BHUTAN MANDATORY STANDARD FOR FOOD ADDITIVES

1. PREAMBLE

This standard is issued pursuant to the Food Rules and Regulations of Bhutan 2017. This standard is based mainly on the Codex General Standard for Food Additives (CODEX STAN 192-1995).

2. SCOPE

This standard applies to Food additives in foods. This list is not exhaustive, but lists selective food additives which are likely to be encountered more commonly in foods in Bhutan. For additives and foods not mentioned in this list, the Codex General Standards of Food Additives shall apply.

3. DEFINITIONS

Anti-caking agent means any substance, which, when added to powder food prevents caking of the food.

Anti-foaming agent means any substance which prevents or reduces foaming of the food

Anti-oxidant means any substance which delays, retards or prevents the development in food of rancidity or other flavour deterioration due to oxidation.

Chemical preservative means any substance which is capable of inhibiting, retarding or arresting the process of fermentation, acidification or other deterioration of food caused by micro-organisms.

Colouring matter means any substance that, when added or applied to food, is capable of imparting colour to that food.

Emulsifier or stabilizer means any substance which is capable, in the case of an emulsifier, of aiding the formation of, and in the case of a stabiliser, of maintaining, the uniform dispersion of 2 or more immiscible substances.

Flavouring agent means any wholesome substance that when added or applied to food is capable of imparting taste or odour, or both, to a food.

Flavour enhancer means any substance which is capable of enhancing or improving the flavour of food, but does not include any sauce, gravy, gravy mix, soup mix, spice or condiment.

Food additive means any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods.

Gaseous packaging agent means any substance used;

(a) as an aerating agent or propellant in the storage or packaging of any fluid food; or

(b) to displace air in a sealed package or in a place of storage, in the storage or packaging of any food.

General purpose food additive means any substance which serves a useful and specific purpose during either the processing or packing of a food and shall include processing aid.

Good Manufacturing Practices (GMP) for use of food additives means the food additives used under the following conditions namely the quantity of the additive added to food shall be limited to the lowest possible level necessary to accomplish its desired effect;

Humectant means any substance which, when added to food, absorbs moisture and maintains the water content of food.

Maximum Use Level of an additive is the highest concentration of the additive determined to be functionally effective in a food or food category and agreed to be safe by the Codex Alimentarius Commission. It is generally expressed as mg additive/kg of food.

Nutrient supplement means any amino acid, mineral or vitamin which, when added either singly or in combination with food, improves or enriches the nutrient content of food.

Sequestrant means any substance which, when added to food, combines with a metal ion in the food and renders the metal ion inactive so as to stabilise certain characteristics associated with the food, including colour, flavour and texture.

Sweetening agent means a substance added to food in place of sugar to provide a sweet taste, but does not include aspartame, any sugar, carbohydrate or polyhydric alcohols.

4 DESCRIPTION OF THE STANDARD

This standard consists of guideline for considering maximum use levels for additives

Anti caking agent

Any article of food may contain the following anti-caking agents at a concentration of not more than 2% on a dry basis:

(a) calcium or magnesium carbonate;

(b) calcium hydroxyphosphate;

(c) edible bone phosphate;

(d) ammonium, calcium, magnesium, potassium or sodium stearates;

(e) magnesium silicate (synthetic), magnesium trisilicate or talc;

(f) calcium, sodium aluminium, sodium calcium aluminium or calcium aluminium silicates;

(g) silicon dioxide;

(h) ammonium, calcium, potassium or sodium myristates;

(i) ammonium, calcium, potassium or sodium palmitates; or

(j) calcium, potassium or sodium oleates.

Salt may contain the following anti-caking agents in amounts not exceeding 10 ppm, whether alone or used in combination:

(a) potassium ferrocyanide; or

(b) sodium ferrocyanide.

Anti-foaming agents

The following food products may contain the anti-foaming agent known as dimethyl polysiloxane not exceeding 10 ppm in amount:

(a) edible fats and oils;

(b) fruit juices and fruit cordials;

(c) non-alcoholic drinks; and

(d) jams, fruit jellies and marmalades.

Colouring mixes for inking on food surfaces may contain dimethyl polysiloxane not exceeding 50 ppm in amount.

