cent on dry basis
Acidity	0.5 gm. Dissolved in 50 ml. of freshly boiled and cooled water requires for neutralisation not more than 0.20 ml. of N/10 sodium hydroxide to phenolphthalein indicator,
Glucose	Not less than 99.0 per cent on dry basis.
Sulphur dioxide content	shall not exceed 70 p.p.m.

A.07.08-----GOLDEN SYRUP means the syrup obtained by inversion of sugar. It shall be golden yellow in colour , pleasant in taste and free from any crystallisation. It shall conform to the following standards:-

Moisture	Not more than 25.0 pr cent by weight.
Total ash	Not more than 2.5 per cent by weight.
Total Sugar as invert sugar	Not less than 72.0 per cent by weight.
Sulphur dioxide content	shall not exceed 70.0 p.p.m.

Sodium bicarbonate, if used, for clarification purposes, shall be of Food Grade Quality.

A.07.08.1---SYNTHETIC SYRUP OR SHARBAT means the syrup obtained by blending syrup made from sugar, dextrose or liquid glucose.

It may also contain fruit juice and other ingredients appropriate to the product. It shall be free from burnt or objectionable taints, flavours, artificial sweetening agents, extraneous matter and crystallization. It may contain citric acid, permitted colours, permitted preservatives and permitted flavouring agents. It shall also conform to the following standards, namely:-

Total soluble solids :- Not less than 65 per cent by weight.

A.07.09—ICING SUGAR means the sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white), sugar with or without edible starch. Edible starch , if added , shall be uniformly extended in the sugar . It shall be in form of white powder, free from dust, or any other extraneous matter. It shall conform to the following standards:-

(a) Total starch and sucrose (moisture free)	Not less than 99.0 per cent by weight.
(b) Moisture	Not more than 0.80 per cent by weight.
(C) Starch	Not more than 4.0 per cent by weight on dry basis.

A.07.10—SACCHARIN SODIUM commonly known as soluble saccharin having an empirical formula as – C7H4 NNAO3S. 2H2O and molecular weight as 241.2 shall be the material which is solube at 20 degree C in 1.5 parts of water and 50 parts of alcohol (95 per cent), and shall contain not less than 98.0 per cent and not more than the equivalent of 100.5 per cent of $C_7H_4O_3NSNa$ calculated with reference to the substance dried to constant at 105 degree C , assay being carried out as presented in Indian Pharmacopoeia, It shall not contain more than 2 p.p.m. of arsenic and 10 p.p.m of lead. The melting point of Saccharin isolated from the material

as per Indian Pharmacopoeia method, shall be between 226 degree C and 230 degree C. The loss on drying of the material at 105 degree C shall not be less than 12.0 per cent and not more than 16.0 per cent of its weight.

The material shall satisfy the tests of identification and shall confom to the limit tests for free acid or alkali, ammonium compounds and parasulpha moylbenzoate as mentioned in the Indian Pharmacopoeia.

A.07.11--- DRIED GLUCOSE SYRUP means the material in the form of coarse or fine white to creamish white powder, sweet to taste, bland in flavour and somewhat hygroscopic . It shall be free from fermentation, evidence of mould growth, dirt or other extraneous matter, or added sweetening or flavouring agent.

It shall also not contain any added natural or coaltar food colour. It shall conform to the following standards:-

(a) Total solid content	Not less than 93.0 per cent by weight.
(b) Reducing sugar content	Not less than 20.0 per cent by weight.
(c) Sulphated ash	Not more than 1.0 per cent by weight.
(d) Sulphur dioxide	Not more than 4.0 p.p.m. Sulphurdioxide may be present in an amount not exceed-ing 150 p.p.m. If the product is intended for manufacture of confectionery to be sold under a label as specified under Rule 42(X).

A.07.12—Aspartyl phenyl alanin methyl ester commonly known as Aspertame, having empirical formula as $C_{14}H_{18}N_2O_5$ and molecular weight as 294.31, shall be the material which is slightly soluble in water and Methanol. It shall contain not less than 98 per cent and not more than 102 per cent of Aspertame on dried basis. It shall not contain more than 3 p.p.m. of Arsenic and 10 p.p.m of Lead.

The loss on drying of the material at 105 degree C for 4 hours shall not be more than 4.3 per cent of its weight. The sulphate ash shall not be more than 0.2 per cent. It shall not contain more than 1 per cent of diketo-piper-zinc.

A.07.13- Acesulfame Potassium commonly known as Acesulfame-K, having empirical formula $C_4H_4KNO_4S$, molecular weight as 201.24 shall be the material which is odourless, white crystalline powder having intensely sweet taste and is very slightly soluble in ethanol but freely soluble in water. It shall contain not less than 99 per cent and not more than 101 per cent of Acesulfame-K on dried basis. It shall not contain more than 3ppm Flouride. Heavy metals content shall not be more than 10 ppm. The loss on drying of material at 105 degree centrigrate for two hours shall not be more than 1 per cent of its weight.

A.08---COFFEE

A.08.01—(1) Coffee (green, raw or unroasted) means the seed of Coffee arabica, Coffee liberica, Coffea excelsa or Coffea robusta freed from all but a small portion of its spermoderm by decortication.

(2) Roasted coffee means properly cleaned green coffee which has been roasted to a brown colour and has developed its characteristic aroma.

(3) Ground coffee means the powdered product obtained from ‘roasted coffee’ only and shall be free from husk.

(4) Coffee (green , raw or unroasted), ‘roasted coffee’ and ‘ground coffee’ shall be free from any artificial colouring, flavouring, facing, extraneous matter or glazing substance and shall be in sound, dry and fresh condition free from rancid or obnoxious flavour.

(5) ‘Roasted coffee’, and ‘ground coffee’ shall conform to the following analytical standards:

(i) Total ash (determined on the sample dried to constant weight at 100 degree C), shall be feathery white or bluish-white in colour and shall be not less than 3.0 per cent and not more than 7.0 per cent by weight of which not less than 65 per cent shall be soluble in boiling distilled water. The ash insoluble in hot dilute HCI shall not be more than 0..1 per cent.

(ii) The alkalinity of the soluble ash per gram of dried coffee shall be equivalent to not less than 3.5 ml. and not more than 5.0 ml. of N/10 acid.

(iii) The caffeine content as obtained by standard methods, shall be not less than 1.0 per cent.

(iv) The aqueous extract (determined by extraction of 2 grams of the sample dried to constant weight at 100 degree C with 100 ml. of boiling water for one hour under reflux) shall be not less than 26.0 per cent and not more than 35.0 per cent.

A.08.02----CHICORY means the roasted chicory powder obtained by roasting the cleaned and dried roots of Chicorium intybus Lin with or without the addition of edible fats and oils or sugar like glucose or sucrose in proportion not exceeding 2.0 per cent by weight in aggregate. It shall be free from any artificial colouring and flavouring matter.

It shall conform to the following standards:

Total ash	Not less than 3.5 per cent and not more Than 10.0 per cent (on dry basis)
Ash insoluble in dilute HCI	Not more than 2.5 per cent on dry basis.
Water soluble matter	Not less than 50.0 per cent on dry basis.

A.08.03---COFFEE CHICORY MIXTURE or coffee mixed with chicory or coffee and chicory shall be pure ground coffee mixed with roasted and ground chicory and shall be in sound, dry and dust-free condition with no rancid or obnoxious flavour.

The coffee chicory mixture shall contain caffeine not less than 0.6 per cent and the aqueous extract shall not be more than 50 per cent.

Any tin or other receptacle containing a mixture of coffee and chicory shall not bear any misleading expression.

The expression “French Coffee” may be used if followed by the words “mixed with chicory” or “blended with chicory”

A.08.04.----SOLUBLE COFFEE POWDER means coffee powder, obtained from freshly roasted and ground pure coffee beans. It shall be in the form of free flowing powder, having the colour, taste and flavour characteristics of coffee. It shall be free from impurities and shall not contain chicory or any other added substance. It shall conform to the following standards:

(a)	Moisture	Not more than 4.0 per cent
(b)	Total ash (on dry basis)	Not more than 12.0 per cent.
(c)	Caffeine content	Not less than 2.8 per cent on dry basis
(d)	Solubility in boiling water	Dissolves readily in 30 seconds with moderate stirring.
(e)	Solubility in cold water at 16 $\pm$ 2 degree C	Soluble with moderate stirring in 3 minutes.

A.08.05-----INSTANT COFFEE Chicory mixture means the product manufactured from roasted and ground coffee and roasted and ground chicory. It shall be in the form of a free flowing powder having the colour, taste and flavour characteristics of coffee-chicory powder. It shall be free from any impurities and shall not contain any other added substance. The percentage of coffee and chicory used shall be marked on the container as provided in clause (ii) of sub-rule (A) of Rule 42. It shall also conform to the following standards, namely:-

(a)	Moisture	Not more than 5 per cent by weight.
(b)	Total ash on dry basis	Not less than 7.0 per cent and not more than 10.0 per cent by weight.
(c)	Caffeine (anhydrous)	Not less than 1.4 per cent by weight on dry basis.

A.09----Omitted.

A.10----EDIBLE FAT

A 10.01 –BEEF FAT or suet means fat obtained from a beef carcass. It shall have a saponification value varying from 193 to 200 and an iodine value from 35 to 46.

A 10.02---MUTTON FAT means fat obtained from the carcass of sheep. It shall have a saponification value varying from 192 to 195 and an Iodine value from 35 to 46.

A 10.03---GOAT FAT means the rendered fat from goat. It shall have a Saponification value varying from 193 to 196 and an Iodine value from 36 to 45.

A.10.04---LARD means the rendered fat from hogs and shall not contain more than one per cent of substances other than fatty acids and fat. It shall have a Saponification value varying from 192 to 198 and an Iodine value from 52 to 65.

A.10.05—COCOA BUTTER means that fat obtained by expression from the nibs of the beans of Theobroma cocoa L. It shall be free from other oils and fats, mineral oil and added colours.

It shall conform to the following standards:

Percentage of free fatty acids (calculated as oleic acid)	Not more than 1.5
Iodine value	32 to 42
Melting point	29 degree C to 34 degree C
Butyro-refractometer reading at 40 degree C	40.9 degree C to 48.degree C
or	
Refractive Index at 40 degree C	1.4530 – 1.4580
Saponification value	185 to 200

A.10.06 – LOW AND HIGH FAT COCOA POWDER means the powder which is the partially defatted product derived from the cocoa bean, the seed of Theobroma cocoa L. It may be subjected to treatments during manufacture with alkali and /or magnesium carbonate, bicorbonate and with tartaric, citric or phosphoric acids. It shall be free from rancidity, dirt, filth, insects and insect fragments or fungus infestations.

It shall conform to the following standards :

Total Ash	Not more than 14.0 per cent (on moisture and fat free basis).

Ash insoluble in dilute HCI	Not more than 1.0 per cent on (on moisture and fat free basis)
Alkalinity of total ash	Not more than 6.0 per cent as K2O (on moisture and fat free basis).
Cocoa butter-	
(i) for low fat	Not less than 10.0 per cent (on moisture free basis).
(ii) for high fat	Not less than 20.0 per cent (on moisture free basis).

A.10.07--- REFINED SALSEED FAT means the fat obtained from seed kernels of Sal trees, Shorea robusta Gaertin. F.(N.O. Dipterocarpaceae) which has been neutralized with alkali, bleached with bleaching earth or activated carbon or both, and deodorized with steam, no other chemical agents being used. Alternatively, deacidification, bleaching and deodorization may be done by physical means. The material shall be clear on melting and free from adulterants, sediment, suspended or other foreign matter, separated water or added colouring substance. There shall be no turbidity after keeping the filtered sample at 40 degree C for 24 hours. It shall conform to the following standards :-

(i)	Moisture	Not more than 0.1 per cent.
(ii)	Butyro-refractometer reading at 40 degree C	36.7—51.0
	or	
	Refractive Index at 40 degree C	1.4500-1.4600
(iii)	Iodine value (Wijs' method)	31-45
(iv)	Saponification value	180-195
(v)	Unsaponifiable matter	Not more than 2.5 per cent by weight.
(vi)	Free fatty acids (expressed as Oleic acid)	Not more than 0.25 per cent by weight.
	or	
	Acid value	Not more than 0.5
(vii)	9,10 epoxy and 9,10 Dihydroxy stearic acid	Not more than 3.0 per cent by weight.
(viiii)	Flash point (Pensky Marten closed method)	Not less than 250 degree C

A.10.08--- CAROB POWDER means the powder obtained from the roasted pods of carob (fibbled carob) of Ceratonia Siliqua (L.) Taub. (Fam. Lejuminosae) and shall be free from husk. It shall be free from any artificial colouring, flavouring, extraneous matter or glazing substance and shall be in sound dry and fresh condition free from rancid or obnoxious flavours.

It shall also conform to the following standards, namely:-

(i)	Total Ash	Not more than 1.2 per cent by weight
(ii)	Acid insoluble matter	Not more than 5 per cent by weight.
(iii)	Tannin content	Not less than 0.1 per cent and not more than 0.15 per cent.

A.10.09- KOKUM FAT means the fat obtained from clean and sound kernels of kokum (Garcinia indica choisy) also known as kokam, by process of expression or by a process of solvent expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulerants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	45.9---47.3
	Refractive Index at 40 degree C.	1.4565 to 1.4575
(b)	Saponification value	187-191.7
(c)	Unsaponifiable matters	Not more than 1.5 per cent by weight.
(d)	Iodine value (Wijs')	32-40
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C.

A.10.10—MANGO KERNEL FAT means that fat obtained from clean and sound kernels of Mango (Mangifera Indica Linn) by process of expression or by a process of solvent extraction from cake of kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment suspended or other foreign matter, separated water, added colouring and flavouring matters and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	43.7—51.6
	Refractive Index at 40 degree C.	1.4550 to 1.4604
(b)	Saponification Value	185-198
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wij's)	32-57
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 C

A.10.11—DHUPA FAT means the fat obtained from clean and sound seed kernels of Dhupa, also known as Indian Copal (Vateria Indica Linn) tree by process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting and free from rancidity, adulterants, sediment, suspended or other foreign matter, separated water, added colouring and flavouring matter and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or	47.5—49.5
	Refractive Index at 40 degree C.	1.4576 to 1.4590
(b)	Saponification Value	187-192
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	36-43
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.10.12 –PHULWARA FAT means the fat obtained from clean and sound seed kernels of Phulwara (variously named Aisandra Butyrace (Roxb) Baelni, Madhuca Butyracea or Bassia Butyracea) by a process of expression or by a process of solvent extraction from cake or kernel. It shall be refined. The fat shall be clear on melting ad shall be free from rancidity, adulterants, sediments, suspended or other foreign matters, separated water, added colouring and flavouring substances and mineral oil.

It shall also conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C. or Refractive Index at 40 degree C.	48.6—51.0 1.4584 to 1.4600
(b)	Saponification Value	192.5-199.4
(c)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(d)	Iodine value(wijs')	43.8-47.4
(e)	Acid value	Not more than 0.5
(f)	Flash Point Pensky-Martens (closed) method	Not less than 250 degree C

A.11. MILK AND MILK PRODUCTS

A.11.01.---Definitions

A.11.01.01—MILK is the normal mammary secretion derived from complete milking of healthy animal without either addition thereto or extraction therefrom. It shall be free from colostrum. Milk of different classes and of different designations shall conform to the standards laid down in the Table below item A.11.01.11.

A.11.01.02---PASTEURISATION –The term pasteurisation, when used in association with Milk of different classes, means heating milk of different classes by a heat treatment as mentioned below and cooling to a suitable temperature before distribution. Pasteurised milk of different classes shall show a negative phosphatase Test.

The terms "Pasteurisation", "Pasteurised" and similar terms shall be taken to refer to process of heating every practice of milk of different classes to at least 63 degree C, and holding at such temperature continuously for at least 30 minutes, or heating it to at least 71.5degree C, and holding at such temperature continuously for at least 15 seconds or an approved temperature-time combination that will serve to give a negative Phosphate Test.

All pasteurised milk of different classes shall be cooled immediately to a temperature of 10 degree C or less

A.11.01.03----STERILISATION---- The term "sterilisation when used in association with milk, means heating milk in sealed container continuously to a temperature of either 115 degree C for 15 minutes or at least 130 degree C for a period of one second or more in a continuous flow and then packed under aseptic condition in hermatically sealed containers to ensure preservation at room temperature for a period not less than 15 days from the date of manufacture.

A.11.01.04---BOILED MILK means milk which has been brought to boil.

A.11.01.05---FLAVOURED MILK by whatever name called, may contain nuts (whole, fragmented or ground) chocolate, coffee or any other edible flavour, edible food colours, and cane sugar.Flavoured milk shall be pasteurised, sterilised or boiled. The type of milk shall be pasteurised, sterilised or boiled.The type of milk shall be mentioned on the label.

A.11.01.05A----MIXED MILK means a combination of milk of cow, buffalo, sheep, goat or any other milch animal and may be a combination of any of these milk which has been made and conforms to the standards given in the table below item A.11.01.11.

A.11.01.06---STANDARDISED MILK means cow milk or buffalo milk or sheep milk or goat milk or a combination of any of these milk that has been standardised to fat and solids-not-fat percentage given in the

table below Item A.11.01.11 by adjustment of milk solids Standardised milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.07—RECOMBINED MILK means the homogenised product prepared from milk fat, non-fat-milk solids and water. Recombined milk shall be pasteurised and shall show a negative Phosphatase Test.

A.11.01.08---TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimed milk; or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids. It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used, it shall be ensured that the product remains homogeneous and no deposition of solids takes place on standing.

A.11.01.09---DOUBLE TONED MILK means the product prepared by admixture of cow or buffalo milk or both with fresh skimmed milk, or by admixture of cow or buffalo milk or both that has been standardised to fat and solids-not-fat percentage given in the Table below item A.11.01.11 by adjustment of milk solids.

It shall be pasteurised and shall show a negative Phosphatase Test. When fat or dry non-fat-milk solids are used. It shall be ensured that the product remains homogeneous and no deposition or solids takes place on standing.

A.11.01.10—SKIMMED MILK means the product prepared from milk from which almost all the milk fat has been removed mechanically.

A.11.01.10A. FULL CREAM MILK means milk or a combination of buffalo or cow milk or a product prepared by combination of both that has been standardised to fat and solids-not-fat percentage, given, under item A.11.01.11 by, adjustment/addition of milk solids. Full cream Milk shall be pasteurised. It shall show a negative phosphatase test. It shall be packed in clean, sound and sanitary containers properly sealed so as to prevent contamination;

A.11.01.11 ---The standards of different classes and designations of milk shall be as given in the table below. Milk shall confirm to both the parameters for milk fat and milk solids, not fat independently, as prescribed in columns (4) and (5) of the said talbe:--

Class of Milk	Designations	Locality	Minimum per cent Milk Fat	Minimum per cent Milk solids non-fat
1	2	3	4	5
Buffalo Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Assam Bihar Chandigarh Delhi Gujarat Haryana Maharashtra Meghalaya Punjab Sikkim Uttar Pradesh West Bengal Andaman and Nicobar Andhra Pradesh Arunachal Pradesh	6.0	9.0

		Dadra and Nagar Haveli Goa, Daman and Diu Himanchal Pradesh Jammu and Kashmir Karnataka Kerala, Laccadive, Minicoy and Amindive Islands Madhya Pradesh Manipur Mizoram Nagaland Orissa Pondicherry Rajasthan Tamil Nadu Tripura	5.0	9.0
Cow Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	Chandigarh Haryana Punjab	4.0	8.5
		Andaman and Nicobar Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and Kashmir Karnataka Kerala Laccadive, minicoy and Amindive Islands Madhya Pradesh Meghalaya Nagaland Pondicherry Rajasthan Sikkim Tamil Nadu Tripura Uttar Pradesh West Bengal	3.5	8.5
		Mizoram, Orissa	3.0	8.5
Goat or Sheep Milk	Raw, Pasteurised, Boiled Flavoured and	Chandigarh Haryana Kerala Madhya Pradesh	3.5	9.0

	Sterilised	Maharashtra Punjab Uttar Pradesh Andaman and Nicobar Islands Andhra Pradesh Arunachal Pradesh Assam Bihar Dadra and Nagar Haveli Delhi Goa, Daman and Diu Gujarat Himachal Pradesh Jammu and kashmir Karnataka Laccadive, minicoy and AmindiveIslands Manipur Meghalaya, Mizram Nagaland Orissa Pondicherry Rajasthan Sikkim, Tamil Nadu Tripura West Bengal	3.0	9.0
Mixed Milk	Raw, Pasteurised, Boiled Flavoured and Sterilised	All India	4.5	8.5
Standardised Milk	Pasteurised, Flavoured and Sterilised	All India	4.5	8.5
Recombined Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Toned Milk	Pasteurised, Flavoured and Sterilised	All India	3.0	8.5
Double Tonned Milk	Pasteurised, Flavoured and Sterilised	All India	1.5	9.0

Skimmed Milk	Raw, Pasteurised, Boiled, Flavoured and Sterilised	All India	Not more than 0.5 per cent	8.7 6.0
Full cream Milk	Pasteurised & Sterilised	All India	6.0	9.0

Note----(I) When milk is offered for sale without indication of the class, the standards prescribed for buffalo milk shall apply.

(ii) The heat treatment for the various designated milk shall be as follows.

Designation	Heat treatment
Raw	Nil
Pasteurised	Pasteurisation
Boiled	Boiling
Flavoured	Pasteurisation or Sterilisation
Sterilised	Sterilisation

A.11.02--- MILK PRODUCTS means the products obtained from milk such as cream malai, curd, skimmed milk curd , chhanna , skimmed milk chhanna, cheese, processed cheese, ice cream , milk ices, condensed milk swetened and unsweetened, condensed skimmed milk sweetened and unsweetened, milk powder, skimmed milk powder , partly skimmed milk powder, khoa, infant milk food, table butter and deshi butter.

A.11.02.01—MILK PRODUCT specified in Appendix B shall not contain any substance not found in milk unless specified in the standards.

A.11.02.02---Cream including sterilized cream means the product of cow or buffalo milk or a combination thereof. It shall be free from starch and other ingredients foreign to milk. It may be of following three categories, namely:-

1. Low fat cream – containing milk fat not less than 25.0 per cent by weight.
2. Medium fat cream – containing milk fat not less than 40.0 per cent by weight.
3. High fat cream – containing milk fat not less than 60.0 per cent by weight.

Note – Cream sold without any indication about milk fat content shall be treated as high fat cream.

A.11.02.03--- MALAI means the product rich in butter fat prepared by boiling and cooling cow or buffalo milk or a combination thereof . It shall contain not less than 25.0 per cent milk fat.

A.11.02.04—DAHI OR CURD means the product obtained from pasteurised or boiled milk by souring, natural or otherwise, by a harmless lactic acid or other bacterial culture. Dahi may contain added cane sugar. Dahi shall have the same minimum percentage of milk fat and milk solids-not-fat as the milk from which it is prepared.

Where dahi or curd is sold or offered for sale without any indication of class of milk, the standards prescribed for dahi prepared from buffalo milk shall apply.

Milk solids may also be used in preparation of this product

A.11.02.05----CHHANNA OR PANEER means the product obtained from cow or buffalo milk or a combination thereof by precipitation with sour milk, lactic acid or citric acid. It shall not contain more than 70.0 per cent moisture, and the milk fat content shall not be less than 50.0 per cent of the dry matter.

Milk solids may also be used in preparation of this product

A.11.02.07—CHEESE (HARD) means the product obtained by draining after coagulation of milk with a harmless milk coagulation agent under the influence of harmless bacterial culture. It shall not contain any ingredients not found in milk, except coagulating agent, sodium chloride, calcium chloride (anhydrous salt) not exceeding 0.02 per cent by weight, annatto or carotene colour, and may contain emulsifiers and/ or stabilizers, namely citric acid, sodium citrate or sodium citrate or sodium salts or orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.2 per cent by weight. Wax used for covering the outer surface shall not contain any thing harmful to health. In case the wax is coloured, only permitted food colour shall be used. Hard cheese shall contain not more than 43.0 per cent, moisture and not less than 42.0 per cent milk fat of the dry matters. Hard cheese may contain up to 3000 parts per million sorbic acid, or its sodium, postassium or calcium salts calculated or sorbic acid, and / or 12.5 parts per million nisin either singly or in combination.

Natamycin may used for surface treatment only , subject to the following conditions, namely:-

(i) Maximum level of application shall not exceed 2 mg/dm 3 of cheese surface.
(ii) The penetration depth shall not exceed 2 mm.
(iii) The maximum residue level in the finished product shall not exceed 1 mg/dm3.

A.11.02.07.01---- PROCESSED CHEESE means the product obtained by heating one or more types of hard cheeses with permitted emulsifiers and /or stabilizers namely, citric acid, sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear polyphosphate) with or without added condiments, and acidifying agents, namely vinegar, lactic acid , acetic acid, citric acid and phosphoric acid. Processed cheese may contain not more than 4.0 per cent of anhydrous permitted emulsifiers and /or stabilizers, provided that the content of anhydrous inorganic agents shall in no case exceed 3.0 per cent of the finished product. It shall not contain more than 47.0 per cent moisture. Processed cheese chiplets (packed sliced cheese) when sold in a package other than tin, shall not contain more than 50.0 per cent moisture. The milk fat content shall not be less than 40.0 per cent of the dry matter. Processed cheese may contain upto 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/or 12.5 parts per million nisin either singly or in combination. It may contain calcium chloride (anhydrous) not exceeding 0.02 per cent by weight.

A.11.02.07.02---PROCESSED CHEESE SPREAD means a product obtained by comminuting and mixing one or more type of cheeses into a homogenous mass with the aid of heat. It may or may not contain butter, cream , butter oil, milk skimmed milk, milk powder, cheese whey, butter milk or one or more of these or any of these from which part of water has been removed. It may also contain permitted emulsfifying and stabilising agents. It may also contain one or more of the sodium potassium salts of citric acid, phosphoric acid , tartaric acid, lactic acid in such quantities that mass of the solids of such emulsifying agents is not more than 4 per cent of mass of the processed cheese spread. It may contain sequestering and buffering agents, namely, lactic acid, acetic acid, citric acid and phosphoric acid.

It may contain vegetable colouring matter such as annatto, carotene, permitted flavouring agents and milk coagulating enzymes with or without purified calcium chloride (anhydrous salt) not exceeding 0.02 per cent and sodium citrate not exceeding 0.02 per cent may be added. It may contain natural sweetening agents, namely, sugar, dextrose, cane sugar, corn syrup, honey, corn syrup solids, maltose, malt syrup, and hydrolysed lactose in a quantity necessary for seasoning and spices and condiments. It may contain sodium chloride not exceeding 3 per cent by weight. Processed cheese spread may contain up to 3000 parts per million sorbic acid or its sodium, potassium or calcium salts (calculated as sorbic acid) and/ or 12.5 parts per million nisin. It shall not contain more than 60 per cent moisture and milk fat content (on dry basis) shall not be less than 40 per cent by weight.

A.11.02.08---ICE CREAM, KULFI AND CHOCOLATE ICE CREAM means the frozen product obtained from cow or buffalo milk or a combination thereof or from cream, and/or other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, Malto dextrin, eggs, fruits, fruit juices, preserved fruits, nuts chocolate, edible flavours and permitted food colours. It may contain permitted stabilizers and emulsifiers not exceeding 0.5 per cent by weight. The mixture shall be suitably heated before freezing. The product shall contain not less than 10.0 per cent milk fat, 3.5 per cent protein and 36.0 per cent total solids

Starch may be added to a maximum extent of 5.0 per cent under a declaration on a label as specified in sub-rule (2) of Rule 43.

The standards for ice-cream shall also apply to softy ice-cream.

In case of ice-cream, where the chocolate or like covering portion forms a separate layer, only the ice-cream portion shall conform to the standards of ice-cream.

A.11.02.08.01—"DRIED ICE CREAM MIX" shall be the material prepared by spray or roller drying of ice-cream mix . It shall contain milk solids, sources or corn syrup or refined sugar. It my contain permitted colours and flavours. It may contain stabilisers and emusifiers not exceeding 1.25 per cent by weight. The product shall contain not less than 27.0 percent milk fat and 9.5 per cent protein and moisture shall not be more than 40 per cent by weight. The sucrose content shall not be more than 40 per cent by weight.

The process of drying shall be mentioned on the table. It shall be packed in hermetically sealed clean sound containers.

A.11.02.09--- MILK ICES OR MILK LOLLIES means the frozen product obtained from milk, skimmed milk, or milk product with or without the addition of cane sugar dextrose, liquid, glucose and dried liquid glucose, eggs, fruits, juices, nuts, chocolate , edible flavours and permitted food colours. It may contain permitted stabilizers not exceeding 0.5 per cent of the product. The mixture shall be suitably heat – treated before freezing. The product shall contain not more than 2.0 per cent milk fat, not less than 3.5 per cent proteins and not less than 20. per cent total solids.

A.11.02.10----CONDENSED MILK UNSWEETENED (EVAPORATED MILK) means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water . It may contain added calcium chloride., citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such additions need not be declared on the label. Condensed milk unsweetened shall contain not less than 8.0 per cent milk fat and not less than 26.0 per cent milk solids.

If the product is subjected to Ultra High Tem-perature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) of sub- rule (B) of Rule 42.

A.11.02.11 – CONDENSED MILK SWEETENED means the product obtained from cow or buffalo milk or a combination thereof or from standardised milk, by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, permitted flavour, calcium, chloride, citric acid, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed milk sweetened shall contain not less than 9.0 per cent milk fat not, less than 31.0 per cent total milk solids and not less than 40.0 per cent cane sugar. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.12---CONDENSED SKIMMED MILK UNSWEETENED (EVAPORATED SKIMMED MILK) means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Condensed skimmed milk unsweetened shall contain not less than 20.0 per cent total milk solids. The fat content shall not exceed 0.5 per cent by weight.

If the product is subjected of Ultra High Temperature (UHT) treatment by heating it at a temperature of not less than 140 degree C for a minimum period of 3 seconds followed by aseptic packaging, it shall be designated as UHT and labelled as specified under clause (ddd) or sub-rule (B) or Rule 42.

A.11.02.13 --- CONDENSED SKIMMED MILK SWEETENED means the product obtained from cow or buffalo skimmed milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label . Condensed skimmed milk sweetened shall contain not less than 26.0 per cent of total milk solids and not less than 40.0 per cent cane sugar. The fat content shall not exceed 0.5 per cent by weight. The total acidity expressed as lactic acid shall not be more than 0.35 per cent.

A.11.02.13.01—PARTLY SKIMMED SWEETENED CONDENSED MILK means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the partial removal of water and after addition of cane sugar. It may contain added refined lactose, calcium chloride, critric acid, sodium citrate, sodium slats of ortho phosphoric acid and poly phosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product . Such addition need not be declared on the label.

Partly skimmed sweetened condensed milk shall contain not less than 28.0 per cent of total milk solids and not less than 40.0 per cent cane sugar . The fat content shall not be less than 3.0 per cent and more than 9.0 per cent by weight;The total acidity expressed as lactic acid shall not be more than 0.35 per cent .

A.11.02.14---MILK POWDER means the product prepared by spray drying of standardised milk obtained from fresh cow milk or buffalo milk or a mixture thereof. It may contain calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product and 0.01 per cent of butylated hydroxyanisole (BHA) by weight of the finished product. Such addition need not be declared on the label. For improving dispersibility, it may contain lecithin to a maximum limit of 0.5 per cent under lable declaration as per Rule 42(ee). Milk powder shall contain not more than 4.0 per cent moisture, not less than 26.0 percent milk fat, not less than 96.0 percent total solids and not more than 7.3 per cent total ash on dry basis. The total acidity expressed as lactic acid shall not be more than 1.2 per cent. The plate count shall not exceed 40,000 per gram. Coliform count and coagulase positive staphylococcus aurens shall be absent in 0.1 gram of the powder. Salmonella and shigella shall be absent in 25 grams of the powder. The insolubility index shall not be more than 2.0 ml. The spray-dried product shall be packed in Nitrogen or mixture of Nitrogen and carbondioxide in) hermetically sealed containers.

Provided that the spray-dried milk powder meant for reconstitution into liquid milk and not for direct consumption as such may also be packed in bags of food grade poly-ethylene of minimum thickness 0.050 mm, encased with multiwalled kraft paper bags, or packs made out of kraft paper sandwich laminated to high density polyethylene woven fabric. The product shall be stored below 20 degree centigrade and a statement of this effect shall be made on the package, alongwith the date of manufacture. In addition to compliance with the labelling provision contained in Rule 32, such bags shall also be clearly labelled as “Not for direct consumption” and “To be used before----------“]

Provided further that if the spray dried milk powder meant for reconstitution into liquid milk and not for direct consumption and packed in above manner, cannot be stored at or below 20 degree centigrade, such product shall not contain moisture more than 3.5 percent by weight and shall be clearly labelled as "To be used within five months from the date of packing " and "Not for direct consumption".]

Rescinded.

A.11.02.15---SKIMMED MILK POWDER means the product obtained from cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Skimmed milk powder shall not contain more than 1.5 per cent milk fat and moisture shall not exceed 5.0 per cent. The total acidity expressed as lactic shall not exceed 1.5 per cent. The plate count shall not exceed 50,000 per gram and Coliform shall be absent in 0.1 gram of the powder.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent.

The process of drying shall be mentioned on the label.

A.11.02.16--- PARTLY SKIMMED MILK POWDER means the product obtained from partly skimmed cow or buffalo milk or a combination thereof by the removal of water. It may contain added calcium chloride, citric acid and sodium citrate, sodium salts of orthophosphoric acid and polyphosphoric acid (as linear phosphate) not exceeding 0.3 per cent by weight of the finished product. Such addition need not be declared on the label. Partly Skimmed milk powder shall not contain more than 5.0 per cent moisture and fat content of the product shall be more than 1.5 and less than 26.0 per cent.

Butylated hydroxyanisole (BHA) not exceeding 0.01 per cent by weight of the finished product may be added. The exact fat content shall be indicated on the label.

Insolubility Index (Maximum)	Roller dried	Spray dried
	15.0 ml	1.5ml

The total solids shall not be less than 95.0 per cent and total ash (on dry basis) shall not be more than 8.2 per cent. The acidity expressed as lactic acid shall not be more than 1.5 per cent.

The process of drying shall be mentioned on the label. The spray-dried product shall be packed in hermetically sealed containers.

A.11.02.17.---KHOYA BY WHATEVER VARIETY OF NAMES IT IS SOLD SUCH AS PINDI, DANEDAR, DHAP,MAWA OR KAVA means the product obtained from cow or buffalo or goat or sheep milk or milk solid or a combination thereof by rapid drying. The milk fat content shall not be less than 30 per cent on dry weight basis of the finished product.

It may contain citric acid not more than 0.1 per cent by weight.

It shall be free from starch , added sugar and added colouring matter.

A.11.02.18 – INFANT MILK FOOD ---The material prepared by spray drying or by roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal/substitution of different milk solids, carbohydrates, such as sucrose, dextrose and dextrins , maltose and lactose, slats like phosphates and citrates, vitamins A,D,E,B Group, Vitamin C and other vitamins; and minerals like iron, copper, zinc and iodine. The source of iron may be selected from ----

"Ferrous sulphate	Ferrous citrate.
Ferrous fumerate	Ferrous succinate.
Ferric ammonium citrate,	Ferric pyrophosphate"

It shall be free from starch and added anti-oxidants. It shall also be free from dirt and extraneous matter, preservatives and added colour and flavour and from any material which is harmful to human health. It shall not have rancid taste or musty odour. It shall also conform to the following standards, namely:

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight (not less than)	-12.0
3.	Milk fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight (not more than)	-8.5
5.	Ash insoluble in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6	Solubility--	
	(a) Solubility Index maximum---	
	(if roller dried)	15.0 ml
	(if spray dried)	2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.5
7.	Vitamin A (as retinol) meg. Per 100 g . (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg per 100 g. (not less than)	-5.0
10.	Thiamine, meg per 100 g . (not less than)	-185
11.	Nicotinamide, mcg per 100 g (not less than)	-1160
12.	Riboflavin , mcg per 100 g. (not less than)	-275
13.	Vitamin B6 mcg per 100 g. (not less than)	-160
14.	Vitamin B12 mcg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100 g. (not less than)	-20
16.	Pantothenic acid, mg per 100g. (not less than)	-1.4
17.	Biotin, mcg per 100g. (not less than)	-7.0
18.	Vitamin C, mg per 100g . (not less than)	-35
19.	Vitamin K, meg per 100g. (not less than)	-18
20.	Copper mcg per 100 g. (not less than)	-280
21.	Iodine mcg per 100g (not less than)	-20
22.	Manganese (Mn) mcg per 100 g. (not less than)	-20
23.	Zinc, mg per 100 g (not less than)	-2.5
24.	Sodium (Na), mg per 100 g (not less than)	-90
25.	Potassium (K), mg per 100g (not less than)	-370
26.	Chloride (CI), mg per 100g (not less than)	-250
27.	Phosphorus (P), mg per 100g. (not less than)	-115
28.	Magnesium (Mg), mg per 100g. (not less than)	-22
29.	Calcium (Ca), mg per 100g (not less than)	-230
30.	Choline, mg per 100 g. (not less than)	-32

31.	Bacterial count, per g .(not more than)	-40,000
32.	Coliform count	-absent in 0.1g.

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide

The product shall be packed in nitrogen or mixture of nitrogen and carbondioxide in hermetically sealed containers and the label shall bear the date by which the product is to be consumed.

A.11.02.18.01 –Infant formula means the product prepared by spray drying or roller drying of the milk of cow or buffalo or a mixture thereof. The milk may be modified by the partial removal /substitution of milk fat with vegetable oils rich in poly-unsaturated fatty acids and/or by different milk solids; carbohydrates such as sucrose, dextrose and dextrins, maltose and lactose; salts such as phosphates and citrates; vitamins A,D,E,B and C Group and other vitamins, minerals such as iron, copper, zinc and iodine and others. The source of iron may be selected from-

"Ferrous sulfate	Ferrous citrate
Ferrous fumerate	Ferrous succinate
Ferric Ammonium citrate	Ferric pyrophosphate".

It shall be free from added starch, added colour and added flavour. It shall not have rancid taste and musty odour. Vegetable oils rich in polyunsaturated fatty acids shall be added to partially substituted milk fat to an extent that the product shall contain a minimum of 12 per cent by weight of milk fat and a minimum of linoleate content of 1.398 g. per 100 g. of the product.

The product shall also contain a minimum of 0.70I.U . of Vitamin E per 100K. Cal.

It shall conform to the following standard, namely-----

1.	Moisture, per cent by weight (not more than)	-4.5
2.	Total milk protein, per cent by weight(not less than)	-10.0
	not more than	-16.0
3.	Total fat, per cent by weight (not less than)	-18.0
4.	Total ash, per cent by weight(not more than)	-8.5
5.	Ash insolute in dilute Hydrochloric acid, per cent by weight (not more than)	-0.1
6.	Solubility-	
	(a) Solubility Index maximum----	
	(if roller dried)	-15.0 ml
	(if spray dried)	-2.0 ml
	(b) Solubility per cent by weight (not less than)	
	(if roller dried)	-85.0
	(if spray dried)	-98.0
7.	Vitamin A (as retinol), mcg. Per 100 g. (not less than)	-350
8.	Added Vitamin D (expressed as Cholecalciferol) I.U. per 100 g. (not less than)	-180
9.	Iron, mg. Per 100g. (not less than)	-5.0
10.	Thiamine ,meg per 100 g. (not less than)	-185
11.	Riboflavin, meg per 100 g. (not less than)	-275

12.	Nicotinamide, meg per 100 g. (not less than)	-1160
13.	Vitamin B6 meg per 100 g. (not less than)	-160
14.	Vitamin B12 meg per 100 g. (not less than)	-0.7
15.	Folic acid, mcg per 100g. (not less than)	-20
16.	Pantothenic acid, mg per 100 g. (not less than)	-1.4
17.	Biotin , mcg per 100 g. (not less than)	-7.0
18.	Vitamin C, mg per 100 g. (not less than)	-35
19.	Vitamin K, mcg per 100 g. (not less than)	-18
20.	Copper, mcg per 100 g. (not less than)	-280
21.	Iodine, mcg per 100 g. (not less than)	-20
22	Manganese mcg per 100 g. (not less than)	-20
23	Zinc, mg per 100 g. (not less than)	-2.5
24	Sodium (Na), mg per 100 g. (not less than)	-90
25	Potassium (K), mg per 100 g. (not less than)	-370
26	Chloride (Cl), mg per 100 g. (not less than)	-250
27	Phosphorus (P), mg per 100 g. (not less than)	- 115
28	Magnesium (Mg), mg per 100 g. (not less than)	-22
29	Calcium (Ca), mg per 100 g. (not less than)	-230
30	Choline , mg per 100 g. (not less than)	-32
31.	Bacterial count, per g. (not less than)	-40,000
32	Coliform count	-absent in 0.1g

It shall be packed in hermetically sealed , clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene, polyester metallized film or aluminium foil in such a way to protect from deterioration.

It shall be packed in nitrogen or a mixture of nitrogen and carbondioxide.

Provided that the low birth weight infant milk substitutes shall also meet the following requirement in addition to the above requirements:

(i) Protein shall be in range of 2.25-2.75 grams per 100 K . Cal/Joules;

(ii) Mineral contents shall not be less than 0.5 gram per 100 K. Cal. The Calcium Phosphorous ratio shall be 2:1. The Sodium , Potassium and Chloride combined together shall not be less than 40 milli equivalent per Litre.

(iii) Whey : Casein ratio shall be 60:40. Essential amino acids should include cystine, tyrosine and histidine.

A.11.02.18.02- MILK CEREAL BASED WEANING FOODS: Milk cereal based weaning foods are obtained from a variety of cereals, vegetable oil and proteins, milk solid different carbohydrates such as sucrose, dextrose, dextrins, maltose and lactose, iron and calcium salts; phosphates and citrates and other nutritionally significant minerals and vitamins. It may also contain fungal-alfaamylase upto a maximum extent of 0.025 per cent, by weight, fruits, vegetables, egg or egg products. It shall be in the form of powder, small granules or flakes, free from lumps, and shall be uniform in appearance. The source of iron shall be selected from----

"Ferrous sulphate,	Ferrous citrate.
Ferrous fumerate,	Ferrous succinate.
Ferric Ammonium Citrate	Ferric pyrophosphate".

It shall be free from dirt and extraneous matters and free from preservatives, added colour, flavour, and antioxidants. It shall be free from any material which is harmful to human health. It shall contain a minimum of 20 per cent milk solids by weight of the product of which milk fat shall be a minimum of 5 per cent by weight.

It shall conform to the following standards, namely:-

1.	Mosisture, per cent by weight (not more than)	-5.0
2.	Total milk protein per cent by weight (not less than)	-12.0
3.	Fat, per cent by weight (not less than)	-7.5
4.	Total Carbohydrates per cent by weight (not less than)	-55.0
5.	Total ash, per cent by weight (not less than)	-5.0
6.	Ash insoluble in dilute hydrochloric acid, per cent By weight (not less than)	-0.1
7.	Crude fibre (on dry basis, per cent by weight) not more than	-1.0
8.	Vitamin A (as retinol) , mcg per 100 g. (not less than)	-350
9.	Vitamin C, mg per 100 g. (not less than)	-25
10	Added Vitamin D, mcg per 100 g. (expressed as cholecalciferol)	-5
11	Bacterial count per g. (not less than)	-40,000
12	Coliform count	-absent in 0.1 g

It shall also contain the following:-

1.	Thiamine (as hydrochloride), mg per 100g . (not less than)	-0.5
2	Riboflavin mg per 100 g. (not less than)	-0.3
3.	Nicotinic acid, mg. Per 100g. (not less than)	-3
4.	Iron, mg per 100 g . (not less than)	-5

It shall be packed in hermetically sealed, clean and sound containers or in flexible pack made from film or combination or any of the substrate made of Board paper, polyethylene polyester metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.18.03- PROCESSED CEREAL BASED WEANING FOOD Processed cereal based weaning food commonly called as weaning food or supplementary food are obtained from a variety of food grains. They may contain vegetable oils, soya isolates proteins, milk solids, various carbohydrates (such as sucrose, dextrose, dextrines, maltose, lactose, honey corn syrup), fruits, vegetables, eggs iron and calcium salts, phosphates and citrates and other nutritionally significant minerals and vitamins. It shall be in the form of powder, small granules or flakes free from lumps and shall be uniform in appearance. It shall be free from dirt and extraneous matter and free from preservatives, added colour, flavour and antioxidants. It shall be free from any material which is harmful to human health.