Antioxidants

Ascorbic acid, erythorbic acid, citric acid, phosphoric acid, lecithin, tocopherols are the antioxidants

Antioxidants that may be added to specified food as mentioned below;

Food	Antioxidant
Coconut cream, coconut cream powder and peanut butter Edible oil and edible fat and ghee (on fat basis) Essential oil including its flavouring constituent isolate and concentrate Manufactured meat Vitamin oil and its concentrate	Tocopherols
Coconut cream, coconut cream powder and peanut butter Edible oil and edible fat and ghee (on fat basis) Fruit nectar	Ascorbic acid
Coconut cream, coconut cream powder and peanut butter Edible oil and edible fat and ghee (on fat basis)	Ascorbic palmitate

Note: The maximum permitted proportion of antioxidant added to food shall be governed by Good Manufacturing Practice (GMP)

Sweetening agents

Artificial sweeteners mentioned in column 2 of the table below, may be used only in the food articles mentioned in column 3 and in quantities not exceeding the levels mentioned in column 4 and as per provision contained in these standards.

Serial No. (1)	*Name of Sweetener (2)*	*Food (3)*	*Maximum Use Level (4)*
I	Saccharin Sodium	Carbonated Water	100 ppm
		Soft Drink Concentrate	100 ppm
		Supari	4000 ppm
		Pan Masala	8000 ppm
		Pan Flavouring Material	8.0 percent
		Synthetic Syrup for dispenser	450 ppm

		Sweets (Carbohydrates based and Milk products based): Halwa, Mysore Pak, Boondi Ladoo, Jalebi, Khoya Burfi, Peda, Gulab Jamun, Rasogolla and similar milk product based sweets sold by any name	500 ppm
		Chocolate (White, Milk, Plain, Composite & Filled)	500 ppm
		Sugar based/ Sugar free confectionery	3000 ppm
		Chewing gum /Bubble gum	3000 ppm
II	Aspartame (methylester)	Carbonated Water	700 ppm
		Soft Drink concentrate	700 ppm
		Biscuits, Bread, Cakes and Pastries	2200 ppm
		Sweets (Carbohydrates based and Milk products based) : Halwa, Mysore Pak, Boondi, Ladoo, Jalebi, Khoya Burfi, Peda, Gulab Jamun, Rasogolla and similar milk product based sweets sold by any name	200 ppm
		Jam, Jellies, Marmalades	1000 ppm
		Chocolate (White, Milk, Plain, Composite And Filled)	2000 ppm
		Sugar based/ Sugar free confectionery	10000 ppm
		Chewing gum/ Bubble gum	10000 ppm
		Synthetic Syrup for dispenser	3000 ppm
		Custard powder mix	1000 ppm
		Vegetarian jelly crystals	3000 ppm
		Fruit Nectar	600 ppm
		Vegetable Nectar	600 ppm
		Ice Cream, Frozen Dessert and Pudding	1000 ppm
		Flavoured Milk	600 ppm
		Ready to Serve Tea and Coffee based Beverages	600 ppm
		Yoghurt	600 ppm
		Ready to eat Cereals	1000 ppm
		Non-Carbonated water based beverages (non-alcoholic)	600 ppm
III	Acesulfame Potassium	Carbonated water	300 ppm
		Soft Drink concentrate	300 ppm
		Biscuits, Bread, Cakes and Pastries	1000 ppm
		Sweets (Carbohydrates based and Milk products based) : Halwa, Mysore Pak, Boondi Ladoo, Jalabi, Khoya	500 ppm