It shall conform to the following standards, namely:-

1.	Moisture, percent by weight (not more than)	4.0
2.	Total Protein, percent by weight (not less than)	6.0
3.	Total ash, percent by weight (not more than)	5.0
4.	Total carbohydrates, percent by weight (not less than)	55.0
5	Acid insoluble ash, per cent by weight (not more than)	0.1
6	Crude fibre (on dry basis) percent by weight (not more than)	1.0
7.	Iron, mg/100 gram (not less than)	5.0
8.	Vitamin A (as retinol) mcg. Per 100 gram (not less than)	350.0
9.	Vitamin C, mg /100 gram (not less than)	25.0

10	Added vitamin D, mcg. Per 100 gram (expressed as cholecaliferol)	5.0
11.	Thiamine (as hydrochloride) (mg./100 gram, not less than)	0.5
12	Riboflavin, mg./100 gram (not less than)	0.3
13	Nicotinic acid, mg./100 gram (not less than)	3.0
14	Bacterial count per gram (not more than)	40,000.0
15	Coliform count absent in	0.1 gram.

The source of iron shall be selected from the ferrous sulphate, ferrous citrate, ferrous fumerate, ferrous succinate, ferric amonium citrate and ferric pyrophosphate.

It shall be packed in harmetically sealed clean and sound containers or in flexible pack made from film or combination of any of the substrate made of board paper, polyethylene, polyester, metallised film or aluminium foil in such a way to protect from deterioration.

A.11.02.19----- TABLE (CREAMERY) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or from cream or curd obtained from cow or buffalo milk or a combination thereof with or without the addition of common salt and annatto or carotene as colouring matter. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats . No preservative except common salt and no colouring matter except annatto or carotene shall be added. It shall contain not less than 80.0 per cent by weight of milk fats, not more than 1.5 per cent by weight of curd and not more than 3.0 per cent by weight of common salt. Diacetyl may be added as flavouring agent but, if so used, the total diacetyl content shall not exceed 4.0 parts per million. Calcium hydroxide, sodium bicarbonate, sodium carbonate, sodium polyphosphate, (as liner phosphate) may be added for regulating the hydrogen ion concentration in the finished products not exceeding 0.2 per cent by weight of butter as a whole.

A.11.02.20---DESHI (COOKING) BUTTER means the product obtained from cow or buffalo milk or a combination thereof or curd obtained from cow or buffalo milk/or a combination thereof without the addition of any preservative including common salt, any added colouring matter or any added flavouring agent. It shall be free from other animal fats, wax and mineral oils, vegetable oils and fats. It shall contain not less than 76.0 per cent of milk fat by weight.

Provided that where butter is sold or offered for sale without any indication as to whether it is table butter or deshi butter, the standards of quality prescribed for table butter shall apply.

A.11.02.21----GHEE means the pure clarified fat derived solely from milk or curd or from deshi (cooking) butter or from cream to which no colouring matter or preservative has been added. The standards of quality of ghee produced in a State or Union territory specified in Coloumn 2 of the Table below shall be as specified against the said State or Union Territory in the corresponding Columns 3,4,5 and 6 of the said Table:-

TABLE

S.No	Name of State /Union Territory	Butyro refractometer reading at 40degree C	Minimum Reichert value	Percentage of FFA as Oleic acid (Max)	Percentage of Moisture (max)
1	2	3	4	5	6

1.	Andhra pradesh	40.0 to 43.0	24	3.0	0.5
2.	Andaman and Nicobar Islands	41.0 to 44.0	24	3.0	0.5
3	Arunachal Pradesh	40.0 to 43.0	26	3.0	0.5
4	Assam	40.0 to 43.0	26	3.0	0.5
5	Bihar	40.0 to 43.0	28	3.0	0.5
6	Chandigarh	40.0 to 43.0	28	3.0	0.5
7	Dadra and Nagar Haveli	40.0 to 43.0	24	3.0	0.5
8	Delhi	40.0 to 43.0	28	3.0	0.5
9	Goa	40.0 to 43.0	26	3.0	0.5
	Daman and Diu	40.0 to 43.5	24	3.0	0.5
10	Gujrat:				
	Areas other than cotton tract areas	40.0 to 43.5	24	3.0	0.5
	Cotton tract areas	41.5 to 45.0	21	3.0	0.5
11	Haryana:				
	Areas other than cotton tract areas	40.0 to 43.0	28	3.0	0.5
	Cotton tract areas	40.0 to 43.0	26	3.0	0.5
12	Himachal Pradesh	40.0 to 43.0	26	3.0	0.5
13.	Jammu and Kashmir	40.0 to 43.0	26	3.0	0.5
14	Karnataka:				
	Areas other than Belgaum District	40.0 to 43.0	24	3.0	0.5
	Belgaum District	40.0 to 44.0	26	3.0	0.5
15	Kerala	40.0 to 43.0	26	3.0	0.5
16	Lakshadweep	40.0 to 43.0	26	3.0	0.5
17	Madhya pradesh				
	(a)Areas other than cotton tract areas	40.0 to 44.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
18	Maharashtra:				
	Areas other than cotton tract areas	40.0 to 43.0	26	3.0	0.5
	(b) Cotton tract areas	41.5 to 45.0	21	3.0	0.5
19	Manipur	40.0 to 43.0	26	3.0	0.5
20	Meghalaya	40.0 to 43.0	26	3.0	0.5
21	Mizoram	40.0 to 43.0	26	3.0	0.5
22	Nagaland	40.0 to 43.0	26	3.0	0.5
23	Orissa	40.0 to 43.0	26	3.0	0.5
24	Pondicherry	40.0 to 44.0	26	3.0	0.5
25	Punjab	40.0 to 43.0	28	3.0	0.5
26	Rajasthan				
	Areas other than Jodhpur Dn.	40.0 to 43.0	26	3.0	0.5
	Jodhpur Dn.	41.5 to 45.0	21	3.0	0.5
27	Tamil nadu	41.0 to 44.0	24	3.0	0.5
28	Tripura	40.0 to 43.0	26	3.0	0.5
29	Uttar Pradesh	40.0 to 43.0	26	3.0	0.5
30	West Bengal				
	Area other than Bishnupur Sub-Division	40.0 to 43.0	28	3.0	0.5

	(b) Bishnapur Sub-Divison	41.5 to 45.0	21	3.0	0.5
31	Sikkim	40.0 to 43.0 Baudouin test shall be negative.	28	3.0	0.5

Explanation – By cotton tract is meant the areas in the States where cotton seed is extensively fed to the cattle and so notified by the State Government concerned.

A.11.02.21.01—BUTTER OIL OR BUTTER FAT—are products exclusively obtained from butter or cream and resulting from the removal of practically the entire water and solids-not-fat contents.

It may contain permitted anti-oxidants not exceeding 0.02 per cent by weight except gallate which shall not exceed 0.01 per cent by weight. It shall conform to standards of quality of ghee laid down in item A.11.02.21 except Butyro refractometer reading which shall be 40.0 –44.0 at 40 degree C. In case of imported butter oil, Reichert value shall not be less than 24.

A.11.02.22 ---CHAKKA--- means a white to pale yellow semi-solid product of good texture and uniform consistency obtained by draining off the whey from the Yoghurt obtained by the lactic fermentation of cow's milk buffalo's milk skimmed milk and recombined or standardised milk which has been subjected to minimum heat treatment equivalent to that of pasteurisation. It shall have pleasant Yoghurt/Dahi like flavour. It shall not contain any ingredient foreign to milk. It shall be free from mouldeness and free from signs of fat or water seepage or both. It shall be smooth and it shall not appear dry. It shall not contain extraneous colour and flavours. It shall conform to the following requirements, namely:-

		Chakka	Skimmed milk Chakka
(i)	Total solids, per cent by weight	Min. 30	Min. 20
(ii)	Milk fat (on dry basis) per cent by weight	Min. 33	Max. 5
(iii)	Milk Protein (on dry basis) per cent by weight	Min 30	Min. 60
(iv)	Titrable acidity (as lactic acid) per cent by weight	Max. 2.5	Max 2.5
(v)	Total ash (on dry basis) per cent by weight	Max 3.5	Max 5.0

Chakka when sold without any indication shall conform to the standards of Chakka.

A.11.02.22.01—SHRIKHAND—means the product obtained from Chakka or Skimmed Milk Chakka to which milk fat is added. It may contain fruit, nuts, sugar, cardamom, saffron and other spices. It shall not contain any added colouring and artificial flavouring substances. It shall conform to the following specifications, namely:-

(i)	Total solids, per cent by weight	Not less than 58
(ii)	Milk fat (on dry basis) per cent by weight	Not less than 8.5
(iii)	Milk Protein (on dry basis) per cent by weight	Not less than 9
(iv)	Titrable acidity (as lactic acid) per cent by weight	Not more than 1.4
(v)	Sugar (Sucrose) (on dry basis) per cent by weight	Not more than 72.5
(vi)	Total ash(on dry basis) per cent by weight	Not more than 0.9

In case of Fruits Shrikhand it shall contain Milk fat (on dry basis) per cent by weight----Not less than 7.0 and Milk Protein (on dry basis) per cent by weight----Not less than 9.0.

A.11.02.23--- Yoghurt means a coagulated product obtained from toned milk, pasteurised or boiled milk by lactic acid fermentation through Lactobacillus bulgaricus delbruckii var bulgaricus and Streptococcus thermophilus. It may also contain cultures of Bifidobacterium bifidus and Lactobacillus acidophilus and if added, the declaration to this effect shall be made on the label. The product shall have smooth body and custard like consistency with no whey separation. It may also contain:-

(i) milk powder, skimmed milk powder, whey proteins, water soluble milk proteins, caseinates manufactured from pasteurised product and lactase enzyme preparation;
(ii) Sugar, corn-syrup or glucose syrup in case of sweetened, flavoured and fruit yoghurd only;
(iii) Fruits, fruit pulp, jam, fruit syrup, fruit juice etc. in flavoured and fruit yoghurt only; Permitted colours and flavours in flavoured and fruit yoghurt only.
(iv) Permitted colours and flavours in flavoured and fruit yoghurt only.

It may contain permitted stabilisers upto a maximum limit of 0.5 per cent, by weight. It shall also conform to the following standard, namely::-

		Yoghurt plain	Yoghurt Skimmed	Yoghurt Sweetened and/of flavoured	Furit yoghurt
(i)	Total Milk fat, solids, per cent by weight, not less than	13.5	11.0	13.5	10.00
(ii)	Milk fat, percent by weight	Not less than 3.0	Not more than 0.5	Not less than 3.0	Not less than 1.5
(iii)	Sugar, per cent by weight not less than	-----	------	6.0	6.0
(iv)	Protein, per cent by weight, Not less than	3.2	3.2	3.2	2.6

Titrable acidity of the product shall be from 0.8 to 1.2 per cent by weight (as lactic acit). The specific lactic acid bacterial count per gram of the product shall not be less than 10,00,000 and Escherichia Coli shall be absent in the product.

The type of yoghurt shall be clearly indicated on the lable ; otherwise standard of plain Yoghurt shall apply.

Note---- The yoghurt subjected to heat treatment after fermentation at temperature not less than 65 degree C shall be labelled as “Thermised or Heat Treated Yoghurt” and shall conform to the above parameters except the minimum requirement of specific lactic acid bacterial count per gm.;

A.12.----TABLE MARAGARINE means an emulsion of edible oils and fats with water. It shall be free from rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent skimmed milk powder not exceeding 2 per cent, permitted emulsifying and stabilizing agents and butylated- hydroxy anisole (BHA) up to a maximum limit of 0.02 per cent. It shall conform to the following specifications, namely:-

1. Fat Not less than 80 per cent mass/mass

2.	Moisture	Not less than 12 per cent and not more than 16 per cent mass/mass.
3.	Vitamin A	Not less than 30 I.U. per gram of the product at the time of sale.
4.	Melting point of extracted fat	31 degree C to 37 degree C (Capillary Slip method).
5.	Unsaponifiable matter of extracted fat.	Not more than 1.5 per cent by weight
6.	Free fatty acids (as oleic acid)	Not more than 0.25 per cent weight acid) of extracted fat
	or Acid value	Not moe than 0.5

It shall contain not less than 5 per cent of its weight of Til oil but sufficient to ensure that when separated fat is mixed with refined groundnut oil in the proportion of 20 : 80, the red colour produced by the Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It may contain Annatto or Carotene as colouring matter. It may also contain Lactic Acid, Butyric Acid , Valeric Acid, Cinnamon Oil, Ethyl Butyrate as flavouring agents upto 0.08 ppm m /m and Diacetyle as a flavouring agent upto a maximum limit of 4.0 ppm.

Provided that such coloured and flvoured margarine shall also contain stratch not less than 100 ppm and not more than 150 ppm.

Provided further that such coloured and flavoured margarine shall only be sold in sealed packages weighting not more than 500 gms.

A.12.01 – BAKERY AND INDUSTRIAL MARGARINE means an emulsion of vegetable oil product with water. It shall be free from added colour and flavour, rancidity, mineral oil and animal body fats. It may contain common salt not exceeding 2.5 per cent, permitted emulsifying and stabilising agents and Butylated hydroxy anisole (BHA) or Teritiary butyl hydro Quinone (TBHQ) up to a maximum limit of 0.02 per cent. It shall conform to the following standards namely:-

Fat	Not less than 80 per cent m/m.
Moisture	Not less than 12 per cent and not more than 16 Per cent m/m.

The separated fat of the product shall conform to the following:-

(i)	Vitamin A	Not less than 30 IU per gram at the time of packing and shall show a positive test for Vitamin ‘A’ when tested by Antimony trichloride (carr price) reagents (as per IS 5886-1970).
(ii)	Melting point by Capillary slip method.	31degree C – 41 degree C
(iii)	Unsaponifiable matter	Not exceeding 2.0 per cent but in case of the product where proportion of Rice bran oil is more than 30 per cent by wt. The unsap matter shall be not more than 2.5 per cent by wt. Provided quantity of Rice bran oil is declared on the label of such product as laid down in Rule. 42.ZZZ(10).
(iv)	Free Fatty Acid calcu	Not more than 0.25 per cent

lated as Oleic acid or Acid value	Not more than 0.5

It shall contain raw or refined sesame oil (Til oil) is sufficient quantity so that when the product is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Boudouin test shall not be lighter than 2.0 red unit in a 1 cm cell on a Lovibond scale.

Note—For the purpose of the standard, the "vegetable oil product" shall have the meaning assigned to it in Vegetable oil product Control order, 1947.

A.13. Omitted.

A.14---TEA means tea, other than Kangra tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia genus and the specis and included (i)leaf, (ii) broken (iii) fanning and (iv)dust. It shall conform to the following specifications:

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.0 to 8.0 per cent by weight
(b)	Total ash soluble in boiling distilled water.	Not less than 40.0 per cent of total ash.
(c)	Ash insoluble in dilute hydrochloric acid	Not more than 1.0 per cent by weight on dry basis.
(d)	Extract obtained by boiling dry tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than degree32 per cent.
(e)	Alkalinity of solubal ash	Not less than 1.0 per cent and not mor than 2.2 per cent expressed as K2O on dry basis.
(f)	Crude fibre determined on tea dried to constant weight at 100 degree C	Not more than 17 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical process from materials of plant origin either in their natural slate or after processing for human consumption.

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of rule 42.

Provided also that the tea used in the manufacture of flavoured tea shall conform to the standards of tea.

Provided also that flavoured Tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.14.01---KANGRA TEA means tea derived exclusively from the leaves, buds and tender stems of plants of the Camellia sinesis of Camellia tea grown in Kangra and Mandi valleys of Himachal Pradesh. It shall conform to the following specifications, namely:-

(a)	Total ash determined on tea dried to a constant weight at 100 degree C	4.5 to 9.0 per cent by weight
(b)	Total ash soluble in boiling distilled water	Not less than 34 per cent of total ash.
(c)	Ash insoluble in dilute hydro chloric acid	Not more than 1.2 per cent by weight on dry basis.
(d)	Extract obtained by boiling dried tea (dried to constant weight at 100 degree C) with 100 parts of distilled water for one hour under reflux.	Not less than 23 per cent.
(e)	Alkalinity of soluble ash	Not less than 1.0 per cent and not more than 2.2 per cent expressed at K2O on dry basis.
(f)	Crude fibre determined on tea dried to a constant weight at 100 degree C.	Not more than 18.5 per cent.

It shall not contain any added colouring matter It may also contain 0.2 per cent pectinase enzyme.

Provided that tea may contain Natural Flavours and Natural Flavouring Substances which are flavour preparations and single substance respectively, acceptable for human consumption, obtained exclusively by physical processing from materials of plant origin either in their raw state or after processing for human consumption:

Provided further that such tea containing added flavour shall bear proper label declaration as provided in sub-rule (YY) of the rule 42.

Provided also that tea used in the manufacture of flavoured tea shall conform to the standard of tea.

Provided that if tea is sold or offered for sale without any indication as to whether it is Kangra tea or not. The standards of quality of tea prescribed in item A.14 shall apply.

Provided also that flavoured tea manufacturers shall register themselves with the Tea Board before marketing Flavoured Tea.

A.15.—EDIBLE COMMON SALT means a crystalline solid, white, pale pink or light grey in colour free from visible contamination with clay, grit and/or light grey in colour free from contamination with clay, grit and other extraneous adulterant and impurities. It shall not contain moisture in excess of six per cent of the weight of the undried sample. The sodium chloride content (as NaCI) and the matter soluble in water other than sodium chloride on dry weight basis shall be as specified in columns (2) and (3) of the Table below against the period of validity mentioned in corresponding entry in coloumn (1) of the said Table. The matter insoluble in water shall not exceed 1.0 per cent by weight on dry weight basis.

TABLE

Period of Validity	Minimum percentage of Sodium chloride content As NaCI (on dry basis)	Maximum percentage of matter soluble in water other than sodium chloride (on dry

Basis)

(1)	(2)	(3)
Upto 31.3.82	94.0	5.0
From 1.4.82 to 31.3.83	94.5	4.5
From 1.4.83 to 31.3.84	95.0	4.0
From 1.4.84 to 31.3.85	95.5	3.5
From 1.4.85 onwards	96.0	3.0

Provided that table salt may contain aluminium silicate as asn anti-caking agent to a maximum extent of 2.0 per cent.

TABLE

Flavours	Per cent by weight (Max.)
Cardamom	2.8
Ginger	1.0
Bergamot	2.0
Lemon	1.6
Cinnamon	2.0
Mixture of above flavours With each other	The level of each individual flavour shall not exceed the quantity given above.”

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and the sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01---IODISED SALT means a crystalline solid, white or pale, pink or light grey in colour , free from contamination with clay, grit and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

Moisture	Not more than 6.0 per cent by Weight of the undried sample.
Sodium Chloride (NaCI)	Not less than 96.0 per cent by Weight on dry basis.
Matter insoluble in water	Not more than 1.0 per cent by Weight on dry basis.
Matter soluble in water other than sodium chloride.	Not more than 3.0 per cent by weight on dry basis.

Iodine content at-

(a)	Manufactureres level	Not less than 30 parts per million on dry weight basis.
(b)	Distribution channel including retail level	Not less than 15 parts per million on dry weight basis.

Provided that table iodised salt may contain aluminium silicate as an anticaking agent to a maximum extent of 2.0 per cent by weight.

Provided further that the total matter insoluble in water in such cases shall not exceed 2.2 per cent and sodium chloride content on dry basis shall not be less than 97.0 per cent by weight.

A.15.01.01- POTASSIUM IODATE means a crystalline powder, white in colour free from impurities. It shall confirm the following standards, namely:-

1.	Potassium Iodate (as KIO3)	Per cent by weight not less than 99.8
2.	Solubility	Soluble in 30 Parts of water
3.	Iodide (as I) per cent by weight not more than	0.002
4.	Sulphate (as SO4) per cent by weight not more than	0.002
5.	Bromate, bromide, chlorate and chloride per cent by Weight not more than	0.01
6.	Matter insoluble in water per cent by weight not More than	0.10
7.	Less on drying per cent by weight not more than	0.1
8.	pH (5 per cent solution)	Neutral
9.	Heavymetal (as Pb) ppm not more than	10
10.	Arsenic (as As) ppm not more than	3
11.	Iron (as Fe) ppm not more than	10.

A.15.02—IRON FORTIFIED COMMON SALT means a crystalline solid, white or pale, pink or light grey in colour, free from visible contamination with clay and other extraneous adulterants and impurities. It shall conform to the following standards, namely:-

1.	Moisture	Not more than 5.0 per cent by weight.
2.	Water insoluble matter	Not more than 1.0 per cent on dry weight basis.
3.	Chloride content (as NaCl)	Not less than 96.5 per cent by weight on dry weight basis
4.	Matter insoluble in dilute hydrochloric acid	Not more than 0.3 per cent by weight on dry weight basis (to be determined by the method specified in IS 253-1970).
5.	Matter soluble in water other than Sodium Chloride.	Not more than 2.5 per cent on dry weight basis.
6.	Iron content (as Fe)	850-1100 parts per million.
7.	Phosphorus as inorganic (PO4)	1500-2000 parts per million.

8.	Sulphate as (SO_4)	Not more than 1.1 per cent by weight.
9.	Magnesium as (Mg) water soluble	Not more than 0.10 per cent by weight.
10.	pH value in 5 per cent solution in water.	2 to 3.5

Provided that Iron Fortified Common Salt may contain aluminium silicate as an anti-caking agent to a maximum extent of 2.0 per cent and in such a case the total matter insoluble in water shall not exceed 2.2 per cent on dry weight basis.

A.16—FRUIT PRODUCTS

A.16.0---FRUIT JUICE means the unfermented and unconcentrated liquid expressed from sound, ripe fresh fruit, and with or without :-

(a) sugar, dextrose, invert sugar, or liquid glucose, either singly or in combination;

(b) Water prel-oil, fruit essences and flavour, common salt, ascorbic acid, citric acid, tartaric acid and malic acid and preservatives.

The acidity of the finished product calculated as citric acid shall not be less than 4 per cent in the case of pure lemon juice or pulp and not less than 5 per cent in the case of pure time juice but shall not exceed 3.5 per cent in the case of other juices.

The total soluble solids for sweetened fruit juice (except tomato juice) shall not be less than 10 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumaric acid (food grade) or Quick Dissolving Fumaric Acid certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.02 -----TOMATO JUICE means canned or bottled, unconcentrated pasteurized juice expressed from tomato with a proportion of the pulp, expressed with or without the application of heat by any method that does not add water to such juice from whole, ripe tomatoes from which all stems and objectionable portions have been removed and with or without.---

(a) salt,
(b) sugar or dextrose or both added in dry form,
(c) citric acid, malic acid or ascorbic acid,
(d) Permitted colours.