		Burfi, Peda, Gulab Jamun, Rasogolla and similar milk product	
		Chocolate (White, Milk, Plain, Composite and Filled)	500 ppm
		Sugar based/ Sugar free confectionery	3500 ppm
		Chewing gum/ Bubble gum	5000 ppm
		Synthetic Syrup for dispenser	1500 ppm
		Ready to serve tea and coffee based Beverages	600 ppm
		Ice lollies / ice candy	800 ppm
		cereal based beverages	500 ppm
		Fruit Nectars	300ppm
		Concentrate for fruit nectars (in final Beverage for consumption)	300 ppm
		Non carbonated water based beverages (non alcoholic)	300 ppm
IV	Sucralose	Carbonated water	300 ppm
		Soft drink concentrate	300 ppm
		Biscuits, breads, cakes and Pastries	750 ppm
		Sweets (Carbohydrates based and Milk products based): Mysore Pak, Boondi Ladoo, Jalebi, Khoya Burfi,Halwa Peda, Gulab Jamun, Rasgulla and similar milk product based sweets sold by any name	750ppm
		Yoghurts	300 ppm
		Sweetened butter milk	300 ppm
		Ice Cream	400 ppm
		Jam, Jellies and Marmalades	450 ppm
		Frozen fruit	150 ppm
		Chutney	800 ppm
		Confectionery	1500 ppm
		Chewing gum	1250 ppm
		Cookies	750 ppm
		Doughnuts /scones /muffins	800 ppm
		Cake mixes	700 ppm
		Ready to serve tea and coffee beverages	600 ppm
		Ice lollies/Ice candy	800 ppm
		Vegetable juice	250 ppm
		Vegetable nectar	250 ppm
		Concentrates for vegetable juice	1250 ppm
		Concentrate for vegetable nectar	1250 ppm
		Lozenges	1500 ppm
		Non-carbonated water based	300 ppm

		beverages (non-alcoholic)	
		Jelly Crystals	300 ppm
		Custard powder/ ready to eat custard dessert	260 ppm
		Chocolate	800 ppm
		Dried ice cream mixes	400 ppm
		Frozen Dessert	400 ppm
		Milk lollies and milk ices	400 ppm
V	Neotame	Carbonated water	33 ppm
		Soft drink concentrate	33 ppm
VI	Cyclamic acid and its calcium and sodium salts, Cyclamates (cyclamates as cyclamic acid)	Non alchoholic drinks, Dairy based drinks flavour &or fermented	250ppm
		Fruit drinks	250ppm
		Vegetable juice drinks	400ppm
		"Sport" "Energy" Electrolyte drinks" Particulated drinks	250ppm
		Dairy based deserts/ desert mixes	250ppm
		Fat based deserts and desert mixes (excluding dairy based products)	250ppm
		Fruit based deserts, desert mixes, including fruit flavours and water based deserts	250ppm
		Cereal based, starch based deserts and desert mixes	250ppm
		Egg based desert and desert mixes	250ppm
		Edible ices including Sherbats and Sorbets	250ppm
		Canned or bottled (pasteurized) fruit	1000ppm
		Fruit preparations (including pulp, puree & fruit toppings)	250ppm
		Jams, Jellies and Marmalades	1000ppm
		Fruit based spread excluding Jams, Jellies and Marmalades	500ppm
		Cocoa based spreads including filings	500ppm
		Cocoa and Chocolate products	500ppm
		Confectionery including hard and soft candy, nougats, marzipans	500ppm
		Decorations, toppings, (non fruit) and Sweetners	500ppm
		Flour confectionery products & mixes for these products	1600ppm
		Pancake syrup and maple syrup	500ppm
		Emulsified sauces	500ppm
		Dietetic formula for weight management	400ppm

		Dietetic food excluding dietetic products stated elsewhere in table & products for infants	400ppm
		Drinks consisting of a mixture of non alcoholic drinks & beer, cider, perry, spirits, wine	250ppm
VII	Steviol Glycosides (as Steveiol)	Non alcoholic drinks, Dairy based drinks flavour &or fermented	200ppm
		Fruit drinks	125ppm
		Vegetable juice drinks	125ppm
		"Sport" "Energy" Electrolyte drinks" Particulated drinks	160ppm
		Ready to drink Coffee, Coffee substitutes, tea, herbal infusions and other hot cereals	100ppm
		Soybean based beverages	200ppm
		Fruit in Vinegar, oil or brine	160ppm
		Vegetables, nuts and seed spreads	330ppm
		Cocoa and Chocolate products	550ppm
		Confectionery including hard and soft candy, nougats, marzipans	700ppm
		Bread & bakery products & mixes of these products	150ppm
		Seasonings and condiments, excluding sauces	30ppm
		Sauces, gravies and dressings & their mixes except soybean sauce	350ppm
		Soybean sauces	165ppm
		Special purpose medical foods	175ppm
		Dietetic formula for weight management	175ppm
		Dietetic food excluding dietetic products stated elsewhere in table & products for infants	175ppm

Chemical preservatives

Chemical preservatives shall be divided into the following classes:

(a) Class I chemical preservatives shall be:

(i) common salt;

(ii) sugars;

(iii) vinegar or acetic acid, lactic acid, ascorbic acid, erythorbic acid, citric acid, malic acid, phosphoric acid, or tartaric acid or the calcium, potassium or sodium salts of any of the acids specified in this subparagraph; and

(iv) ethyl alcohol or potable spirits;

(b) Class II chemical preservatives shall be:

(i) Sulphur dioxide sulphurous acid or any of it sodium, potassium or calcium salts

(ii) Benzoic acid and its sodium and potassium salts

(iii) Methyl or propyl parahydroxybenzoate and their sodium salts

(iv) Sorbic acid and its sodium, potassium or calcium salts

(v) Propionic acid and its sodium or calcium salts

(vi) Nitrites of sodium or potassium

(vii) Nitrates of sodium or potassium

Class III chemical preservative shall be dimethyl dicarbonate.

- *The additions of any Class I chemical preservatives in any food in any proportion is not restricted.*
- *Any specified food may contain one of the Class II chemical preservatives*
- *Any specified food in relation to which 2 or more Class II chemical preservatives are added they may contain an admixture of those chemical preservatives if, when the quantity of each such chemical preservative present in that food is expressed as a percentage of the maximum quantity of that chemical preservative appropriate to that food provided the sum of those percentages does not exceed 100.*
- *Class III chemical preservative may be added to any food, as per GMP*

PERMITTED PRESERVATIVE THAT MAY BE ADDED TO SPECIFIED FOOD AND THE MAXIMUM USE LEVEL IN EACH CASE

	PRESERVATIVES [Maximum Use Level (mg/kg)]		
(1) Food	*(2) Sulphur dioxide (or sulphites Calculated as Sulphur dioxide*	*(3) Benzoic acid (or sodium benzoate calculated as benzoic acid)*	*(4) Sorbic acid (or its sodium, calcium or potassium salts calculated as sorbic acid)*
Cheese, processed cheese, cheese paste	Nil	Nil	1,000

and dried cheese			
Chilli slurry	Nil	1,000	Nil
Cider	200	Nil	Nil
Curry paste	Nil	350	Nil
Coconut milk	Nil	1000	Nil
Dextrose anhydrous and dextrose monohydrates	20	Nil	Nil
Edible gelatin	1,000	Nil	Nil
Essence and flavouring emulsion	800	350	800
Fermented soya bean product	Nil	1,000	Nil
Fish paste, belacan, cincalok, otak udang, pekasam**,** fish ball and fish cake	Nil	750	Nil
Flavoured drink concentrate requiring more than 50 times dilution and the addition of sugar	Nil	2,000	Nil
Fresh uncut fruit (the edible portion)	30	Nil	Nil
Fructose	20	Nil	Nil
Fruit–candied; dried; dried candied (including kundur, peel and sugar coated nutmeg)	2,000	350	500
Fruit juice – concentrated	350	800	800
Fruit juice – for direct consumption	140	350	350
Fruit nectar – concentrated	350	800	800
Fruit nectar for direct consumption	140	350	350
Fruit pickle (including drained form)	550	750	750
Fruit (preserved) not otherwise specified in this Schedule	550	750	750
Fruit pulp	350	1,000	1,000
Fruit pulp for	1,000	1,000	1,000

manufacturing			
Ginger (fry)	150	Nil	Nil
Glucose	40	Nil	Nil
Glucose syrup	300	Nil	Nil
High fructose glucose syrup	40	Nil	Nil
Icing sugar	20	Nil	Nil
Jam, fruit jelly (including jelly strips in peanut butter) and marmalade	100	450	450
Jam, fruit jelly and marmalade as low energy food	100	450	450
Margarine	Nil	1,000	1,000
Meat – uncooked manufactured other than meat-burger	150	Nil	400
Pectin and jam setting compound	250	Nil	Nil
Perry	200	Nil	Nil
Pickle other than fruit pickle and vegetable pickle	140	350	350
Sauce not otherwise specified in this Schedule	300	750	750
Soft drink for direct consumption excluding mineral water	140	350	350
Soft drink requiring dilution	350	800	800
Soya sauce, hydrolysed vegetable protein sauce, hydrolysed plant protein sauce, blended hydrolysed vegetable protein sauce, blended hydrolysed plant protein sauce, oyster sauce and fish sauce	400	1,000	1,000
Sugar	20	Nil	Nil