Provided that canned tomato juice may also contain extraneous permitted colours.

The total soluble solids w/w shall not be less than 5 per cent free of salt.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.03---FRUIT SYRUP means sweetened fruit juice containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination with or without-

(a) water, peel-oil, fruit essences and flavours common salt;
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solid w/w shall be not less than 65 per cent

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying any stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.04----FRUIT SQUASH means the expressed juice of the sound, ripe fruit with the pulp containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without---

(a) water, peel-oil, fruit essences and flavours, common salt,
(b) citric acid, ascorbic acid;
(c) permitted preservative and colours.

The total soluble w/w in the finished product shall be not less than 40 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 25.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

Provided that when additional sodium potassium salt is added, it shall be declared on the label as laid down in clause ZZZ (8) or Rule 42 of the said rules.

A.16.05---FRUIT BEVERAGE OR FRUIT DRINKS means any beverage or drink which is purported to be prepared from fruit juice and water or carbonated water, and containing sugar, dextrose, invert sugar or liquid glucose either singly or in combination and with or without-

(a) Water, peel-oil, fruit essences and flavours,
(b) citric acid, ascorbic acid,
(c) permitted preservative and colours.

The total soluble solids w/w in the final product shall be not less than 10 per cent.

The minimum percentage of fruit juice in the final product shall be not less than 5.0 per cent w/w.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.06---TOMATO SAUCE, TOMATO KETCHUP, TOMATO RELISH or any other expression conveying the meaning that the product so designated is a form of tomato sauce, shall be a preparation of sound and ripe tomatoes with or without-

(a) sugar , salt, vinegar, acetic acid, onions, garlic, spices or condiments;
(b) citric acid, ascorbic acid;
(c) permitted preservative

The product shall be free from skins and seeds. The product shall show no sign of fermentation when incubated at 37 degree C for 15 days . The mould count shall not exceed 40 per cent of the fields examined. The yeast and spores shall not exceed 125 per 1/60 c.m.m. The bacterial count shall not exceed 100 million per cc.

Total acidity in terms of acetic acid shall be not less than 1.0 per cent. and the total soluble solids w/w not less than 25 per cent. It shall not contain any other vegetable substance.

It may contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.07---JAM means the product obtained by processing fresh fruit, canned fruit, dried fruit or fruit pulp with water, sugar, dextrose, invert sugar or liquid glucose either singly or in combination by boiling to a suitable consistency and with or without----

(a) citric, malic, ascorbic acid,
(b) permitted preservative and colours;
(c) pectin derived from any fruit.

The minimum soluble solids w/w shall be 68 per cent Jam shall not contain---

(a) less than 45 per cent of fruit except where fruit is strawberry or respberry where it shall contain not less than 25 per cent,
(b) sweetening agent other than specified above,
(c) apple or rhubar, but it may contain in an amount that reasonably compensates for any deficiency in the natural acidity or pectin content of the fruit used in its preparation.
(d) tartaric acid, or
(e) agar or gelatin.

It shall be free from mould growth. When dry fruit is used it shall be clearly declared on the label.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C. It may also contain fumeric acid (food grade) or Quick Dissolving Fumeric Acid certified by the Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.09—MARMALADE means the product made from any combination of peel, pulp and juice of the named citrus fruit by boiling with water, sugar, dextrose, invert sugar , liquid glucose either singly or in combination to a suitable consistency and with or without an acid ingredient in an amount that reasonably compensates for any deficiency in the natural acidity of the fruit used in its preparation consisting of---

(a) citric, tartaric or ascorbic acid,
(b) lemon or lime juice,

It may contain permitted preservatives, colour or pectin derived from any fruit.

It shall not contain less than 45 per cent of the named fruit.

Total soluble solids w/w shall be not less than 65 per cent.
Fumaric acid may be used up to a maximum limit of 0.5 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.It may also contain fumeric acid(food grade) or Quick Dissolving Fumeric Acid} certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.11.---FRUIT CHUTNEY means a preparation made from sound fruits with spices , salt, onion, garlic, sugar, vinegar or acetic acid, and shall not less than 50 per cent of total soluble solids w/w and may contain permitted preservative.

The minimum percentage of fruit in the final product shall not be less than 40.0 . The percentage acidity of the product expressed as acetic acid by weight shall be not less than 0.75 and not more than 2.0. The ash content shall not exceed 5.0 per cent.

It may also contain permitted emulsifying and stabilising agents as prescribed in Rule 61-C.

A.16.12----SAUCE shall be the product derived from any suitable kind and variety of fruit and vegetable which are wholesome and which shall be practically free from insect or fungal attack or blemish affecting the quality of the fruit or vegetable. The only substances that may be added are fruit, vegetable their pulp, juice dried fruit, sugar, spices, salt, vinegar, acetic acid, citric acid, malic acid, onion, garlic ,flavouring material and permitted preservatives. It shall not contain any coal tar dye.

Fumaric acid may be used up to a maximum limit of 0.5 per cent.

The minimum total soluble solids shall not be less than 15 per cent.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent.

It may also contain permitted emulsifying and stabilsing agents as prescribed in Rule 61-C.. It may also contain fumeric acid(food grade) certified by Bureau of Indian Standards to the extent of 0.3 per cent by weight.

A.16.12.01—SOYABEAN SAUCE shall be the product derived from any suitable variety of sound and wholesome soyabean, free from insect or fungal or any other blemish affecting the quantity of Soyabean, The only substance that may be added are spices, salt, sugar, vinegar, acetic acid, onion, garlic, wheat molasses and permitted preservatives. It shall not contain any other fruit or vegetable substance. It shall show no sign of fermentation when incubated at 28 degree C –30 degree C and 37 degree C for three days.

It shall not contain any added colour except cramel.

The minimum total soluble solids shall not be less than 25 per cent, mass/mass determined by refractometers at 20 degree C. uncorrected for acidity.

The total acitity in terms of acetic acid shall not be less than 0.6 per cent mass/mass.

Mould count shall not be more than 40 per cent of the fields examined.

Yeast spores shall not be more than 125 per 1/60 c.m.m. Bacteria shall not be more than 100 million per c.c.

A.16.13---SPICES BASED SAUCE-Spices based sauce like chillies sauce shall be the product derived from any suitable variety of spices or condiments, singly or in combination. Such spices shall be wholesome and practically free from fungal or insect attack. The only substance that may be added are spices-fresh or dried, sugar, salt, vinegar, acetic acid, citric acid, fumeric acid, onion, garlic, flavouring agents , permitted preservatives, permitted stabilizers and emulsifiers. It may contain caramel, but shall not contain any coal tar food colour. It may also contain small quantities of vegetable fruit pulp or juice.

The total acidity in terms of acetic acid shall not be less than 1.0 per cent and total soluble solids shall not be less than 10.0 per cent by weight.

A.16.14- TOMATO PUREE or TOMATO PASTE or any other expression conveying the meaning that the product so designated is a from of Tomato Puree or Tomato Paste, shall be a preparation of sound and ripe tomatoes with or without.

(a) salt, spices and condiments;
(b) citric acid, matic acid, tartaric acid, lactic acid and L-ascorbic acid; and
(c) permitted preservatives.

The product shall be free from skin and seeds. It shall be free from added colouring matter. The product shall show no sign of fermentation action when incubated at 37 degree C for seven days.

Tomato Puree shall contain not less than 9 per cent total solube solids by weight whereas Tomato Paste shall contain not less than 25 per cent , total soluble solids by weight.

A.16.15.-FRUIT JELLY means the product prepared by boiling the fruit or its pieces or other fruit parts with or without water, expressing and straining, mixing the strined fruit extract with sugar and boiling the mixture to such a consistency the gellatinisation takes place on cooling.

Jelly may contain sugar, dextrose, invert sugar or liquid glucose, honey fruit essence and flavours, ascorbic acid, citric acids, pectin, permitted natural flavours , permitted food colours and preservatives . It shall be free from artificial sweetening agents; it shall show no sign of fermentation. It shall not contain less than 45 per cent of the fruit extract. Total soluble solids shall not be less than 65 per cent by weight. It shall be free from extraneous plant materials.

A.16.16---PICKLE means the preparation made from sound, clean, raw or sufficiently mature fruits or vegetables or a combination of both free from insect damage of fungus attack preserved in salt acid, sugar or any combination of the three. The pickle may contain onion, garlic, ginger, sugar, jaggery, edible oils, spices, spice extract or oil of turmeric, pepper, chillies, fenugreek , mustardseed or powder, vegetable ingredients, asafoetida, bengal gram, lime juice, lemon juice, green chillies, vinegar or acetic acid, dry fruit including raisins and fruits nuts.

Pickles shall be free from added synthetic Food colours.

Combination of pickles may be:

(i) Pickles in citrus juice or brine: The percentage of salt in covering liquid shall not be less than 10 per cent when salt is used as major preserving agent. When packed in citrus juice, acidity of the covering liquid shall be not less than 1.2 per cent calculated as citric acid. Soluble calcium salt and permitted preservatives may be used in Soluble calcium salt and permitted preservatives may be used in such type of pickles. Pickles shall be free from copper, alum and

(ii) Pickles in oil. The fruit or vegetable percentage in the final product shall not be less than 60 per cent. The pickle shall be covered with oil so as to form a layer of not less than 0.5 cm above the contents or the percentage of oil in pickle shall be not less than 10 per cent.

Pickle shall be free from copper , alum and mineral acid. It may contain rapeseed (rai) ajwain,saunf,black pepper and like spices , etc. Permitted preservatives may be used in Pickles.

(iii) Pickles in vinegar : Pickles in vinegar mean the preparation from sound, clean, raw or sufficiently matured fruits or vegetables free from insect damage or fungus attack, which have been cured in brine or dry salt or salted and dried stock with or without natural fermentation. It shall contain vinegar or acetic acid and the percentage of acid in the fluid portion shall not be less than 2 per cent w/w calculated as acetic acid. It may contain sugar, whole or ground or semi-ground spices, dried fruits, green and red chillies, ginger, etc, dry fruit. Citric acid may also be added in such type of pickles. Spice extract or essences may also be used. The drained weight of the product shall not be less than 60 per cent. Pickles shall be free from copper, mineral acid, alum synthetic colours and shall show no sign of fermentation. The product shall be reasonably free from sediments. Permitted preservatives may be used in pickles.

A.17---EDIBLE OILS

A.17.01.—COCONUT OIL (Naryal ka tel) means the oil expressed from copra obtained from the kernel of Cocos mucifera nuts. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C .	34.0 to 35.5
	or Refractive Index at 40 degree C.	1.4481 –1.4491
(b)	Saponification value	Not less than 250
(c)	Iodine value	7.5 to 10.0
(d)	Polenske value	Not less than 13.0
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.0 per cent.

A.17.02---COTTON SEED OIL (Binola ka tel) means the oil extracted from clean, sound, delinted and decorticated cotton seeds (genus Gossypium). It shall be refined. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oils. It shall conform to the following standards:-

(a)	Butyro refractometer reading at 40 degree C	55.6 to 60.2
	or Refractive Index at 40 degree C	1.4630 – 1.4660
(b)	Saponification value	190-198
(c)	Iodine value	98 to 112
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid value	Not more than 0.50
(f)	There shall be no turbidity after keeping the filtered sample at	30 degree C for 24 hours.
(g)	Bellier test (Turbidity temperature Acetic acid test)	19 degree to 23 degree C

A.17.03—GROUNDNUT OIL (MOONGHPHALI-KA -TEL) MEANS THE OIL EXPRESSED from clean and sound groundnuts(Arachis hypogoes). It shall be clear, free from rancidity, suspended or other foreign matter, separated water added colouring or flavouring, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	54.0 to 57.1
	Or Refractive Index at 40 degree C.	1.4620-1.4640
(b)	Saponification value	188 to 196
(c)	Iodine Value	85 to 99
(d)	Unsaponifiable matter	Not more than 1.0 per cent.
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature	39 degree C to 41 degree C

Acetic acid method.

A.17.04-LINSEED OIL (Tisi ka tel) means the oil obtained by process of expressing clean and sound linseed (Linum usitatissimum). It shall be clear, free from rancidity, suspended or other foreign matter , separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:-

(a)	Butyro-refractometer reading at 40 degree C.	69.5 to 74.3
	Or Refractive Index at 40 degree C.	1.4720-1.4750
(b)	Saponification value	188 to 195
(c)	Iodine Value	Not less than 170
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 4.0

A.17.05. MAHUA OIL means the oil expressed from clean and sound seeds or nuts of Madhuca (Bassia latofolia or B. longifolia or a mixtur of both). It shall be clear and shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil.

It shall be refined and shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	49.5 to 52.7
	Or Refractive Index at 40 degree C.	1.4590 - 1.4611
(b)	Saponification value	187 to 196
(c)	Iodine Value	58 to 70
(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Acid Value	Not more than 0.50

A.17.06---RAPE-SEED OIL (Toria oil), MUSTARD OIL (Sarson ka tel) means the oil expressed from clean and sound mustard seeds, belonging to the compestris, juncea or napus varieties of Brassica. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.5
	Or Refractive Index at 40 degree C.	1.4646 -1.4662
(b)	Saponification value	168 to 177
(c)	Iodine Value	96 to 12 polybromide test shall be negative
(d)	Unsaponifiable matter	Not more than 1.2 per cent by weight
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	23.0 degree C to 27.5 degree C
(g)	Test for agremone oil	Negative
(h)	Test for Hydrocyanic acid	Negative.

A.17.07.—OLIVE OIL means the oil expressed from the ripe olive fruit (Olea europea). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	53.0 to 56.0
	Or Refractive Index at 40 degree C.	1.4613 -1.4633
(b)	Saponification value	185 to 196

(c)	Iodine Value	79 to 90
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.08. POPPY SEED OIL means the oil expressed from poppy seeds (Papaver somniferum). It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.0 to 64.0
	Or Refractive Index at 40 degree C.	1.4659 -1.4685
(b)	Saponification value	186 to 194
(c)	Iodine Value	133 to 143
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.09.----SAFFLOWER SEED OIL.. (barrey ka tel) means the oil expressed from the seeds of Carthamus tinctorius. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	62.4 to 64.7
	Or Refractive Index at 40 degree C.	1.4674 - 1.4689
(b)	Saponification value	186 to 196
(c)	Iodine Value	135 to 48
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test Turbidity temperature Acetic acid method.	Not more than 16 degree C

A.17.10.---- TARAMIRA OIL means the oil expressed from clean and sound seeds of Taramira (Eruca sativa). It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 60.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4659
(b)	Saponification value	174 to 177
(c)	Iodine Value	99 to 105
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0

A.17.11.---- TIL OIL (Gingelly or sesame oil) means the oil expressed from clean and sound seeds of Til (Sesamum indicum), black , brown , white or mixed. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances, or mineral oil. It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.0 to 61.0
	Or Refractive Index at 40 degree C.	1.4646 -1.4665
(b)	Saponification value	188 to 193
(c)	Iodine Value	103 to 120
(d)	Unsaponifiable matter	Not more than 1.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

Provided that the oil obtained from white sesame seeds grown in Tripura, Assam and West Bengal shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	60.5 to 65.4
	Or Refractive Index at 40 degree C.	1.4662 -1.4694
(b)	Saponification value	185 to 190
(c)	Iodine Value	115 to 120
(d)	Unsaponifiable matter	Not more than 2.5 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	Not more than 22 degree C

A.17.12—NIGER SEED OIL (Sargiya ka tel) means the edible oil obtained by process of expressing clean and sound seeds of Guizotia abyssinica. It shall be clear and free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances mineral or other oil. It shall conform to the following standars :

(a)	Butyro-refractometer reading at 40 degree C.	61.0 to 65.0
	Or Refractive Index at 40 degree C.	1.4665-1.4691
(b)	Saponification value	188 to 193
(c)	Iodine Value	110 to 135
(d)	Unsaponifiable matter	Not more than 1.0 per cent
(e)	Acid Value	Not more than 6.0
(f)	Bellier test (Turbidity temperature Acetic acid method.)	25 degree to 29degree C

A.17.13.--- SOYABEAN OIL means the expressed from clean and sound soyabeans (Soja max) from which the major portion of the gums naturally present have been removed by hydration and mechanical or physical separation. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil.

It shall conform to the following standards :

(a)	Butyro-refractometer reading at 40 degree C.	58.5 to 68.0
	Or Refractive Index at 40 degree C.	1.4649-1.4710
(b)	Saponification value	189 to 195
(c)	Iodine Value	120 to 141
(d)	Unsaponifiable matter	Not more than 1.5per cent
(e)	Acid Value	Not more than 2.5
(f)	Phosphorus	Not more than 0.02 per cent

A.17.14.---MAIZE (Corn) OIL means the oil, extracted from the gram of clean and sound seeds of Zea mays Linn. Fam Graminiae, refined. It shall be free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards:

(a)	Butyro-refractometer reading at 40 degree C.	56.7 to 62.5
	Or Refractive Index at 40 degree C.	1.4637 - 1.4675
(b)	Saponification value	187 to 195
(c)	Iodine Value	103 to 128
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
(e)	Acid Value	Not more than 0.50

A.17.15.--- REFINED VEGETABLE OIL means any vegetable oil which is obtained by expression or solvent extraction of vegetable oil bearing materials, deacidified with alkali and/or physical refining and /or by miscella refining using permitted food grade solvents followed by bleaching with absorbent earth and/or carbon and deodourised with steam. No other chemical agent shall be used. The name of the vegetable oil from which the refined oil has been manufactured shall be clearly specified on the label of the container. In addition to the under-mentioned standards, to which refined vegetable oils shall conform to the standards prescribed in these rules for the specified edible oil shall also apply except for acid value which shall be not more than 0.5. Moisture shall not exceed 0.10 per cent by weight.

A.17.15.01.--- INTERESTERIFIED VEGETABLE FAT means an edible fatty material that has been so treated as to bring about a rearrangement of fatty acid positions within the glyceride entities and hence a change in the physical properties like melting point, viscosity, specific gravity and the like with very little change in the constitution of the fatty acids themselves by a process of interesterification of the essentially neutral edible oil or fat, singly or in mixtures generally through the use of alkaline catalysts exemplified by sodium or potassium metals, or their ethoxides or hydroxides in the form either of anhydrous powders or in anhydrous glycerol medium followed by such post-process steps as washing, bleaching and deodorisation, the last of which can be omitted if the interesterified fat is to be incorporated as part of the raw material for further processing in edible fat products.

The interesterified fat shall be clear, free from soap, flavouring substances, rancidity, suspended or other foreign matters, separated water and mineral oil. It shall conform to the following standards, namely :-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health;

(ii) No colour shall be added to interesterified far unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used , it shall be distinct from that of ghee in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 ppm . may be added to interesterified fat exclusively meant for consumption by the Armed Forces;

(\iv) It shall not have moisture exceeding 0.25 per cent;

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive;

(vi) The Butyro-refractometer reading at 40 degree C, shall not be less than 48; or Refractive Index at 40 degree shall not be less than 1.4580.

(vii) It shall not have unsaponifiable matter exceeding 2.0 per cent;

(viii) It shall not have free fatty acids (calculated as Oleic acid) exceeding 0.25 per cent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell;

(x) It shall contain raw or refined sesame (til) oil not less than 5 per cent by weight, but sufficient so that when it is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin Test shall not be lighter than 2.0 red units in a 1 cm, cell on a Lavibond scale;

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A" per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony. Trichloride (Carr-Price) reagent (as per IS: 5886-1970);

(xii) No anti-oxidant, synergist, emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

A.17.16—ALMOND OIL means the expressed from the seeds of Prunus amygdalus Batach, var, dulcis Koehne (sweet almond) or of Prunus amygdalus Batach, var, Amara Focke (bitter almond) without the application of heat. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substance or mineral oil. It shall conform to the following standards:-

Butyro-refractometer reading at 40 degree C	54.0 to 57.0
or Refractive Index at 40 degree C	1.4620 - 1.4639
Saponification value	186 to 195
Iodine value	90 to 109
Acid value	Not more than 6.0
Bellier's test (Turbidity temperature --- Acetic acid method)	Not more than 60 degree C

A.17.17.—WATER-MELON SEED OIL means the oil extracted from the clean, sound seeds of the fruit of water-Melon (Citrullus vulgaris Schard) (Family:Cucurbitaceae). It shall be clear, free from rancidity, adulterants, sediments, suspended and other foreign matter, separated water, added colouring and flavouring substances and mineral oil. It shall conform to the following standards:-

(a)	Moisture and volatile matter.	Not more than 0.25 per cent.
(b)	Butyro-refractometer reading at 40 degree C	55.6 to 61.7
	or Refractive Index at 40 degree C	1.4630- 1.4670
(c)	Saponification value	190 to 198
(d)	Iodine value	115-125
(e)	Acid value	Not more than 6.0
(f)	Unsaponifiable matter	Not more than 1.5 per cent.

A.17.18.--- IMPORTED RAPESEED OIL- (Toria-ka-Tel) means-

(a) the oils obtained from clean and sound rapeseed grown abroad belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction and imported into India or,

(b) the oil produced in India obtained from clean and sound rapeseed belonging to compestries, Juncea, or napus varieties of Brassica by the method of expression or solvent extraction

It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards namely;-

(a)	Butyro-refractometer reading at 40 degree C	51.0-64.8
	or	
	Refractive Index at 40 degree C	1.4600- 1.4690
(b)	Iodine value (Wij's method)	94-126
(c)	Saponification value	166 to 198

(d)	Unsaponifiable matter	Not more than 2.0 per cent.
(e)	Test for argemone oil	Negative
(f)	Test for Hydrocyanic acid (Ferric-Chloride test)	Passes the test
(g)	Acid value	Not more than 6.0
(h)	Bellier test (Turbidity temperature --- Acetic acid method)	Not more than 19.0 degree C.

Rapessed oil imported into India or rapessed oil obtained by solvent extraction shall be supplied for human consumption only if it is refined and it shall conform to the standards laid down under item A.17.15 except for free fatty acid content which shall not be more than 0.3 per cent (Acid value being not more than 0.6) Additionally , it shall have Flash point (Pensky Marten closed method) not less than 250 degree C.