Tomato – pulp, paste and puree	100	Nil	Nil
Topping	230	800	800
Vegetable – dried; salted; pickled; dried salted; dried pickled	2,000	750	500
Vinegar – distilled, blended and artificial	70	Nil	Nil
Wine, wine cocktail, aerated wine, dry wine, sweet wine, fruit wine excluding cider and perry, vegetable wine, honey wine, rice wine and toddy	450	Nil	200

NOTE:

1. In places where the word "Nil" appears, it means that the substance is prohibited in that food.
2. "*" indicates level before dilution.

Colouring matter

a) any article of food intended for human consumption which contains any added colouring matter other than a permitted colouring matter as listed in Table 1

(b) any colouring matter for use in food intended for human consumption other than a permitted colouring matter, as listed in Table 1 or

(c) any permitted synthetic organic colour, as listed in Table 1which contains alpha naphthylamine, beta-naphthylamine, benzidine, paraaminodiphenyl(xenylamine) or their derivatives and the polycyclic aromatic hydrocarbons.

Meat, poultry, fish, fruit or vegetable in the raw or unprocessed state, may not have any added colour (otherwise than for the purpose of marking e.g. egg)

The following synthetic dyes are permitted to be used as colouring substances in food:

(1) *Common Name of Colour*	*(2)* *Scientific Name*	*(3)* *Colour Index Number*
Allura Red AC	disodium salt of 6-hydroxy-5-[(2-methoxy-5-methyl-4-sulfophenyl)-azol]-2-naphthalene-sulforic acid	16035

Amaranth	trisodium salt of 1-(4-sulpho-1-naph-thylazo)-2-naphthol-3:6-sulphonic acid	16185
Brilliant Balck PN	tetrasodium salt of 8-acetamido-2 (7-sulpho-4-p-silphophenylazo-1-naphthy-lazo)-1-naphthol-3:5-disulphonic acid	28440
Brilliant Blue FCF	disodium salt of 4-[(4-N-ethyl-p-sul-pho-benzylamino)-phenyl]-2(2-sulpho-niumphenyl)-methylene)[1-(N-ethyl-N-p-sulphobenzyl)-Δ2,5-cyclohexadienimine	42090
Carmoisine	disodium salt of 2-(4-sulpho-1-naph-thylazo)-1-naphthol-4 sulphonic acid	14720
Chocolate Brown HT	disodium salt of 2:4-dihydroxy-3:5-di(4-sulpho-1-naphthylazo) benzyl alcohol	20285
Erythrosine BS	disodium or dipotassium salt of 2:4:5:7-tetraiodo-fluorescein	45430
Fast Green FCF	disodium salt of 4-{[4-N-ethyl-p-sulpho-benzylamino)-pheny]-(4-hydroxy-2-sul-phoniumphenyl)-methene}-[1-(N-ethyl-N-p-sulphobenzyl)-Δ2,5 cyclohexadienimine]	42053
Green S	disodium salt of di-(p-dimenthylamino-phenyl-2-hydroxy-3:6 disulphonapthyl-methanol anhydride	44090
Indigotine	disodium salts of a mixture of indigo 5:5'-disulphonic acid and indigo-5:7'-disulphonic acid	73015
Ponceau 4R	trisodium salt of 1-(4-sulpho-1-naphthylazo)-2-naphtol-6:8-disulphonic acid	16255
Quinoline Yellow	disodium salt of disulfonates of 2-(2-quinolyl) indan-1, 3-dione	47005
Sunset Yellow FCF	disodium salt of 1-p-sulphophenylazo-2-naphthol-6-sulphonic acid	15985
Tartrazine	trisodium salt of 5-hydroxyl-p-sulpho-phenyl-4-sulpho-phenylazopyrazole-3-carboxylic acid	19140

The colour index numbers specified in column (3) of the Table above refer to the numbers allotted in the edition of the Colour Index published in 1971 jointly by the Society of Dyers and Colourists of the United Kingdom and the Association of Textiles Chemists and Colourists of the United States of America.