A.17.19---PALM OIL – Palm oil means the oil obtained from fleshy mesocarp of fruits of the oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 50 degree C	35.5-44.0
	or	
	Refractive Index at 50 degree C	1.4491-1.4552
(b)	Melting point (capillary slip method)	Not more than 37 degree C.
(c)	Iodine value (Wij's method)	45-56
(d)	Saponification value	195-205
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
(g)	Acid value	Not more than 10.0

Indigenously produced Raw Palm Oil obtained by method of expression may be supplied for human consumption as such provided acid value is not more than 6.0. But palm oil imported into the country or produced by solvent extraction shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under A.17.15. Additionally, it shall have Flash Point (Pensky-Marten closed method)—Not less than 250 degree C.

A.17.20---PALMOLEIN.- Palmolein means the liquid fraction obtained by fractionation of palm oil obtained from fleshly mesocarp of fruits of oil palm (Elaeis guineensis) tree by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substances or mineral oils. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C	43.7-52.5
	or	
	Refractive Index at 40 degree C	1.4550-1.4610
(b)	Iodine value (Wij's method)	54-62.
(c)	Saponification value	195-205
(d)	Cloud point	Not more than 18 degree C.
(e)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further , if the palmolein is obtained from solvent extracted plam oil, it shall be refined before it is supplied for human consumption and it shall conform to the standards laid down under item A.17.15. Additionally, it shall have Flash Point (Pensky Marten closed method)- not less than 250 degree C.

A.17.21.--- PALM KERNEL OIL means the oil obtained from sound palm kernel of the fruits of oil palm (Elaeis Guineensis) tree by the method of expression or solvent extraction. It shall be clear , free from rancidity, suspended or other foreign matter, separated water, added colouring and flavouring substance or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	35.3-39.5
	Refractive Index at 40 degree C	1.4494—1.4520
(b)	Iodine value (Wij's method)	10-23
(c)	Saponification value	237-255
(d)	Unsaponifiable matter	Not more than 1.2 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under item A.17.15. Additionally it shall have Flash Point (Pensky Marten closed method)-not less than 250 degree C.

A.17.22—SUNFLOWER SEED OIL means the oil obtained from clear and sound sunflower seeds or cake from the plants. Helianthus annus linn (Family; Composite) by the method of expression or solvent extraction. It shall be clear, free from rancidity, suspended or other foreign matter, separated water, added colouring or flavouring substances or mineral oil. It shall conform to the following standards, namely:-

(a)	Butyro-refractometer reading at 40 degree C or	57.1 --- 65.0
	Refractive Index at 40 degree C	1.4640--1.4691
(b)	Iodine value (Wij's method)	100-145
(c)	Saponification value	181-194
(d)	Unsaponifiable matter	Not more than 1.5 per cent.
	Acid value	Not more than 6.0

Further, if the oil is obtained by the method of solvent extraction, it shall be supplied for human consumption only after refining and shall conform to the standards laid down under Item A.17.15. Additionally, it shall have Flash point (Pensky Marten closed method)-not less than 250 degree C.

A.17.23---RICE BRAN OIL means the oil obtained from the layer around the endosperm of rice obtained from paddy of Oryza Sativa Linn. Fam.,Gramineae, which is removed during the process of rice milling and is generally known as rice bran.

Refined Rice Bran Oil shall be obtained from solvent extracted oil, neutralised with alkali, bleached each or activated carbon or both and deodorised with steam. Alternatively deacidification, bleaching and deodorisation may be done by physical means.

The oil shall be clear and free from rancidity, adulterants, sediments, suspended and other foreign matters, separated water and added colouring and flavouring substances. The clarity of the oil shall be judged by the absence of turbidity after keeping the filtered sample at 35 degree C for 24 hours. Rice Bran oil shall be sold for human consumption only after refining. It shall conform to the following standards, namely:-

(i)	Moisture and volatile matter	Not more than 0.1 per cent by weight.

(ii)	Refractive Index at 40 degree C or	1.4600 to 1.4700
	Butyro-refractometer reading at 40 degree C	51.0 to 66.4
(iii)	Saponification value	180-195
(iv)	Iodine value (Wij's method)	90—105
	Acid value	Not more than 0.5 per cent
(vi)	Unsaponifiable matter	Not more than 3.5 per cent.
(vii)	Flash point (Penske Marten closed method	Not less than 250 degree C.

A.17.24---BLENDED EDIBLE VEGETABLE OIL means an admixture of any two edible vegetable oils where the proportion by weight of any edible vegetable oil used in the admixture is not less than 20 per cent. The individual oils in the blend shall conform to the respective standards prescribed by these rules. The blend shall be clear, free from rancidity, suspended or insoluble matter or any other foreign matter, separated water, added colouring matter, flavouring substances, mineral oil, or any other animal and non-edible oils, or fats, argemone oils, hydrocyanic acid, castor oil and tricresyl phosphate. It shall also conform to the following standards, namely:-

(a)	Moisture and volatile matter	Not more than 0.2 per cent by weight.
(b)	Acid value:-	

	Nature of oils (1)	Acid value (2)
(1)	Both raw edible vegetable oil s in the Blend	Not more than 6.0
(2)	One raw edible vegetable oil and one refined edible vegetable oil in the Blend	Not more than 5.0
(3)	Both refined edible vegetable oils in the Blend	Not more than 0.5
	(c) Unsaponifiable matter----	
	(i) Blend with rice bran oil	Not more than 3.0 per cent by weight.
	(ii) Blend with other edible Vegetable oils.	Not more than 1.50 per cent by weight.
	(d) Flash point (Penske-Martin closed method)	Not less than 250 degree C

A.17.25. PARTIALLY HYDROGENATED AND WINTERISED SOYABEAN OIL---Partially Hydrogenated and winterised soyabean oil means deodourised product obtained by light (mild or "Brush") hydrogenation of degummed ,deacidified, decolourised and winterised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted for food grade solvent, decolourised with bleaching earth and/ or carbon, partially hydrogenated using nickel catalyst, winterised with or without the use of a food grade solvent, filtered in a suitable filter press and deodourised with steam.

The product shall be clear, free from rancidity , suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil and other vegetable and animal fats. Antioxidants TBHQ up to 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards:

(1)	Moisture	Not more than 0.1 per cent by weight.

(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4690 55.6---64.8
(4)	Saponification value	189---195
(5)	Iodine value	107-120
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point degree C	Not less than 10 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

A.17.26--- PARTIALLY HYDROGENATED SOYABIN OIL -- Partially Hydrogenated soyabean oil means deodourised product obtained by light (mild or '"brush") hydrogenation of degummed, deacidified and decolourised soyabean oil. The oil shall be degummed by water with or without a food grade additive, deacidified by either neutralisation with alkali or steam distillation (physical refining) or miscella refining using permitted food grade solvent, decolourised with bleaching earth and /or carbon and partially hydrogenated using nickel catalyst. The product shall again be deacidifed, bleached and deodourised with steam.

The product shall be clear liquid at 35 degree C. It shall be clear on melting, free from rancidity suspended or other foreign matter, separated water, added colouring or flavouring substances, castor oil, mineral oil or other vegetable and animal oils and fats. Antioxidants TBHQ upto 0.02 per cent and citric acid up to 0.02 per cent may be added and shall be so stated on the label. It shall conform to the following standards :

(1)	Moisture	Not more than 0.1 per cent by weight.
(3)	Refractive Index at 40 degree C or Butyro-refractometer reading at 40 degree C	1.4630 to 1.4670 55.6---61.7
(4)	Saponification value	189---195
(5)	Iodine value	95-110
(6)	Acid value	Not more than 0.50
(7)	Unsaponifiable matter	Not more than 1.5 per cent by weight.
(8)	Linolenic acid (c 18:3)	Not more than 3 per cent by weight.
(9)	Cloud Point	Not less than 25 degree C.
11	Flash point (Penske Marten closed method)	Not less than 250 degree C.

Note:- The edible oils prescribed under item A.17 shall be free from Castor oil.

A.18.—CEREALS

A.18.01.---ATTA OR RESULTANT ATTA means the coarse product obtained by milling or grinding clean wheat free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent,
(b)	Total ash (on dry weight basis).	Not more than 2.0 per cent.
(c)	Ash insoluble in dilute HCI (on dry weight basis).	Not more than 0.15 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.01.01--- FORTIFIED ATTA means the product obtained by adding one or more of the following materials to atta, namely----

(a) Calcium carbonate (prepared chalk, popularly known as Creta preparata);
(b) Iron;
(c) Thiamine;
(d) Riboflavin; and
(e) Niacin.

The calcium carbonate powder, if added for fortification shall be in such amount that 100 parts by weight of fortified atta shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.01.02---PROTEIN RICH (PAUSHTIK) ATTA means the product obtained by mixing wheat atta with groundnut flour or Soya flour or a combination of both up to an extent of 10.0 per cent Soya flour which is a solvent extracted soya flour used in such mix shall conform to the standards of Soya flour laid down under item A.18.15. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matter.

It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent on dry basis.
Total ash	Not more than 2.75 per cent. on dry basis.
Ash insoluble in dilute HCI	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 2.5 per cent on dry basis.
Alcoholic acidity (with 90 per cent alcohol)-expressed as H_2SO_4	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

A.18.02.--MAIDA means the fine product made by milling or grinding clean wheat free from rodent hair and excreta and bolting or dressing the resulting wheat meal. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130-133 degree C for 2 hours).	Not more than 14.0 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 7.5 per cent.
(e)	Alcoholic acidity (with 90 per cent alcohol) expressed as H_2SO_4 (on dry weight basis)	Not more than 0.12 per cent.

It shall be free from Rodent hair and excreta.

If the product is to be used for bakery purposes, the following flour treatment agents in the quantities mentioned against each may be used, namely:-

(i)	Benzoyl peroxide (Max.)	40 p.p.m.
(ii)	Potassium bromate (Max.)	20 p.p.m.
(iii)	Ascorbic acid (Max.)	200 p.p.m.

A.18.02.01.-- FORTIFIED MAIDA means the product obtained by adding one or more of the following materials to maida, namely:-

(a) Calcium carbonate (preparated chalk popularly known as Creta preparata),
(b) Iron,
(c) Thiamine,
(d) Riboflavin, and
(e) Niacin.

The calcium carbonate powder, if added for fortification, shall be in such amount that 100 parts by weight of fortified madia shall contain not less than 0.30 and not more than 0.35 parts by weight of calcium carbonate. It shall be free from Rodent hair and excreta.

A.18.02.02----PROTEIN RICH (PAUSHTIK) MAIDA means the product obtained by mixing maida (wheat flour) with groundnut flour or Soya flour or combination of both up to an extent of 10.0 per cent. Soya flour which is a solvent extracted flour used in such mix shall conform to the standards of soya flour laid down under Solvent Extracted Oil, Deoiled Meal and Edible Flour (Control) Order, 1967. It shall be free from insect or fungus infestation, odour and rancid taste. It shall not contain added flavouring and colouring agents or any other extraneous matters. It shall conform to the following standards :-

Moisture	Not more than 14.0 per cent.
Total Ash	Not more than 1.4 per cent.
Ash insoluble in dilute HCl	Not more than 0.1 per cent on dry basis.
Total protein (N x 6.25)	Not less than 12.5 per cent on dry basis.
Crude fibre	Not more than 0.53 per cent on dry basis.
Alchoholic acidity (with 90 Per cent alcohol) expresed As H2SO4	Not more than 0.12 per cent.
Gluten	Not less than 7.0 per cent on dry basis.

It shall be free from Rodent hair and excreta.

A.18.03.----SEMOLINA (SUJI or RAWA) means the product prepared from clean wheat free from rodent hair and excreta by process of grinding and bolting. It shall be free from musty smell and off-odour and shell be creamy yellow in colour. It shall conform to the following standards:-

(a)	Moisture (when determined by hearing at 130-133 degree C for 2 hours).	Not more than 14.5 per cent.
(b)	Total ash (on dry weight basis)	Not more than 1.0 per cent.
(c)	Ash insoluble in dilute HCl (on dry weight basis)-	Not more than 0.1 per cent.
(d)	Gluten (on dry weight basis)	Not less than 6.0 per cent.

(e)	Alcoholic acidity (with 90 per cent Alcohol) expressed as H2SO4 (on dry weight basis)	Not more than 0.18 per cent.

It shall be free from Rodent hair and excreta.

A.18.04---BESAN means the product obtained by grinding dehusked Bengal gram (Cicer arietinum) and shall not contain any added colouring matter on any other foreign ingredient.

Besan shall conform to the following standards:-

(a)	Total ash	Not more than 5 per cent.
(b)	Ash insoluble in dilute Hydrocholoric acid	Not more than 0.5 per cent.

A.18.05.---PEARL BARLEY or BARLEY (JAU) shall be the product obtained from sound and clean barley (Hordeum vulgare or Hordeum distichon). It shall be whitish in colour and shall be free from fermented, musty or other objectionable taste or odour, adulterants and insect and fungus infestation and rodent contamination. It shall not contain other foodgrains more than 1 per cent by weight.

Barley powder shall be the product obtained by grinding clean and sound dehusked barely (Hordeum vulgare or Hordeum distichon) grains. Barley starches shall not be less than 98.0 per cent by weight.

Barley powder shall also conform to the following standards, namely:-

(i)	Total ash (on dry basis)	Not more than 1.0 per cent;
(ii)	Ash insoluble in dilute hydro-chloric acid(on dry basis)	Not more than 0.1 per cent;
(iii)	Crude fibre (on dry basis)	Not more than 0.5 per cent;
(iv)	Alcoholic acidity (as H2SO4 with 90 per cent alcohol)	Not more than 0.10 per cent.

A.18.05.01---WHOLE MEAL BARLEY POWDER OR BARLEY FLOUR OR CHOKER yukt Jau ka Churan means the product obtained by grinding clean and sound dehusked barley (Hordeum vulgare or Hordeum vulgare or Hordeum distichun) grains free from rodent hair and excreta. It shall conform to the following standards:-

(a)	Moisture (when determined by heating at 130 degree-133 degree C for 2 hours)	Not more than 14.0 per cent
(b)	Total ash (on dry weight basis)	Not more than 3.0 per cent.
(c)	Ash insoluble in dilute (HCI) (on dry weight basis)	Not more than 0.5 per cent.
(d)	Alcoholic acidity (with 90 per cent alcohol) expressed as H2SO4 (on drZy weight basis)	Not more than 0.17 per cent.

A.18.06.—FOODGRAINS means for human consumption shall be whole or broken kernels of cereals, millets and pulses. In addition to the undermentioned standards to which foodgrains shall confrom they shall be free from argemone maxicana and kesari in any form. They shall be free from added colouring matter. The foodgrains shall not contain any insecticide residues other than those specified in coloumn (2) of the table of Rule 65 and the amount of insecticide residue in the foodgrains shall not exceed the limits specified in column (4) of the said Table.

The foodgrains meant from grinding/processing shall be clean, free from all impurities including foreign matter(extraneous matter).

A.18.06.01.----WHEAT

Description---Wheat shall be the dried mature grains of Triticum aestivvum Linn. or Triticum vulgare vill, Triticum durum Desf, Triticum sphaerococcum perc. Triticum dicoccum schubl, Triticum Compactum Host. It shall be sweet, clean and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture-Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C-133 degree C for two hours.)
(ii) Foreign matter (Extraneous matter) – Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains --- Not more than 6 per cent by weight.
(iv) Damaged grains- Not more than 6.0 per cent by weight including kernel bunt affected grains and ergot affected grains. The limit of kernel bunt affected grains, ergot affected grains shall not exceed 3.0 per cent and 0.05 per cent by weight, respectively.
(v) Weevvilled grains—Not more than 10 per cent by count.
(vi) Uric acid- Not more than 100 mg. per kg.
(vii) Aflatoxin – Not more than 30 micrograms per kilogram.

Deoxynivalenol (DON)—Not more than 1000 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 12 per cent by weight.

A.18.06.02-----MAIZE

Maize shall be the dried mature grains of Zea mays Linn. It shall be sweet, hard, clean and wholesome . It shall also conform to the following stanadards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight.
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflaoxin-Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.03- JAWAR AND BAJRA

Jawar and Bajra shall be the dried mature grains of Sorghum Volgare Pers, and Pennisetum-typhyoideum Rich respectively. These shall be sweet, hard, clean and wholesome. These shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 6 per cent by weight out of which ergot affected grains shall not exceed 0.05 per cent by weight.
(v) Weevilled grains- Not more than 6 per cent by weight.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent by weight.

A.18.06.04.-----RICE

Rice shall be the mature kernels or pieces of kernels of Oryza sativa Linn obtained from paddy as raw or parboiled. It shall be dry , sweet, clean, wholesome and free from unwholesome poisonous substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16.0 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Damaged grains---Not more than 5 per cent by weight
(iv) Weevilled grains- Not more than 10 per cent by count.
(v) Uric acid-Not more than 100 mg per kg.
(vi) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter and damaged grains shall not exceed 6 per cent by weight.

A.18.06.05---- MASUR WHOLE

Masur whole shall consist of lentil (Lens, culinaris Medik or Ervum lens Linn, or Lens esculenta Moench). It shall be sound , dry , sweet, clean and wholesome . It shall conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 3 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A.18.06.06.----URD WHOLE

Urd whole shall consist of seeds of the pulses (Phaseolus Mungo Linn). It shall be sound, dry, sweet and wholesome. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Weevilled grains- Not more than 6 per cent by count.
(v) Damaged grains---Not more than 5 per cent by weight
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.07--- MOONG WHOLE

Moong whole shall consist of seeds of green gram (Phaseolus aurues Roxb, Phaseolus radiatus Roxb). It shall be sound, dry, sweet and wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised pulses at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 6 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.08.---- CHANA WHOLE

Chana whole shall be the dried grains of gram (Cicer arietinum Linn). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 16 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.

(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 10 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 9 per cent by weight.

A.18.06.09--- SPLIT PULSE (DAL) ARHAR

Dal arhar shall consisit of husk and split seeds of red gram Cajanus cajan (L) Millsp. It shall be sound, clean, sweet, dry , wholesome and free from admixture of unwholesome substance. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 0.5 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 6 per cent by weight.

A.18.06.10.---SPLIT PULSE (DAL) MOONG

Dal Moong shall consist of split seeds of green grams (Phaseolus aureus Roxb, Phaseolus radiatus Roxb). It shall be sound, clean, sweet, wholesome and free from unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture—Not more than 14 per cent by weight (obtained by heating the pulverised grains at 130 degree C –133 degree C for two hours).
(ii) Foreign matter (Extraneous matter)—Not more than 1 per cent by weight of which not more than 0.25 per cent by weight shall be mineral matter and not more than 0.10 per cent by weight shall be impurities of animal origin.
(iii) Other edible grains---Not more than 4 per cent by weight.
(iv) Damaged grains---Not more than 5 per cent by weight
(v) Weevilled grains- Not more than 3 per cent by count.
(vi) Uric acid-Not more than 100 mg per kg.
(vii) Aflatoxin—Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 per cent by weight.

A-18.06.11. - SPLIT PULSE (DAL) URD

Dal Urd shall consist of split seeds of pulse (Phaseolus mungo Linn). It shall be sound, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 4 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 8 percent by weight.

A.18.06.12. - DAL CHANA

Dal Chana shall consist of split grains of gram (Cicer arietinum Linn). It shall be sound,clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.13. - SPLIT PULSE (DAL) MASUR

Dal Masur shall consist of dehusked whole and split seed of the lentil (Lens esculenta Moench or Lens culinaris Medik or Ervum lens Linn). It shall be sound, clean, dry, sweet, wholesome and free from admixture of unwholesome substances. It shall also conform to the following standards, namely:-

(i) Moisture - Not more than 14 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 2 percent by weight.

(iv) Damaged grains - Not more than 5 percent by weight.

(v) Weevilled grains - Not more than 3 percent by count.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall not exceed 7 percent by weight.

A.18.06.14. - ANY OTHER FOODGRAINS not specified above shall conform to the following standards, namely:-

(i) Moisture - Not more than 16 percent by weight (obtained by heating the pulverised pulses at 130 degree C -133 degree C for two hours).

(ii) Foreign matter (Extraneous matter) - Not more than 1 percent by weight of which not more than 0.25 percent by weight shall be mineral matter and not more than 0.10 percent by weight shall be impurities of animal origin.

(iii) Other edible grains - Not more than 6 percent by weight.

(iv) Weevilled grains - Not more than 10 percent by count.

(v) Damaged grains - Not more than 5 percent by weight.

(vi) Uric acid - Not more than 100 mg per kg.

(vii) Aflatoxin - Not more than 30 micrograms per kilogram.

Provided that total of foreign matter, other edible grains and damaged grains shall exceed 12.0 percent by weight.

Explanation - For the purposes of Items 18.06 to 18.06.14:-

(a) "foreign matter" means any extraneous matter other than foodgrains comprising of -

(i) inorganic matter consisting of metallic pieces, sand, gravel, dirt, pebbles, stones, lumps of earth, clay and mud, animal filth and in the case of rice, kernels or pieces of kernels, if any, having mudsticking on the surface of the rice, and

(ii) organic matter consisting of husk, strawes weedseeds and other inedible grains and also paddy in the case of rice.

(b) "Poisonous, toxic and /or harmful seeds" means any seeds which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as dhatura (D.fastuosa linn and D. stramonium linn), corm cokle (Agrostemma githago L, Machai Lallium remulenum linn), Akra (Vicia species).

(c) "Damaged grains" means kernels or pieces of kernels that are sprouted or internally damaged as a result of heat, microbe, moisture or weather, viz., ergot affected grain and kernel bunt grains.

(d) "Weevilled grains" means kernels that are partially or wholly bored by insects injurious to grains but does not include germ eaten grains and egg spotted grains.

(e) "Other edible grains" means any edible grains (including oil seeds) other than the one which is under consideration.

A.18.07. - BISCUITS INCLUDING WAFER BISCUITS shall be made from maida, vanaspati or refined edible oil or table butter or deshi butter or margarine or ghee or their mixture. It may contain any one or more of the following ingredients, namely:-

Edible common salt; permitted anti-oxidants; emulsifying and stabilizing agents; permitted preservatives and colours; leavening agents such as baking powder; ammonium bicarbonate; ammonium carbonate; butter milk powder; cereals and their products; cheese; citric acid; cocoa; coffee extract; edible desiccated coconut; dextrose; fruits and fruit products; dry fruit and nuts; egg; edible vegetable products; amylases and other enzymes; permitted flavouring agents; flavour improvers and fixers; flour improvers; ginger; gluten; groundnut flour milk and milk products; honey; jellyfying agents; liquid glucose; malt products edible oilseeds; flour and meals; spices and condiments; edible starches such as potato starch and edible flour; sugar and sugar products; invert sugar; jaggery, protein concentrates and other nutrients; sodium bisulphites, sodium metabisulphite and other dough conditioners; vitamins; calcium and ferrous salts; potassium iodide, malic and lactic acids; tartaric acid; vinegar and acetic acid; yeast. Biscuits shall conform to the following standards, namely:-

(a) Ash insoluble in dilute hydrocholoric acid (on dry basis) shall not be more than 0.1 percent.
(b) Acidity of extracted fat (as oleic acid) shall not exceed 1.5 percent.