The levels of above permitted colours and food types shall be as per Codex General Standards of food additives

The synthetic dyes specified in the Table above shall conform to the following standard

Pure dye	minimum percentage % 85%
Water insoluble matter	maximum percentage 0.1%
Subsidiary dye	maximum percentage 4%
Ether extractable matter	maximum percentage 0.2%
Intermediates	maximum percentage 0.5%

The following diluents are permitted to be used in coloring preparation

1. For colouring preparation in powdered form: anhydrous sodium sulphate, sodium chloride, sucrose, dextrose, cornflour , starch

2. For colouring preparation in liquid form: water, ethyl alcohol, edible oil, sugar syrup, sorbitol, glycerine, propylene glycol

Use of permitted synthetic food colours prohibited - Use of permitted synthetic food colours in or upon any food other than those enumerated below is prohibited:

(i) Ice-cream, milk lollies, frozen desserts, flavoured milk, yoghurt, ice-cream mix-powder;

(ii) Biscuits including biscuit wafer, pastries, cakes, confectionery, thread candies, sweets, savouries (dalmoth, mongia, phululab, sago papad, dal biji only);

(iii) Peas, strawberries and cherries in hermetically sealed containers, preserved or processed papaya,canned tomato juice, fruit syrup, fruit squash, fruit crushes, fruit cordial, jellies, jam, marmalade, candied crystallized or glazed fruits;

(iv) Non-alcoholic carbonated and non-carbonated ready to serve synthetic beverages including synthetic syrups, sharbats, fruit bar, fruit beverages, fruit drinks, synthetic soft-drink concentrates;

(v) Custard powder;

(vi) Jelly crystal and ice-candy;

(vii) Flavour emulsion and flavour paste for use in carbonated or non-carbonated beverages should be under label declaration.

Maximum Level of permitted synthetic food colours;

The maximum level of permitted synthetic food colours or mixture thereof which may be added to any food article shall not exceed 200 parts ppm of the final food or beverage for consumption.

Emulsifier or Stabilizer

Permitted emulsifier or stabilizers are as follows in following quantities in following foodsNon-alcoholic drinks may contain:

(a) ester gum in an amount not exceeding 100 ppm; and

(b) sucrose acetate isobutyrate in an amount not exceeding 300 ppm.

Quillaia extracts (Type I, II or both) may be used only in;

(a) soft drinks, at a level not exceeding 50 ppm (calculated as saponins); and

(b) alcoholic beverages, at a level not exceeding 40 ppm (calculated as saponins).

Flavouring agents

Natural or synthetic flavouring essence or extract should not to be contained in a solvent other than a permitted solvent, namely, benzyl alcohol, beta-cyclodextrin, diacetin, diethyl ether, ethyl acetate, ethyl alcohol, glycerol, isopropyl alcohol, propylene glycol, triacetin and water.

The permitted flavouring compounds may also be carried in an emulsion of a permitted emulsifier.

Natural flavouring agents shall include natural flavouring essences, spices and condiments.

The use of coumarin, tonka bean, safrole, sassafras oil, dihydrosafrole, isosafrole, agaric acid, nitrobenzene, dulcamara, pennyroyal oil, oil of tansy, rue oil, birch tar oil, cade oil, volatilebitter almond oil containing hydrocyanic acid and male fern as flavouring agents is prohibited.