A.18.08 - Cornflour(Maize starch) means the starch obtained from maize (Zea mays L). It shall contain no added colour, flavours or other chemicals. It shall be free from dirt, insects, larvae and impurities or other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 0.5 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent, on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0 ml. of NNaOH per 100 g. of dried starch.

A.18.09. - CORN FLAKES means the product obtained from dehulled, degermed and cook corn (Zea mays L.) by flaking, partially drying and toasting. It shall be in the form of crisp flakes or reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 7.5 percent.
Total ash excluding salt	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Alcoholic acidity (with 90 percent alcohol)	Shall be equivalent to not more than 2.0ml. of N NaOH per 100 g. of dried substance.

A.18.10 - CUSTARD POWDER means the product obtained from maize (Zea mays L.) or sago/tapioca with or without the addition of small quantities of edible starches obtained from arrowroot, potato or jawar (sorghum vulgare) and with or without the addition of edible common salt, milk and albuminous matter. It may contain permitted colours and flavours. It shall be free from any other foreign matter. It shall be in the form of fine powder, free from rancidity, fermented and musty odour.

It shall conform to the following standards, namely:-

Moisture	Not more than 12.5 percent.
Total ash excluding added Common salt(on dry basis)	Not more than 0.5 percent.
Ash insoluble in dilute Hydrochloric acid(on dry basis)	Not more than 0.1 percent.

A.18.11. - MACARONI PRODUCTS - (Macaroni, spaghetti, vermicelli) means the products obtained from suji or maida with or without addition of ingredients like edible groundnut flour, tapioca flour, soya flour, milk powder, spices, vitamins, minerals by kneading the dough and extending it. It shall be free from added colour, dirt, insects, larvae and impurities or any other extraneous matter.

It shall conform to the following standards:-

Moisture	Not more than 12.5 percent.
Total ash	Not more than 1.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.7 percent on dry basis.

A.18.12.- MALTED MILK FOOD means the product obtained by mixing whole milk, partly skimmed milk or milk powder with the wort separately from a mash of ground barley malt, any other malted-cereal grain and wheat flour or any other cereal flour or malt extract with or without addition of flavouring agents and spices, emulsifying agent, eggs, protein isolates, edible common salt, sodium or potassium bicarbonate, minerals and vitamins and without added sugar in such a manner as to secure complete hydrolysis of starchy material and prepared in a powder or granule or flake form by roller drying, spray drying, vaccum drying or by any other process. It may contain cocoa powder. It shall be free from dirt and other extraneous matter. it shall not contain any added starch (except starch natural to cocoa powder) and added non-milk fat. It shall not contain any preservative or added colour. Malted milk food containing cocoa powder may contain in added sugar.

Malted milk food shall also conform to the following standard, namely:-

	Malted Milk food without	Malted Milk food with

	cocoa powder	cocoa powder
(a) Moisture	Not more than 5 percent by weight.	Not more than 5 percent by weight.
(b)Total protein (Nx 6.25)	Not less than 12.5 percent By weight.	Not less than 11.25 percent By weight.
(c) Total fat (on dry basis)	Not less than 7.5 percent by weight	Not less than 6 percent by weight
(d) Total ash (on dry basis)	Not more than 5 percent by weight	Not more than 5 percent by weight
(e) Acid insoluable ash (on dry basis)(in dilute HCl)	Not more than 0.1 percent by weight	Not more than 0.1 percent by weight
(f) Solubility	Not less than 85 percent by weight	Not less than 80 percent by weight
(g) Cocoa powder (on dry basis)	---	Not less than 5.0 percent by weight
(h) Test for starch	Negative	---
(i) Bacterial Count	Not more than 50,000 per gram	Not more than 50,000 per gram
(j) Coliform Count	Not more than 10 per gram	Not more than 10 per gram

A.18.12.01 - MALT BASED FOODS (MALT FOOD) means the product obtained by mixing malt (wort or flour or malt extract) of any kind obtained by controlled germination of seeds (cereals and/or grain legumes), involving mainly steeping germination and kiln drying processes with other cereal and legume flour with or without whole milk or milk powder, flavouring agents, spices emulsifying agents, eggs, egg powder, protein isolates, protein hydolysates, edible common salt, liquid glucose, sodium or potassium bicarbonate minerals, amino acids and vitamins. It may contain added sugar and /or cocoa powder and processed in such a manner to secure partial or complete hydrolysis of starchy material in the form of powder or granules or flakes by drying or by dry mixing of the ingredients. The grains, legumes and their products used in preparation of malt shall be sound uninfested and free from insect fragments, rat excreta, fungal infested grains or any other type of insect or fungal damage.

It shall also conform to the following standards, namely:

(a)	Moisture	Not more than 5 percent, by weight
(b)	Total Protein (Nx6.25) (on dry basis)	Not more than 7.0 percent by weight
(c)	Total ash (on dry basis)	Not more than 5 percent by weight
(d)	Acid insoluble ash (in dilute HCl)	Not more than 0.1 percent, by weight
(e)	Total plate count	Not more than 50,000 per gram
(f)	Coliform count	Not more than 10 per gram.
(g)	Yeast and Mould count	Not more than 100 per gram.
(h)	E. Coli	Absent in 10 gram.
(i)	Salmonella and Shingella	Absent in 25 gram.
(j)	Alcoholic Acidity (expressed as H_2SO_4) with 90 percent alcohol (on dry weight basis)	Not more than 0.30 percent

A.18.13. - ROLLED OATS (Quick-cooking oats) means the product made from sound hulled oats (Avena sativa). It shall be free from added colours, rancidity and falvouring agents. It shall be in form of thin flakes of uniform size having a light cream colour. It shall be free from dirt, insects and insect fragments.

It shall conform to the following standards:-

Moisture	Not more than 10.0 percent.
Total ash	Not more than 2.0 percent on dry basis.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry basis.
Nitrogen	Not less than 1.8 percent on dry basis.
Crude fibre	Not more than 2.0 percent on dry basis.
Alcoholic acidity (with 90	Shall be equivalent to not more than 8.0 ml.
Percent alcohol)	N NaOH per 100 g. of dried substance.

A.18.14 - BREAD - Wheat-meal break (brown bread) and white bread means the products prepared from a mixture of wheat atta, maida, water, salt, yeast or other fermentive medium. It may also contain one or more of the following ingredients, namely:-

Condensed milk, milk powder (whole or skimmed), whey and curd, gluten, sugar gur, laggery, bura, khandsari honey, liquid glucose malt products, edible starches, edible groundnut flour edible soya flour, vanaspati or refined edible oil of suitable type or butter or ghee or their mixture, lecithin, glycerine,glyceryl monosterate, diacetyle tartaric acid ester or mono and diglycerides, albumin lime water,lysine and sorbitol.

It may contain the improvers given below:-

Ammonium persulphate	Not more than 0.25 percent
Calcium phosphate	Not more than 0.25 percent
Calcium carbonate	Not more than 0.5 percent
Potassium bromate	Not more than 0.005 percent
Ammonium choloride	Not more than 0.05 percent
Fungal alpha amylase	Not more than 0.01 percent
sodium steroyl-2 lactylate	
Calcium steroyl-2 lactylate	Not more than 0.5 percent
(singly or in combination)	
L - Cystein monoro hydro-choloride	Not more than 9 p.p.m. by wieght

It may contain one or more of the following mould inhibitors:-

Calcium or sodium propionate	Not more than 0.5 percent
Sorbic acid or its Sodium Potassium	Not more than 0.1 percent
Or calcium salts	
Acetic acid or lactic acid	Not more than 0.25 percent
Vinegar	Not more than 0.5 percent
Acid calcium Phosphate	Not more than 1.0 percent
Sodium diacetate	Not more than 0.4 percent
Acid sodium pyrophosphate	Not more than 0.5 percent

It shall be free from dirt, insect fragments, larvae, rodent hairs and maggots. It shall be free from added colouring matter. It shall conform to the following standards:-

Alcoholic acidity (with 90 percent	Shall be not more than the equivalent
Alcohol)	0f 7.5 ml. N NaOH per 100g. of
	Dried substance.
Ash insoluble in dilute HCl	Not more than 0.1 percent on dry
	Basis.

Crude fibre, on dry weight basis:-

(i)	Wheat meal bread (brown bread)	Not more than 1.8 percent
(ii)	White bread	Not more than 0.5 percent.

It may contain Gur-Gum up to a maximum limit of 0.15 percent by weight.

A.18.15- SOLVENT EXTRACT SOYA FLOUR means the product obtained from clean, sound, healthy soyabeans by a process of cracking, dehulling, solvent extraction with food grade hexane and grinding. It shall be in the form of coarse or fine power or grits, white to creamy white in colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from any added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 7.2 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.4 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 4.2 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.01 - SOLVENT EXTRACTED GROUNDNUT FLOUR means the product obtained from fresh, clean, degermed groundnut kernels which have been decuticled after mild roasting. The kernels shall be first expelled followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be whitish to light brown in colour of unifrom composition and shall be free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.38 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 48 percent by weight on dry basis.
(e)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.02 - SOLVENT EXTRACTED SESAME FLOUR means the product obtained by pressing, clean, sound, healthy and decuticled sesame seeds followed by solvent extraction with food grade hexane or by direct extraction of kernels. It shall be in the form of flour of white or pale creamy white colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.15 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Crude fibre	Not more than 6.0 percent by weight on dry basis.

(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Oxalic Acid content	Not more than 0.5 percent by weight on dry basis.
(k)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.03 - SOLVENT EXTRACTED COCONUT FLOUR means the product obtained from fresh coconut kernels or dried coconut copra of good quality and free from mould. Food grade hexane shall be used for extraction of the oil. It shall be of white or pale brownish yellow colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insects, fungus, rodent hair and excreta. It shall be free from added colour and flavour. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 9.0 percent by weight.
(b)	Total ash	Not more than 6.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Protein (Nx6.25)	Not less than 22.0 percent by weight on dry basis.
(e)	Crude fibre	Not more than 9.0 percent by weight on dry basis.
(f)	Fat	Not more than 1.5 percent by weight on dry basis.
(g)	Total bacterial Count	Not more than 50,000 per gm.
(h)	Coliform bacteria	Not more than 10 per gm.
(i)	Salmonella bacteria	Nil in 25 gm.
(j)	Hexane (Food grade)	Not more than 10.00 ppm.

A.18.15.04 - SOLVENT EXTRACTED COTTON SEED FLOUR means the product obtained by solvent extraction of oil with food grade hexane from oil cake immediately following the single pressing, from cotton seed of good quality which have been pre-cleaned and are free from infected or otherwise damaged materials and extraneous matter. It shall be in the form of flour of white or pale brownish colour, of uniform composition and free from rancid and objectionable odour, extraneous matter, insect, fungus, rodent hair and excreta. It shall be free from added colours and flavours. It shall conform to the following standards, namely:-

(a)	Moisture	Not more than 8.0 percent by weight.
(b)	Total ash	Not more than 5.0 percent by weight on dry basis.
(c)	Ash insoluble in dilute HCl	Not more than 0.35 percent by weight on dry basis.
(d)	Crude Protein (Nx6.25)	Not less than 47 percent by weight on dry basis.
(e)	Available lysine	Not less than 3.6 g. per 100 g. of crude protein.
(f)	Crude fibre	Not more than 5.0 percent by weight on dry basis.
(g)	Free gossypol	Not more than 0.06 percent by weight on dry basis.
(h)	Total gossypol	Not more than 1.2 percent by weight on dry basis.
(i)	Fat	Not more than 1.5 percent by weight on dry basis.
(j)	Total bacterial Count	Not more than 50,000 per gm.
(k)	Coliform bacteria	Not more than 10 per gm.
(l)	Salmonella bacteria	Nil in 25 gm.
(m)	Hexane (Food grade)	Not more than 10.00 ppm.

A.19 VANASPATI means any refined edible vegetable oil or oils, subjected to a process of hydrogenation in any form.. It shall be prepared by hydrogenation from groundnut oil, cotton seed oil and sesame oil or mixture thereof or any other harmless vegetable oils allowed by the Government for the purpose.

Refined sal seed fat, if used, shall not be more than 10 percent of the total oil mix.

It shall conform to the standards specified below:-

(i) It shall not contain any harmful colouring, flavouring or any other matter deleterious to health.

(ii) No colour shall be added to hydrogenated vegetable oil unless so authorised by Government, but in no event any colour resembling the colour of ghee shall be added.

(iii) If any flavour is used, it shall be distinct from that of ghee, in accordance with a list of permissible flavours and in such quantities as may be prescribed by Government.

Provided that diacetyl to the extent of not more than 4.0 p.p.m. may be added to Vanaspati exclusively meant for consumption by the Armed Forces.

(iv) It shall not have moisture exceeding 0.25 percent.

(v) The melting point as determined by capillary slip method shall be from 31 degree C to 41 degree C both inclusive.

(vi) The Butyro-refractometer reading at 60 degree C, shall not be less than 37.0 or Refractive Index at 60 degree C shall not be less than 1.4502.

(vii) It shall not have unsaponifiable matter exceeding 2.0 percent but in case of vanaspati where proportion of rice bran oil is more than 30 percent by weight, the unsaponifiable matter shall be mot more than 2.5 percent by weight provided quantity of rice bran oil is declared on the level of such vanaspati as laid down in clause (zzz)(4) of Rule 42.

(viii) It shall not have free fatty acids (calculated a Oleic acid) exceeding 0.25 percent.

(ix) The product on melting shall be clear in appearance and shall be free from staleness or rancidity, and pleasant to taste and smell.

(x) It shall contain raw or refined sesame (til) oil in sufficient quantity so that when the vanaspati is mixed with refined groundnut oil in the proportion of 20:80, the colour produced by the Baudouin test shall not be lilghter than 2.0 red units in a 1 cm. cell on a Lovibond scale.

(xi) It shall contain not less than 25 I.U. of synthetic Vitamin 'A' per gram at the time of packing and shall show a positive test for Vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagent (as per IS - 5886-1970).

(xii) No anti-oxidant, synergist-emulsifier or any other such substance shall be added to it except with the prior sanction of the Government.

(xiii) It shall not have nickel exceeding 1.5 p.p.m.

A.19.01.- BAKERY SHORTENING means vanaspati conforming to standards prescribed in items A.19 except that -

(a) the melting point as determined by the capillary slip method shall not exceed 41 degree C.

(b) if aerated, only nitrogen, air or any other inert gas shall be used for the purpose and the quantity of such gas incorporated in the product shall not exceed 12 percent by volume thereof;

(c) it may contain added mono-glycerides and diglycerides as emulsifying agents.

A.20 .- VINEGAR means a liquid derived from alcoholic and acetous fermentation of any suitable medium such as fruits, malt, molasses, sugarcane juice, etc.

Vinegar shall conform to the following standards:-

1. It shall contain at least 3.75 grammes of acetic acid per 100 ml.
2. It shall contain at least 1.5 percent w/v of total solids and 0.18 percent of ash.

3. It shall not contain (I) sulphuric acid or any other mineral acids, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
4. Malt vinegar in addition, shall have at least 0.05 percent of phosphorus pentoxide (P2O5) and 0.04 percent of nitrogen.

Brewed vinegar shall not be fortified with acetic acid.

A.20.01.- SYNTHETIC VINEGAR means the product prepared from acetic acid. It shall contain not less than 3.75 grammes of acetic acid per 100 ml.

It shall not contain -

(a) sulphuric or any other mineral acid
(b) lead or copper
(c) arsenic in amounts exceeding 1.5 parts per million
(d) any colouring matter, except caramel.

Synthetic vinegar shall be distinctly labelled as **SYNTHETIC - PREPARED FROM ACETIC ACID**.

A.21.- CATECHU (Edible) shall be the dried aqueous extract prepared from the heart-wood of Acacia catechu. It shall be free from infestation, sand, earth or other dirt and shall conform to the following standards :

(a) 5 ml. of 1 percent aqueous solution, and 0.1 percent solution of ferric ammonium sulphate shall give a dark green colour, which on the addition of sodium hydroxide solution shall change to purple.
(b) When dried to constant weight at 100 degree C, it shall not lose more than 16 percent of its weight.
(c) Water insoluble residue (dried at 100 degree C) shall not be more than 25 percent by weight. Water insoluble matter shall be determined by boiling water.
(d) Alcohol insoluble residue in 90 percent alcohol dried at 100 degree C - not more than 30 percent by weight.
(e) Total ash on dry basis - Not more than 8 percent by weight.
(f) Ash insoluble in HCl - Not more than 0.5 percent on dry weight basis.

Provided that in case of Bhatti Katha, the ash insoluble in dilute hydrochloric acid on dry basis shall not be more than 1.5 percent. The Bhatti Katha be marked as required in sub-rule (12) or Rule 49.

A.22 GELATIN shall be purified product obtained by partial hydrolysis of collagen, derived from the skin, white connective tissues and bones of animals. It shall be colourless or pale yellowish and translucent in the form of sheets, flakes, shreds or coarse to fine powder. It shall have very slight odour and taste but not objectionable which is characteristic and boullion llike. It is stable in air when dry but is subject to microbial decomposition when moist or in solution. It shall not contain -

(a) more than 1.5 percent moisture;
(b) more than 3.0 percent of total ash;
(c) more than 1000 parats per million of sulphur dioxide;
(d) less than 15 percent of nitrogen on dry weight basis.

Gelatin meant for human consumption should be labelled as "Gelatine food Grade".

A.23 and 24. Omitted.

A.25 SWEETS AND CONFECTIONERY:

A.25.01.- SUGAR BOILED CONFECTIONERY whether sold as hard boiled sugar confectionery or pan goods confectionery or toffee or milk toffee or modified toffee or lacto-bon-bon or by any other name shall mean a processed composite food article made from sugar with or without doctoring agents such as cream of tartar, by process of boiling whether panned or not. It may contain centre filling, or otherwise, which may be in the form of liquid semi-solid or solids with or without coating of sugar or chocolate or both. It may also contain any of the following:-

(i) sweetening agents such as sugar invert sugar, jaggery, lactose, gur, bura sugar, khandsari, sorbitol, honey, liquid glucose;
(ii) milk and milk products;
(iii) edible molasses
(iv) malt extracts
(v) edible starches
(vi) edible oils and fats
(vii) edible common salt
(viii) fruit and fruit products and nut and nut products
(ix) tea extract, coffee extract, chocolate, cocoa;
(x) Vitamins and minerals
(xi) Shellac (food grade) not exceeding 0.4 percent by weight bee wax (food grade), paraffin wax (food grade), carnuba wax (food grade), and other food grade wax or any combination therefor of;
(xii) Edible desiccated coconut
(xiii) Spices and condiments and their extracts
(xiv) Candied peels
(xv) Enzymes
(xvi) Sodium bicarbonate
(xvii) Lubricants such as calcium, magnesium or sodium salts of stearic acid, talc (not exceeding 0.2 percent), icing sugar, or food grade mineral oil (not exceeding 0.2 percent by weight), stearic acid (food grade) glycerine (food grade)
(xviii) Permitted anti-oxidants
(xix) Permitted colouring matter
(xx) Permitted stabililzing and emulsifying agents
(xxi) Flavouring agents
(xxii) Acidulants, such as citric acid, tartaric acid malic acid (food grade)
(xxiii) Jellifying agent, such as gelatine (food grade) agar-agar, sodium carboxymethyl cellulose
(xxiv) Permitted preservatives
(xxv) Edible foodgrain,edible seeds
(xxvi) Calcium bicarbonate, calcium carbonate
(xxvii) Baking powder
(xxviii) Gulkand, gulabanafsha, mulathi
(xxix) Puffed rice
(xxx) China grass
(xxxi) Eucalyptus oil camphor, menthol oil crystals, pepper mint oil
(xxxii) Thymol
(xxxiii) Edible oil seed flour and protein isolates
(xxxiv) Gum arabic and other edible gum

It shall not contain artificial sweeteners.

Mineral oil (food grade) if used as a lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards, namely:-

(i) Ash sulphated (on salt free basis) - Not more than 2.5 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash sulphated shall not be more than 3 percent by weight.

(ii) Ash insoluble (in dilute Hydrochloric acid) - Not more than 0.2 percent by weight.

Provided that in case of sugar boiled confectionery where spices are used as centre filling, the ash insoluble in dilute Hydrochloric acid shall not be more than 0.4 percent.

Where the sugar boiled confectionery is sold under the name of milk toffee, and butter toffee, it shall conform to the following additional requirements as shown against each.

(1) Milk toffee -
- (i) Total protein (N X 6.25) shall not be less than 3 percent by weight on dry basis.
- (ii) Fat content shall not be less than 4 percent by weight on dry basis.

(2) Butter toffee - fat content shall not be less than 4 percent by weight on dry basis. It may contain sulphur dioxide in concentration not exceeding 350 parts per million;

A.25.02.LOZENGES: Lozenges shall mean confections made mainly out of pulverised sugar, or icing sugar with binding materials such as edible gums, edible gelatine, liquid glucose or dextrin and generally made from cold mixing which does not require primary boiling or cooking of the ingredients. It may contain any of the following:-

- (i) sweetening agents such as dextrose, dextrose-mononydrate, honey, invert sugar, sugar, jaggery, bura sugar, khandsari, sorbitol, liquid glucose;
- (ii) milk and milk products;
- (iii) nuts and nuts products;
- (iv) malt syrup;
- (v) edible starches;
- (vi) edible common salt;
- (vii) ginger powder or extracts;
- (viii) cinnamon powder or extracts;
- (ix) aniseed powder or extracts;
- (x) caraway powder or extracts;
- (xi) cordamom powder or extracts;
- (xii) cocoa powder or extracts;
- (xiii) protein isolates;
- (xiv) coffee extracts or its flavour;
- (xv) permitted falvouring agents;
- (xvi) acidulants such as tartaric acid, malic acid and citric acid (food grade);
- (xvii) permitted colouring matter;
- (xviii) permitted colouring matter;
- (xix) vitamins and minerals;
- (xx) sodium bicarbonate;

(xxi) lubricants such as calcium, magnesium or sodium salts of stearic acid talc (not exceeding 0.2 percent) icing sugar, mineral oil (food grade), stearic acid (food grade), glycerine (food grade).