The following flavouring substances are prohibited to be added into food:

a) Cade oil
b) Cocaine
c) Nitrobenzene
d) Any other flavouring substance that is injurious or likely to be injurious to health

Flavour enhancers

Permitted flavour enhancer for use in food intended for human consumption include

(a) ethyl maltol;

(b) L-glutamic acid, mono-sodium L-glutamate, monopotassium L-glutamate, calcium di-L-glutamate, monoammonium L-glutamate and magnesium di-Lglutamate;

(c) Inosinic acid, guanylic acid, di-sodium 5'-inosinate, dipotassium 5'-inosinate, calcium 5'-inosinate, disodium 5'- guanylate, di-potassium 5'-guanylate and calcium 5'- guanylate;

(d) L-cysteine; and

(e) L-theanine in the following foods at a level not exceeding 1000 ppm:

(i) brewed tea;

(ii) soft drinks;

(iii) chocolate;

(iv) chocolate confectionery

PERMITTED FLAVOUR ENHANCER

1. Monosodium salt of L-Glutamic Acid (Monosodium L-Glutamate)

The above mentioned flavor enhancer shall contain not less than 99% of the monosodium salt calculated on a water-free basis, and derived solely from vegetables sources.

2. Sodium or Calcium Salts of Guanylic Acid or Inosinic Acid or a combination of these

The above mentioned flavor enhancers shall contain not less than 97% and not more than the equivalent of 102% of the sodium or calcium salt of guanylic or inosinic acid calculated on a water-free basis, and derived solely from animal or vegetables sources.

3. *Yeast extracts or dried inactive yeast or autolyzed yeast or a combination of these*

The above mentioned flavor enhancers shall not contain more than 0.04 mg per gram of total folic acid (approximately 0.008 milligram of pteroyglumatic acid per gram of yeast) and derived solely from *Saccharomyces cerevisiae* or *Saccharomyces fragilis* or torula yeast (*Candida utilis*) or a combination of these.

Monosodium salt of L-Glutamic Acid (Monosodium L-Glutamateis permitted to be added as per GMP in the following food:

Frozen vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds, Fermented vegetable (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera and seaweed products, Dried pastas and noodles and like products, Fresh meat, poultry, and game, Frozen fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms, Frozen battered fish, fish fillets, and fish products, including mollusks, crustaceans, and echinoderms, Frozen minced and creamed fish products, including mollusks, crustaceans, and echinoderms, Cooked and/or fried fish and fish products, including mollusks, crustaceans, and echinoderms, Smoked, dried, fermented, and/or salted fish and fish products, including mollusks, crustaceans, and echinoderms, Salt Substitutes, and Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages, excluding cocoa

Sodium or Calcium Salts of Guanylic Acid or Inosinic Acid or a combination of these are permitted to be added as per GMP in salt.

Sequestrant

Citric acid, phosphoric acid, and tartaric acid or the calcium salts of the abovementioned acids, as well as glycine may be added to food to serve as sequestrants

Calcium disodium ethylenediamine tetraacetate may be used only in:

(a) canned fish, including crustaceans and molluscs, at a level not exceeding 250 ppm;

(b) mayonnaise, salad dressing, French dressing, fat spread, savoury sauce and margarine at a level not exceeding 75 ppm; and

(c) soft drinks at a level not exceeding 33 ppm

Gaseous packaging agent

Permitted gaseous packaging agents in food are;

(a) carbon dioxide;

(b) nitrogen; and

(c) helium.

General purpose food additives

Any permitted general purpose food additive should not be added unless the food is sound and fit for human consumption.

(a) in the case of flavouring, where acetone is used as a processing aid in the production of the flavouring, the residue of acetone does not exceed 5 mg/kg of the flavouring; or

(b) in the case of any food or any food containing flavouring, where acetone is used as a processing aid in the production of the food or in the production of one or more of itsingredients, the residue of acetone does not exceed 0.1 mg/kg of the food.

Methanol may be used as an extraction solvent in food, provided that the residue of methanol in the food does not exceed 5 ppm.

Triethyl citrate may be used as a whipping agent in the following foods, at a level not exceeding 2500 ppm:

(a) liquid egg products;

(b) dried egg products, whether or not heat coagulated;

(c) heat coagulated egg products.