It shall not contain artificial sweeteners.

Minerals oil (food grade), if used as lubricant, shall not exceed 0.2 percent by weight.

It shall also conform to the following standards:-

(i) Sucrose content - Not less than 85.0 percent by weight.
(ii) Ash sulphated (Salt free basis) - Not more than 3.0 percent by weight.
(iii) Sh insoluble indilute Hydrochloric acid - Not more than 0.2 percent by weight.

It may contain sulphur dioxide in concentration not exceeding 350 parts per million.

A.25.02.01. - CHEWING GUM AND BUBBLE GUM shall be prepared from chewing gum base of bubble gum base, natural or synthetic, non-toxic; cane sugar and liquid glucose (corn syrup).
The following sources of gum base may be used:-

(1) Babul, Kikar (Gum Arabic)
(2) KHAIR
(3) Jhingan (Jael)
(4) Ghatti
(5) Chiku (Sapota)
(6) Natural rubber latex
(7) Synthetic rubber latex
(8) Glycerol ester of wood rosin
(9) Glycerol ester of gum rosin
(10) Synthetic resin
(11) Glycerol ester of partially hydrogenated gum or wood rosin
(12) Natural resin
(13) Polyvinyl acetate
(14) Agar (food grade)

It may also contain any of the following ingredients, namely:-

(a) Glycerine
(b) Malt
(c) Milk powder
(d) Chocolate
(e) Coffee
(f) Gelatin, food grade
(g) Permitted Flavours;
(h) Permitted Colours;
(i) Permitted anti-oxidants
(j) Permitted Preservatives
(k) Permitted Emulsifiers
(l) Sorbitol
(m) Lubricants such as starch,talc, stearic acid, icing sugar, paraffin wax or liquid paraffin, food grade, or other food grade mineral oil
(n) Water, potable
(o) Acidulants food grade

(p) Nutrients like vitamins, minerals, proteins
(q) Titanium dioxide, food grade (Maximum 1 percent by weight)
(r) Calcium carbonate
(s) Magnesium carbonate
(t) Phosphated starch

It shall be free from dirt, filth, adulterants and harmful ingredients. It shall also conform to the following standards, namely:-

Ingredients	Chewing gum	Bubble gum
Gum	Not less than 12.5 percent by weight	Not less than 14.0 percent by weight
Moisture	Not more than 3.5 percent by weight	Not more than 3.5 percent by weight
Sulphated Ash	Not more than 9.5 percent by weight	Not more than 11.5 percent by weight
Acid insoluble Ash	Not more than 2.0 percent by weight	Not more than 3.5 percent by weight
Reducing sugars (calculated as dextrose)	Not less than 4.5 percent by weight	Not less than 5.5 percent by weight
Sucrose	Not more than 70.0 percent by weight	Not more than 60.0 percent by weight

A.25.03.- CHOCOLATE - Chocolate means a homogeneous product obtained by an adequate process of manufacture from a mixture of one or more of the ingredients, namely, cocoa (cacoa) beans, cocoa (cacoa)nib, cocoa (cacoa)mass, cocoa press cake and cocoa dust (cocoa fines/powder), including fat reduced cocoa powder with or without addition of sugars, cocoa butter, milk solids including milk fat and non-prohibited flavouring agents. The chocolates shall not contain any vegetable fat other than cocoa butter.

The material shall be free from rancidity or other off edour, insect and fungus infestation, filth, added colouring matter, adulterants and any harmful or injurious matter. Provided that filled chocolated may contain permitted food colours.

The chocolates shall be of the following types:-

Milk chocolates is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low-fat cocoa powder with sugar and milk solids including milk fat and cocoa butter.

Milk covering Chocolate - as defined above, but suitable for covering purposes.

Plain Chocolate is obtained from one or more of cocoa nib, cocoa mass, cocoa press cake, cocoa powder including low fat cocoa powder with sugar and cocoa butter.

Plain covering Chocolate - same as plain chocolate but suitable for covering purposes.

Blended Chocolate means the blend of milk and plain chocolates in varying proportions.

White Chocolate is obtained from cocoa butter, milk solids, including milk fat and sugar.

Filled Chocolate means a product having an external coating of chocolate with a centre clearly distinct through its composition from the external coating, but does not include flour confectionery, pastry and biscuit products. The coating shall be of chocolate that meets the requirements of one or more of the chocolate types mentioned above. The amount of chocolate component of the coating shall not be less than 25 percent of the total mass of the finished product.

Composite chocolate - means a product containing at least 60 percent of chocolate by weight and edible wholesome substances such as fruits, nuts. It shall contain one or more edible wholesome substances which shall not be less than 10 percent of the total mass of finished product.

In addition to the ingredients mentioned above, the chocolate may contain one or more of the substances as outlined below under different brands of chocolates:-

1.Milk Chocolate, Plain Chocolates, Blended Chocolates, white Chocolates and Composite Chocolates:-

(a) edible salt,
(b) non-prohibited flavouring agents,
(c) permitted emulsifying agents
(d) spices and condiments.

2.Filled Chocolates:-

(a) permitted antioxidants,
(b) permitted amulsifying and stabilising agents,
(c) permitted preservatives,
(d) permitted food colours and non-prohibited flavouring agents
(e) permitted sequestering and buffering agents,
(f) permitted acidulants such as citric acid, tartaric acid, malic acid (food grade)

Chocolate shall also confirm to the following standards, namely:-

S.No.	Characteristics	Requirement for					
		Milk Chocolate	Milk Covering Chocolate	Plain Chocolate	Plain Covering Chcolate	White Chocolate	Blended Chocolate
1.	Total fat (on dry basis) percent by weight. Not less than	25	25	25	25	25	25
2.	Milk fat (on dry basis) percent by weight. Not less than	2	2	--	--	2	--
3.	Cocoa solids (on moisture-free and fat-free basis) percent by weight. Not less than	2.5	2.5	12	12	--	3.0
4.	Milk solids (on moisture free and fat-free basis) percent by weight. Not less than/ Not more than	10.5	10.5	--	--	10.5	1
		--	--	--	--	--	9
5.	Acid insoluble ash (on moisture fat and sugar free basis) percent by weight. Not more than	0.2	0.2	0.2	0.2	0.2	0.2

A.26.- FOOD COLOURS:

A.26.01.- TARTRAZINE

Common Name tartrazine

Synonyms	FD and C Yellow No.5 E.E.C. serial No. E-102, L-Gebb 2, C.I. Food Yellow 4.
Colour of the 0.1 percent (M/V) solution in distilled water.	Yellow
Colour Index Number (1975)	No. 19140
Class	Monoazo
Chemical Name	Trisodium salt of 5-hydroxy-1-p-sulphophenyl 1-4 (p-sulpho-phe-nylazo) pyrazol-3-carboxylic acid.
Empirical Formula	$C_{16}H_9N_4O_9S_2Na_3$
Molecular Weight	534.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.02. - SUNSET YELLOW

Common Name	Sunset Yellow
Synonyms	FD and C Yellow No.6, Janus Orange S, C.I. Food yellow 3,- Orange 2, Janune soil, EEC Serial No. E.10
Colour of the 0.1 percent (M/V) solution in distilled water.	Orange
Colour Index Number (1975)	No. 15985
Class	Monoazo
Chemical Name	Disodium salt of 1(4-sulphophenylazo)-2-naptho 1-6-sulphonic acid
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	452.37
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying to 135 deg C percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, max	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes(lower sulphonated dyes including traces of orange II) percent by mass, Max.	3.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbones, and cyanides.

A.26.03.- AMARANTH

Common Name	Erythrosine
Synonyms	FD and C Red No.3 C.I. Food Red 14, LB-Rot-I
Colour of the 0.1 percent (M/V) solution in distilled water.	Red
Colour Index Number (1975)	No. 45430
Class	Xanthene
Chemical Name	Disodium or dipotassium salt of 2',4',5',7', tetraiodo-fluorescein
Empirical Formula	$C_{20}H_6O_5I_4NO_2$
Molecular Weight	879.87 (Disodium Salt)
Solubility	Soluble in water. Soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 degree ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C, percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Ether extractable matter, (alkaline), percent by mass, Max.	0.2
5.	Inorganic Iodide, percent by by mass as sodium iodide, Max.	0.1
6.	Subsidiary colouring matters except fluorescein,	4

	percent by mass, Max.	
7.	Fluorescein, mg/kg, Max.	20
8.	Organic compounds other than colouring matter	0.2
	(a) Tri-iodoresorcinol, percent by mass, max.	0.2
	(b) 2(2,4-dihydroxy-3, 5-di-iodobenzoyl) benzoic acid, percent by mass, Max.	
9.	Lead, mg/kg, Max.	10
10.	Arsenic, mg/kg. Max.	3
11.	Zinc, mg/kg, Max	50
12.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form, aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A.26.05. - INDIGO CARMINE

Common Name	Indigo carmine
Synonyms	Indigotine, FD and C Blue no.2, CI Food Blue 1, EEC serial No.E 132 L-Blue 2
Colour of the 0.1 percent (M/V) solution in distilled water.	Blue
Colour Index Number (1975)	No. 73015
Class	Indigoid
Chemical Name	Disodium salt of indigotine-5, 5'-Disulphonic Acid
Empirical Formula	$C_{16}H_8N_2O_8S_2Na_3$
Molecular Weight	466.36
Solubility	Soluble in water. Sparingly soluble in ethanol.
General Requirements	The material shall conform to the requirements prescribed In Table below:-

TABLE
REQUIREMENT FOR INDIGO CARMINE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$ 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	3.0
6.	Isatin sulphonic acid, percent by mass, Max.	1
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.26.06.- Byta -CAROTENE.

Byta-Carotene is obtained as dark violet hexagonal prisms when crystallised from benzene methanol solution; or as red rhombic, almost quadratic plates, from petroleum ether.

Synonyms	C.I. natural yellow 26.
Colour Index number	(1956) - No.75130
Class	Carotenoids
Chemical Name	All trans Byta-carotene.
Empirical Formula	$C_{40}H_{56}$
Molecular weight	536.89
Melting point	183 deg.$\pm$1 deg C.

Solubility - Soluble in carbon, disulphide, benzene and chloroform, moderately soluble in normal haxane, cyclohexane ether, petroleum ether and oils; practically insoluble in methanol and ethanol; insoluble in water.

Spectrophotometric Requirement - The wave lengths of absorption maxima of all trans byta-Carotene in cyclohexane (0.2 mg per 100 ml. approximately) and in 1-cm cell shall be 456 mu to 484 mu region. There shall be no cis-peak in the 330 mu to 355 mu region.

A solution of Byta-carotene in chloroform on addition of antimony trichloride solution shall give a dark blue colour having maximum absorption at a wave length of 590 mu.

Colour Reaction - When 2 ml. of concentrated sulphuric acid is added to 2 ml. of 0.2 percent solution of Byta-carotene in chloroform, the acid layer shall turn blue.

The material shall have a minimum purity of 96.0 percent.

Maximum limit of metallic impurities shall be:	
Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.

A.26.07. - CHLOROPHYLL - Chlorophyll, the green pigment of plants, is extracted and widely used as a colouring matter for various food items.

Synonyms	C.I. natural Green 3; Lebensmittel Green No.1.
Colour	Green
Colour Index number	(1956) - No.75810 (1924) - No.12499
Class	Phorbin (dihydrophorbin)
Chemical Name	Chlorophyll a-magnesium complex of 1,3,5,8,- Tetramethyl 4-ethyl-2vinyl-9-keto-10-carbomethoxyphorbinphytyl-7- Propionate. Chlorophyll b-Magnesium complex 0f 1,5,8,- trimethy 1-3-formy 1-4- Ethyl-2-vinyl 1-9-keto-10-carobo-methoxy-phorbinphyty 1-7 propionate.
Empirical Formula	Chlorophyll a - $C_{55}H_{72}O_5N_4Mg$ Chlorophyll b - $C_{55}H_{70}O_6N_4Mg$
Molecular weight	Chlorophyll a - 893.54 Chlorophyll b - 907.52

General - The material shall be an intensely dark green, aqueous, ethanolic, or oily solution of chlorophyll degradation products. It shall be soluble in ethanol, ether, chloroform and benzene. It shall be insoluble in water.

Identification test - A solution of chlorophyll in ethanol shall be blue with deep red fluorescence.

Brown-phase Reaction - When green ether or petroleum ether solution of chlorophyll is treated with a small quantity of a 10 percent solution of potassium hydroxide in methanol, the colour shall become brown quickly returning to green.

Note - This test is applicable only when chlorophyll has not been treated with alkalis.

Maximum limits for metallic impurities shall be:

Arsenic (as As)	5 p.p.m.
Lead (as Pb)	20 p.p.m.
Copper (as Cu)	30 p.p.m.
Zinc (as Zn)	50 p.p.m.

A.26.08.- CARAMEL - Caramel shall be prepared from the food grade carbohydrates or their combinations in the presence of food grade acids, alkalis or salts. It shall be of four types, namely:-

Type-I - Plain Caramel - It shall be prepared by heating cabohydrates with or without acids or alkalis, or their salts; No ammonium or suphite compounds are used.

Type-II - Caustic Suphite Caramel - It shall be prepared by heating carohydrates with or without acids or alkalis or their salts in the presence of sulphite compounds; no ammonium compounds are used.

Type-III - Ammonia Process Caramel - It shall be prepared by heating carbohydrate with or without acids or alkalis or their salts in the presence of ammonium compound; no sulphites are used.

Type-IV - Ammonia Sulphite Caramel - It shall be prepared by heating carbohydrates with or without acids or alkalis or their salts in the presence of both sulphite and ammonium compounds.

RAW MATERIALS

1.Carbohydrates - Caramel shall be prepared from the following carbohydrates or their mixtures:-

Sucrose, glucose, fructose, invert sugar, lactose, malt syrup, molasses, starch hydrolysates and fractions thereof and/or polymer thereof.

2.Acids and alkalis - The acids used are suphuric acid, phosphoric acid, acetic acid, or citric acid and the alkalis used are sodium, potassium or calcium hydroxide or mixture thereof.

Where the ammonium compounds are used, they are one or more of the following:-

Sulphurous acid, Potassium, Sodium or Ammonium sulphite or Bisulphite
Ammonium Hydroxide
Ammonium Carbonate and Bicarbonate
Ammonium Phosphate
Ammonium Sulphate
Ammonium Sulphate, Bisulphite, Metasulphite.

Where the sulphite compounds are used, they are one or more of the following:-

It shall be a dark brown to black liquid or solid materials having the characteristic odour of burnt sugar and a pleasant, bitter taste. Its solution, when spread in a thin layer on a glass plate should appear homogeneous, transparent and have reddish-brown colour. It shall be miscible with water. It shall be free from any other extraneous colouring matter. It may contain permitted emulsifying and stabilising agents.

It shall conform to the requirements prescribed in Table 1 below. All requirements shall be on solid basis, except metallic impurities.

TABLE I - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Solid content, percent by mass	62-77	65-72	53-83	40-75
2.	Colour intensity, percent by mass	0.01-0.12	0.06-0.10	0.08-0.36	0.10-0.60
3.	Ammoniacal nitrogen percent by mass, Max.	0.01	0.01	0.4	0.5
4.	4 - Methylimidazole	--	--	Max. 300 mg/kg & Max. 200 mg/kg on equivalent Colour basis	Max.1000 mg/kg & Max. 250 mg/kg on equivalent Colour basis
5.	Lead (as Pb),mg/kg, Max.	5	5	5	5
6.	Arsenic (as AS) mg/Kg	3	3	3	3

Note - Rquirement of ammoniacal nitrogen is based on a product colour having a minimum colour intensity prescribed at Sl.No.(2) proportionately higher values of ammoniacal nitrogen apply for products of higher colour intensity.

TYPE TEST -

The mateial shall also conform to the requirements prescribed in Table 2 below.

All requirements shall be on solid basis except metallic impurities.

TABLE II - ROUTINE TEST REQUIREMENTS FOR CARAMEL

S.NO.	Characteristics	Type-I Plain	Type II Caustic Sulphite	Type III Ammonia Process	Type IV Sulphite Ammonia
1	2	3	4	5	6
1.	Total sulphur per cent by mass	Max. 0.3	1.3-2.5	Max.0.3	1.4-10.0
2.	Sulphur dioxide (as SO2)	-	Max.0.2%	-	Max. 0.5%
3.	Total nitrogen, per cent by	Max. 0.1	Max.0.2	1.3-6.8	0.5-7.5

	mass				
4.	Heavy metals, mg/kg(max)	25	25	25	25
5.	2-Acetyl-4-tetrahdroxy butylimidazole(THI)	-	-	Max. 40mg/kg & Max. 25 mg/kg on an equivalent colour basis	-
6.	Mercury (as Hg)mg/kg (Max)	0.1	0.1	0.1	0.1
7.	Copper(as Cu)mg/kg (Max)	20	20	20	20

The material shall be filled in amber coloured glass or high density polythylene containers or any other well closed suitable containers with as little air space as possible. The containers shall be such as to preclude contamination of the contents with metals or other impurities.

A.26.09.- SNNATTO

Class	Carotenoids	
Code Number	C-1 (1975) No.75120	
	C-1 (1975) Natural Orange 4 EEC No.E-160 b	
Chemical Name	Annatto extract in oil contains several coloured components, the Major single one being bixin which may be present in both Cis and Transforms. Thermal degradation products of bixin may also be present.	
Solubility	Water soluble annatto contains norbixin, the hydrolysis product of bixin, in the form of sodium or potassium salt, as the major colouring principle. Both Cis and Transforms may be present.	
Chemical Formula	Bixin	$C_{25}H_{30}O_4$
	Norbixin	$C_{24}H_{28}O_4$
Molecular Weight	Bixin	394.50
	Norbixin	380.48

The material shall be of the following two types:

(a) Solution in oil for use in butter and other food products, and
(b) Solution in water for use in cheese and other food products.

GENERAL:

The material shall be derived only from the plant Bixa orellana L. and shall not contain any extraneous colouring matter. It shall be processed, packed, stored and distributed under hygienic conditions in licensed premises.

(i) Solution of Annatto Colour in Oil for Use in Butter and Other Food Products:-

Annatto extract in oil, as solution or suspension, is prepared by extraction of the outer coating of seeds with vegetable oils. In the preparation of the solution of annatto colour in oil, only the edible vegetable oils shall be used, either singly or in a mixture.

The solution of annatto colour in oils shall be clear and shall remain so on storage in suitable containers at 15 deg. C except for a slight deposit of stearine or shall be in the form of a suspension. The suspension on dilution with hot oil to bring the bixin content to 0.24 percent shall be a clear solution.

COLOUR:

The colour of solution in amyl acetate at a dilution of 1:1000 (m/v), when meansured in a Lovibond Tintomater with a 1 cm Cell Spectrophotometrically/Calorimeterically shall be not less than the following:

Yellow units	5.0
Red units	0.4

Or be not less than the colour of the following inorganic solution at a liquid depth of one centimetre which may be employed for matching the stated dilution in a plunger type colorimeter using incident light closely approximating the normal dalylight:

Potassium Bichromate	0.320 g
Cobalt ammonium suphate ($CoSO_4 (NH_4)_2 SO_4, 6H_2O$)	2.02 g
Sulphuric acid, Sp-gr 1,84	2 ml
Distilled water	To make solution to one litre

These reagents shall be of the analytical reagent grade. Although the solution retains its tinctorial value for a considerable time, after prolonged storage, its optical clarity shall be examined before use, to ensure that no alteration has taken place.

Note 1 - Diluted solution of annatto colour in amyl acetate is not stable in colour quality, particularly if exposed to light, and measurement shall be carried out on the diluted solution without undue delay.

(ii) Solution of Annatto Colour in Water for use in Cheese and other Food Products:

Water soluble annatto colour is prepared by extraction of the outer coating of the seeds with aqueous alkali (sodium or potassium hydroxide). In the preparation of the solution, potable water shall be used. A little quantity (0.5 to 3 percent) of alkali may be added.

The solution shall be clear and shall remain so on storage in suitable containers at a temperature of 15 deg. C.

COLOUR:-

The colour of the solution in 0.1 N sodium hydroxide or potassium hydroxide at a dilution of 1:1000(m/v) measured in a 1 cm shall be the same as that specified in (i) above.

The material shall conform to the requirements prescribed in Table below:-

TABLE
REQUIREMENTS FOR ANNATTO

S.No.	Characteristic	Requirement
1.	Carotenoid	
	(a) Annatto extract in oil, expressed as bixin, percent by mass, Min.	0.24
	(b) Water soluble annatto, expressed as norbixin, percent by mass, Min.	0.24
2.	Arsenic, mg/kg, Max.	3

3.	Lead, mg/kg, Max.	10
4.	Copper, mg/kg, Max.	30
5.	Heavy metals, mg/kg, Max.	40

A.26.10. - RIBOFLAVIN : Riboflavin is a yellow to orange-yellow crystalline powder. Melting point about 280 deg. C. with decomposition.

Solubility - Slightly soluble in water, more soluble in saline solution and in a 10 percent (w/v) solution of urea, springly soluble in alcohol, practically insoluble in chloroform and in solvent ether, and soluble in dilute solution of alkali hydroxides.

Synonyms	Vitamin B2, lactoflavin and Lactroflavine
Colour	Yellow to orange-yellow
Class	isoalloxazine
Chemical name	6:7 - dimethyl-9-(d-1-ribityl) - isoalloxazine
Empirical Formula	$C_{17}H_{20}ON_4O_6$
Molecular weight	376.38

Identification - A solution of 1 mg of Riboflavin in 100 ml water is pale greenish yellow in transmitted light, and has an intense yellowish green flourescene which disappears on the addition of soldium dithionite and mineral acids or alkalis.

Spectrophotometry - Absorption maxima of aqueous solution shall be at 220 to 225, 226, 371 and 444 mm.

Specific Rotation - It shall be determined in a 0.5 percent w/v solution in a mixutre of 1.5 ml of 0.1 N alcoholic solution of potassium hydroxide (free from cabronate) and sufficient freshly boiled and cooled water to produce 10 ml. The specific rotation, when calculated with reference to the substance dried to constant weight in the dark at 105 deg C, shall be - 122 deg. C.

The material shall have minimum purity of 97.0 percent.
Maximum limit of metallic impurities shall be:

Arsenic as (As)	05 p.p.m.
Lead as (Pb)	20 p.p.m.

A.26.11.- PONCEAU 4R

Common Name	Ponceau 4R
Synonyms	CI Food Red 7, L-Rot No.4, Coccine Nouvelle, Cochineal Red A; EEC serial no.E124.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number (1975)	No.16255
Class	Monoazo
Chemical Name	Trisodium salt of 1-(4-sulpho-1-naphtylazo) - naphthol-6, 8-disul-phonic acid
Empirical Formula	$C_{20}H_{11}N_2O_{10}S_3Na_3$
Molecular weight	604.5
Solubility	Soluble in water. Sparingly soluble in ethanol

The material shall conform to the requirements prescribed in Table below:-

TABLE

REQUIREMENTS FOR PONCEAU 4R

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	82
2.	Loss on drying at 135 deg C,percent by mass max. and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	18
3.	Water insoluble matter, percent by mass, Max.	0.4
4.	Combined ether extracts, percent by mass, Max.	0.4
5.	Subsidiary dyes, percent by mass, Max.	1.0
6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, selenium and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons and cyanides.

A-26.12. - CARMOISINE:

Common Name	Carmoisine
Synonyms	Azorubine,CI Food Red 3, EEC serial no.E122.
Colour of 0.1 percent (m/v) Solution in distilled water.	Red
Colour Index Number	(1956)-No.14720
Class	Monoazo
Chemical Name	Disodium salt of 2-(4-sulpho-1-naphtylazo) -1-hydroxy-Naphthylazo)-4-sulphonic acid.
Empirical Formula	$C_{20}H_{12}N_2O_7S_2Na_2$
Molecular weight	502.44
General requirements	The material shall be free from mercury, selenium and chromium in any form, aromatic amines, aromatic-nitro compounds, aromatic hydrocarbons and any cyanides.

Carmoisine shall also comply with requirements prescribed in Table below:-

TABLE

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	87
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Dye intermediates, percent by mass, Max.	0.5
7.	Lead, mg/kg, Max.	10
8.	Arsenic, mg/kg. Max.	3
9.	Heavy metals, mg/kg Max.	40

A.26.13. - Fast Red E

A.26.14. - SYNTHETIC FOOD COLOUR - Preparation and Mixtures.

COLOUR PREPARATION:

A preparation containing one or more of the permitted synthetic food colour conforming to the prescribed standard alongwith diluents and /or filler materials and meant to be used impating colour to food. It may contain permitted preservatives and stabilizers.

The colour preparation would be either in the form of a liquid or powder. Powder preparations shall be reasonably free from lumps and any visible extraneous.foreign matter. Liquid preparations shall be free from sediments.

Only the following diluents or filler materials shall be permitted to be used in colour preparations conforming to the prescribed standards:-

2. Potable water
3. Edible common salt
4. Sugar
5. Dextrose Monohydrate
6. Liquid glucose
7. Sodium sulphate
8. Tartaric acid
9. Glycerine
10. Propylene glycol
11. Acetic acid, dilute
12. Sorbitol
13. Citric acid
14. Sodium carbonate and sodium hydrogen carbonate
15. Lactose
16. Ammonium, sodium and potassium alginates
17. Dextrins
18. Ethyl acetate
19. Starches
20. Diethyl ether
21. Ethanol
22. Glycerol mono, di and tri acetate
23. Edible oils and fats
24. Isopropyl alcohol
24. Bees wax
25. Sodium and ammonium hydroxide
26. Lactic acid
27. Carragenan and gum arabic
28 Gelatin

29. Pectin

COLOUR MIXTURES:

A mixtures of two or more permitted synthetic food colour conforming to prescribed standards without diluents and filler material and meant to be used for imparting Colour to food.

It may contain permitted preservatives and stabilizers.

GENERAL REQUIREMENTS - For Colour Preparation & Colour Mixture - The total synthetic dye content, percent by mass (m/v) in the colour preparation or in the mixture shall be declared on the label of the container. In powder preparations the declared value shall be on moisture free basis and in case of liquid preparations on as in basis. The total dye content shall be within the tolerance limits given below on the declared value:

(a)	Liquid preparations	+15percent -5 percent
(b)	Solid preparations	$\pm$ 7.5 percent

The limits of impurities shall be as prescribed in Table below:-

TABLE
LIMITS FOR IMPURITIES

1.	Water insoluble matter, percent by mass, Max. (on dry basis), Max.	1.0
2.	Lead(as Pb), mg/kg, Max.	10
3.	Arsenic(as As), mg/kg. Max.	3.0
4.	Heavy metals, mg/kg Max.	40

It shall be free from mercury, copper and chromium in any form; aromatic amines, aromatic nitro compounds, aromatic hydrocarbons, polycyclic aromatic hydrocarbon, 2-naphthy1 aminonbenzidine, amino-4-diphenyl (xenylamine) or their derivaties and cyanides.

A.26.15.- BRILLIANT BLUE FCF

Common Name	Brilliant Blue FCF
Synonyms	C.I. Food Blue, and C Blue No. 1 Blue brilliant FCF.
Class	Triarylmethane
Colour	Blue
Colour Index	(1975) No. 42900
Chemical Name	Disodium salt of alpha -(4-(N-ethyl-bita sulphobenzylamino)-Phenyl) alpha (-4-(ethyl-3-sulfonatobenzylimino) cyclohexa-2, 5-dienylidene) toluene-2-sulfonate.
Empirical Formula	C_{37} H_{34} N_2 Na_2 O_9 S_3
Molecular weight	792.86
General requirements	The material shall conform to the requirement prescribed in Table below namely:-

TABLE FOR BRILLIANT BLUE FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 $\pm$	85

	1 deg C for 2 hours, percent by mass, Min.	
2.	Loss on drying at 135 deg C and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	15
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	3
6.	Dye intermediates, percent by mass, Max.	
	(a) O, sulpho-benzaldehyde, Maximum	1.5
	(b) N-N' ethyl-aniline-3-sulphonic acid, Maximum	0.3
	(c) Leuco base percent by mass, max.	5
7.	Heavy metals, (as Pb), mg/kg, Max	40
	- Lead, mg/kg, Max.	10
	- Arsenic, mg/kg, Max	3
	- Chromium, mg/kg, Max.	50

Note:- The material shall be free from aromatic amines, aromatic nitro compound aromatic hydrocarbons, and cyanides.

A. 26.16- FAST GREEN FCF

Fast Green FCF is hygroscopic in nature and its shade changes with different pH. Suitable preccautions should, therefore, be taken in packing the colour.

Fast Green FCF is described below, namely:-

Common Name-	Fast Green FCF
Synonyms-	C.I. Food Green 3, FD and C Green No. 3, Vert Solid FCF
Class	Triarylmethane
Colour	Green
Colour Index	(1975) No. 42053
Chemical Name	Disodium salt of4-[4-(N-ethyl-p-sulfobenzylamino)-phenyl-(4-hydroxy-2-sulphonumphenyl)-methylene]-(N-ethyl-N-p-sulphobenzyl 2,5-cyclohexadienimine).
Chemical Formula	C_{37} H_{34} O_{10} N_2 S_2 Na_2
Molecular Weight	808.86
Requirements	The material shall conform to the following requirements prescribed in the Table below, namely:-

TABLE FOR FAST GREEN FCF

S.NO.	Characteristic	Requirement
1	2	3
1.	Total dye content, corrected for Sample dried at 105 ± 1 deg C for 2 hours, percent by mass, Min.	85
2.	Loss on drying at 135 deg C,percent by mass max and Chlorides and Sulphates expressed as sodium salt, percent by mass, Max.	13
3.	Water insoluble matter, percent by mass, Max.	0.2
4.	Combined ether extracts, percent by mass, Max.	0.2
5.	Subsidiary dyes, percent by mass, Max.	1.0

6.	Organic compond other than colouring matter uncombined intermediates and products of side reactions		
	(a)	Sum of 2-, 3-, 4- formyl benzene sulphonic acid, sodium salts, percent by mass, Max	0.5
	(b)	Sum of 3- and 4-(ethyl(4-sulfophenyl) amino) methyl benezene sulphonic acid, disodium salts, percent by mass, Max	0.3
	(c)	2-formyl-5-hydroxybenzene sulphonic acid sodium salt, percent by Mass, Max	0.5
	(d)	Leuco base, percent by Mass, Max	5.0
	(e)	Unsulphonated primary aromatic amines(calculated as aniline), percent by Mass, Max	0.01
7.	-	Lead, mg/kg, Max	10
8.	-	Arsenic, mg/kg, max	3
9.	-	Chromium, mg/kg, Max	50
10.	-	Mercury, mg/kg, Max	Absent
11	-	Heavy metals, mg/kg, Max	40

Note:- The material shall be free from aromatic nitro compounds, aromatic hydrocarbons, and cyanides.

A.27.01- SILVER LEAF (Chandi-ka-warq) - Food grade - shall be in the form of sheets, free from creases and folds and shall contain not less than 99.9 percent of silver

A.28. - GROUNDNUT KERNEL (deshelled) for direct human consumption commonly known as Mungphali are obtained from the plant Arachis hypogols. The kernels shall be free from non-edible seeds such as mahua, castor, neem or argemone, etc. It shall be free from colouring matter and preservatives. It shall be practically free from extraneous matter, such as stones, dirt clay, etc. The kernels shall conform to the following standards, namely:-

(a)	Moisture	Not more than 7.0 percent
(b)	Damaged kernel including slightly damaged kernel	Not more than 5.0 percent by weight
(c)	Aflatoxin content	Not more than 30 parts per billion

A.29.BEVERAGES. - ALCOHOLIC

A.29.01.- TODDY : Toddy means the sap from coconut, date, toddy palm tree or any other kind of palm tree which has undergone alcoholic fermentation. It shall be white cloudy in appearance which sediments on storage and shall possess characteristic flavour derived from the sap and fermentation without addition of extraneous alcohol. It shall be free from added colouring matter, dirt, other foreign matter or any other ingredient injurious to health. It shall also be free from chloral hydrate, paraldehyde, sedative tranquilizer and artificial sweetner.

It shall also conform to the following standards, namely:-

(a) Alcoholic content - Not less than 5 percent(v/v).

(b) Total acid as tartaric acid (expressed in terms of 100 lt. of absolute alcohol) Not more than 400 grams.

(c) Volatile acid as acetic acids (expressed in terms of 100 litres of absolute alcohol) Not more than 100 grams.

A.30.- PAN MASALA means the food generally taken as such or in conjunction with Pan, it may contain:-

Betelnut, lime, coconut, catechu, saffron, cardamom, dry fruits, mulethi, sabermusa, other aromatic herbs and spices, sugar, glycerine, glucose, permitted natural colours, menthol and non-prohibited flavours.

It shall be free from added coal tar colouring matter. and any other ingredient injurious to health.

It shall also conform to the following standards, namely:-

Total ash	Not more than 8.0 percent by weight (on dry basis)
Ash insoluble in dilute hydrocholoric acid	Not more than 0.5 percent by weight (on dry basis)

A.31. - FAT SPREAD means a product in the form of water in oil emulsion, or an aqueous phase and a fat phase of edible oils and fats excluding animal body fats. The individual oil and fat used in the spread shall conform to the respective standards prescribed by these rules.

Fat spread shall be classified into the following three groups:-

(a)	Milk fat spread	Fat content will be exclusively milk fat.
(b)	Mixed fat spread	Fat content will be a mixture of milk fat with any one or more of hydrogenated, unhydrogenated refined edible vegetable oils or interesterified fat.
(c)	Vegetable fat spread	Fat content will be a mixture of any two or more of hydrogenated, unhydrogenated, refined vegetable oils or interesterified fat.

The fat content shall be declared on the lable. In mixed fat spread, the milk fat content shall also be declared on the label along with the total fat content.

The word 'butter' will not be associated while labelling the product.

It may contain edible common salt not exceeding 2 percent by weight in aqueous phase; milk solids-not-fat; lactic acid, butyric acid, valeric acid, cinnamon oil, and Ethyl butyrate may also be added as flavouring agent upto 0.08 percent m/ml, Diacetyl may be added as flavouring agents not exceeding 4.0 p.p.m., permitted emulsifiers and stabilizers' permitted antioxidants (BHA or TBHQ) not exceeding 0.02 percent of the fat content of the spread; permitted Class II preservatives namely sorbic acid including its sodium, potassium and calcicum salts (calculated as sorbic acid) or benzoic acid and its sodium and potassium salts (calculated as benzoic acid) singly or in combination not exceeding 1000 parts per million by weight; and sequestering agents. It may contain annatto and/or carotene as colouring agents. It shall be free from animal body fat, mineral oil and wax. Vegetable fat spread shall contain raw or refined Sesame oil (Til oil) in sufficient quantity so that when separated fat is mixed with refined groundnut oil in the proportion of 20:80 the red colour produced by Baudouin test shall not be lighter than 2.5 red units in 1 cm. Cell on a Lovibond scale.

It shall also conform to the following standards, namely:-

(i)	Fat	Not more than 80 percent and not less than 40 percent by weight.
(ii)	Moisture	Not more than 56 percent and not less than 16 percent by weight.
(iii)	Melting point of Extracted	Not more than 37 deg C.

fat (capacity slip method)
in case of vegetable fat spread.

(iv) Unsaponifiable matter of extracted fat -

(a)	In case of milk fat And mixed fat spread	Not more than 1 percent by weight.
(b)	In case of vegetable fat spread	Not more than 1.5 percent
(c)	Acid value of extracted fat	Not more than 0.5.

It shall be compulsorily sold in sealed packages weighing not more than 500 g. under Agmark Certification Mark.

(vi) The vegetable fat spread shall contain not less than 25 IU synthetic vitamin 'A' per gram at the time of packing and shall show a positive test for vitamin 'A' when tested by Antimony Trichloride (Carr-Price) reagents (as per I.S. 5886-1970).

(vii) It shall contain starch not less than 100 PPM and not more than 150 PPM.

A.32.MINERAL WATER

1 Mineral water means includes all kinds of Mineral Water or Natural mineral water by whatever name it is called and sold.

2.Description and Types of Mineral water:

(i) Natural mineral water is water clearly distinguished from ordinary drinking water because -

(a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents,

(b) it is obtained directly from natural or drilled sources from underground water bearing strata and from Public water supply for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water.

(c) Of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;

(d) It is collected under conditions which guarantee the original micro-biological purity and chemical composition of essential components;

(e) It is packaged close to the point of emergence of the source with particular hygienic precautions;

(f) It is not subjected to any treatment other than those permitted by this standard;

(ii) Naturally Carbonated Natural Mineral Water - A naturally carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and re-incorporation of gas from the same source and after packaging , taking into consideration usual technical tolerance, has the same content of carbondioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

(iii) Non-Carbonated Natural Mineral Water - A non-carbonated natural mineral water is a natural mineral water which, by nature and after possible treatment as given hereunder and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

(iv) Decarbonated Natural Mineral Water - A decarbonated natural mineral is a natural mineral water which, after possible treatment as given hereunder and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give of carbon dioxide under normal conditions of temperature and pressure.

(v) Natural Mineral Water Fortified with Carbon Dioxide from the Source - A natural mineral water fortified with carbon dioxide from the source is natural mineral water which, after possible treatment as given hereunder and after packaging, has more carbon dioxide content than that at emergence.

(vi) Carbonated Natural Mineral Water - A carbonated natural mineral water is a natural mineral water which, after possible treatment as given hereunder and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

3.**Treatment and handling** - Treatment permitted include separation from unstable constituents,, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

The treatments provided may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited. Natural Mineral water shall be packaged in clean and sterile containers.

The source or the point of emergence shall be protected against risks of pollution.

The installation intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular -

(a) the installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water,
(b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements,
(c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated'

4.All Mineral water shall conform to the following standards, namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour, Hazen Unit/True Colour Unit	Not more than 2
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	150-700 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 50 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre

10.	Mineral Oil	Not detectable
11.	Phenolic compounds (as C_6H_5OH)	Not detectable
12.	Manganese (as Mn)	Not more than 2.0 mg.litre
13.	Copper (as Cu)	Not more than 1 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Surface active agents	Not detectable
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 50 mg/litre
25.	Calcium (as Ca)	Not more than100 mg/litre
26.	Sodium (as Na)	Not more than 150 mg/litre
27.	Alkalinity (as HCO_3)	75-400 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.003 mg/litre
30.	Cyanide (as CN)	Not more than 0.07 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.05 mg/litre
35.	Poly nuclear aromatic Hydrocarbons	Not detectable
36.	Polychlorinated biphenyle (PCB)	Not detectable
37.	Pesticide Residue	Below detectable limits
38.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
39.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
40.	Yeast and mould counts	Absent
41.	Salmonella and Shigella	Absent
42.	E.Coli or thermotolerant Coliforms 1 X 250 ml	Absent
43.	Total coliform bacteria A x 250 ml	Absent
44.	Fecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
45.	Pseudomonas aeruginosa 1 x250 ml	Absent
46.	Sulphite-reducing anaerobes 1x50 ml	Absent
47.	Vibrocholera 1 x 250 ml	Absent
48.	V Parahaemolyticus 1 x 250 ml	Absent

5.**Labelling Prohibitions** - No claims concerning medicinal (preventative, alleviative or curative)effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

A.33 PACKAGED DRINKING WATER (OTHER THAN MINERAL WATER)

"Packaged drinking water" means water derived from any source of potable water which is subjected to treatments, namely, decantation, filteration, combination of filteration, aerations, filteration with membrane filter, depth filter, cartidge filter, activated carbon filteration, demineralisation, remineralisation reverse ormosis and packed. It may be disinfected to a level that will not lead to harmful contamination in the drinking water. It may be disinfected by means of chemical agents and/or physical method of the number of micro-organism to a level that does not compromise food safety or suitability.

It shall be packed in clean, sterile, colourless, transparent and tamperproof bottles/containers made of polyethlene (PE) conforming to IS:10146 or polyvinyl chloride (PVC) conforming to IS:10151 or polyalkylene terephthalate (PET and PBT) conforming to IS:12252 or polypropylene conforming to IS:10910 or foodgrade polycarbonate or sterile glass bottles suitable for preventing possible adulteration or contamination of the water.

All packaging materials of plastic origin shall pass the overall migration and colour migration limits as laid down in the relevant Indian Standards for products for respective packaging materials.

It shall conform to the following standards namely:-

S.No.	Characteristics	Requirements
1	2	3
1.	Colour	Not more than 2 Hazen units/ True colour units.
2.	Odour	Agreeable
3.	Taste	Agreeable
4.	Turbidity	Nor more than 2 nephelometric turbidity unit (NTU)
5.	Total Dissolved solids	Not more than 500 mg/litre
6.	PH	6.5-8.5
7.	Nitrates (as NO_3)	Not more than 45 mg/litre
8.	Nitrites (as NO_2)	Not more than 0.02 mg/litre
9.	Sulphide (as H_2S)	Nore more than 0.05 mg/litre
10.	Mineral Oil	Not more than 0.01 mg/litre
11.	Phenolic compounds (as C_6H_5OH)	Not more than 0.001 mg/litre
12.	Manganese (as Mn)	Not more than 0.1 mg/litre
13.	Copper (as Cu)	Not more than 0.05 mg/litre
14.	Zinc (as Zn)	Not more than 5 mg/litre
15.	Fluoride (as F)	Not more than 1.0 mg/litre
16.	Barium (as Ba)	Not more than 1.0 mg/liltre
17.	Antimony (as Sb)	Not more than 0.005 mg/litre
18.	Nickel (as Ni)	Not more than 0.02 mg/litre
19.	Borate (as B)	Not more than 5 mg/litre
20.	Anionic surface active agents (as MBAS)	Not more than 0.2 mg/litre
21.	Silver (as Ag)	Not more than 0.01 mg/litre
22.	Chlorides (as Cl)	Not more than 200 mg/litre
23.	Sulphate (as SO_4)	Not more than 200 mg/litre
24.	Magnesium (as Mg)	Not more than 30 mg/litre
25.	Calcium (as Ca)	Not more than 75 mg/litre
26.	Sodium (as Na)	Not more than 200 mg/litre

27.	Alkalinity (as HCO_3)	Not more than 200 mg/litre
28.	Arsenic (as As)	Not more than 0.05 mg/litre
29.	Cadmium (as Cd)	Not more than 0.01 mg/litre
30.	Cyanide (as CN)	Not more than 0.05 mg/litre
31.	Chromium (as Cr)	Not more than 0.05 mg/litre
32.	Mercury (as Hg)	Not more than 0.001 mg/litre
33.	Lead (as Pb)	Not more than 0.01 mg/litre
34.	Selenium (as Se)	Not more than 0.01 mg/litre
35.	Iron (as Fe)	Not more than 0.1 mg./litre
36	Poly nuclear aromatic Hydrocarbons	Not detectable
37.	Polychlorinated biphenyle (PCB)	Not detectable
38.	Aluminium (as Al)	Not more than 0.03 mg/litre
39.	Residual free chlorine	Not more than 0.2 mg/litre
40.	Pesticide Residue	Below detectable limits
41.	"Alpha" activity	Not more than 0.1 Bacqueral/litre(Bq)
42.	"Beta" activity	Not more than 1 pico curie/litre (pCi)
43	Yeast and mould counts 1 x 250 ml	Absent
44.	Salmonella and Shigella 1 x 250 ml	Absent
45.	E.Coli or thermotolerant bacteria 1 x 250ml	Absent
46	Coliforma bacteria 1 x 250 ml	Absent
47	Faecal Streptococci and Staphylococcus Aureus 1 x 250 ml	Absent
48.	Pseudomonas aeruginosa 1 x250 ml	Absent
49.	Sulphite-reducing anaerobes 1x50 ml	Absent
50.	Vibrio cholera and V Parahaemolyticus 1 x 250 ml	Absent
51.	Aerobic Microbial Count	The total viable colony count shall not exceed 100 per ml at 20 degree C. to 22 degree C in 72 h on agar - agar or on agar - gelatin mixture, and 20 per ml at 37 degree C in 24h on agar-agar.

Labelling Prohibitions

No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not made.

The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to packaged water collected at the place designated by that trade name.

The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition, and properties of such waters put on sale is prohibited.

Note-- Without prejudice to the standards laid down in this Appendix, whenever water is used in the manufacture or preparation of any article of food, such water shall be free from micro-organisms likely to cause disease also free from micro-organisms likely to cause disease and also free from chemical constituents which may impair health.