Permitted Food additives in Bread and Biscuits

Sl. No. **1**	**Name of additive** **2**	**Bread** **3**	**Biscuits** **4**
A.	**Acidity regulators**		
1	Sodium fumarate	GMP	GMP
2	Potassium malate	GMP	GMP
3	Sodium hydroxide	GMP	GMP
4	Acetic acid or Lactic acid	2500 ppm max	GMP
5	Citric acid	-	GMP
6	Malic acid	-	GMP
7	Tartaric acid	-	GMP
B.	**Emulsifying and stabilizing agents singly or in combination**		
1	Sucroglycerides	-	1000 ppm
2	Hydroxy Propyl methyl cellulose	GMP	GMP
3	Sucrose esters of fatty acids	GMP	GMP
4	Di- Acetyl tartaric acid esters of mono and diglycerides	GMP	10000ppm
5	Guar gum	5000 ppm max	—
6	Sorbitol	GMP	—
7	Lecithin	GMP	—
8	Glycerine	—	GMP

9	Glycerol monostearate	GMP	—
10	Sodium steroyl 2 lactylate of Calcium steroyl 2 lactylate (Singly or in combination)	5000 ppm max	—
11	Polyglycerol esters of fatty acids and polyglycerol esters of interesterified recinoleic acid	2000 ppm max	—
C.	**Improver**		
1	Fungal alpha amylase	100 ppm max (on flour mass basis)	—
2	Bacterial amylase	GMP	GMP
3	Amylases and other enzymes	GMP	-
4	Ammonium persulphate	2500 ppm max (on flour mass basis)	--
5	Calcium phosphate	2500 ppm max (on flour mass basis)	--
6	Calcium carbonate	5000 ppm max (on flour mass basis)	—
D.	**Flour treatment agent**		
1	Ammonium chloride	500 ppm max (on flour mass basis)	--
2	L- cystein mono hydrochloride	90 ppm max (on flour mass basis)	—
3	Ammonium phosphate	2500 ppm max (on flour mass basis)	-
4	Benzoyl peroxide	40 ppm max	40 ppm
E.	**Antioxidant**		
1	Ascorbic acid	GMP	GMP
F.	**Preservatives/ Mould inhibitors singly or in combination**		
1	Calcium or sodium propionate	5000 ppm max	—
2	Sorbic acid or its Sodium, Potassium or Calcium salts	1000 ppm max (calculated as sorbic acid)	—
3	Acid calcium phosphate	10000 ppm max	—
4	Sodium diacetate	4000 ppm max	—
5	Acid sodium pyrophosphate	5000 ppm max	—
G.	**Colours** (can be used singly or in combination within the specified levels)		
a.	Natural		
1	Chlorophyll	—	GMP

2	Caramel	GMP	—
3	Curcumin or turmeric	—	GMP
4	Beta carotene	—	GMP
5	Beta apo-8 carotenal	—	GMP
6	Methyl ester of Beta apo-8 carotenic acid	—	GMP
7	Ethyl ester of Beta apo-8 carotenic acid	—	GMP
8	Canthaxanthin	—	GMP
9	Riboflavin, Lactoflavin	—	GMP
10	Annato	—	GMP
11	Saffron	—	GMP
b.	Synthetic singly or in combination		
1	Ponceau 4R	—	100 ppm
2	Carmoisine	—	100ppm
3	Erythrosine	—	100ppm
4	Tartrazine	--	100ppm
5	Sunset Yellow FCF	—	100ppm
6	Indigo carmine	—	100ppm
7	Brilliant blue FCF	—	100ppm
8	Fast green FCF	—	100ppm
H.	**Artificial sweeteners (Singly)**		
1	Aspartame	2200 ppm max	2200 ppm
2	Acesulphame K	1000 ppm max	1000 ppm
3	Sucralose	750 ppm max	750 ppm
I.	**Leavening agents**		
1	Baking powder	GMP	GMP
2	Ammonium bi-carbonate	GMP	GMP
3	Ammonium carbonate	5000 ppm max	5000 ppm
J.	**Flavours**		
1	Natural flavours and natural flavouring substances/ Nature identical flavouring substances/Artificial flavouring substances	-	GMP
K.	**Flavour improver/ enhancer**	-	GMP
L.	**Nutrient**		
1	Calcium and ferrous salts	-	GMP
2	Potassium iodate	-	GMP
M.	**Dough conditioners**		

1	Sodium bisulphate	-	GMP
2	Sodium metabisulphite	-	GMP
N.	**Yeast**	GMP	GMP
O.	**Jellifying agents**	-	GMP