



Republic of the Philippines  
Department of Health  
OFFICE OF THE SECRETARY

Administrative Order  
No. 88-A s.1984

**Subject : Regulatory Guidelines Concerning Food Additives**

This regulations prescribes the guidelines on the use of food additives in all foodstuffs sold in the Philippines whether manufactured or imported.

**1. Definition of Terms**

**Food Additive** refer to any substance not normally consumed as food by itself and not normally used as typical ingredient of the food, whether or not it has nutritive value, the international addition of which for food technological (including organoleptic) purpose in the manufacture. Processing, preparation treatment, packaging, transport or result (directly or indirectly) in its or its by products becoming a component of (or otherwise affecting the characteristics of) such food.

**Processing Aids** are additives that are used in the processing of food to achieve a specified technological purpose and which may or may not result in the presence of residues or derivatives in the final product.

**Flavoring Substances** refer to flavor preparations composed of substances derived from plant/animal products and/ or chemically synthesized substances whose significant function in food flavoring rather than nutritional.

**2. List of Permissible Food Additives**

- 2.1. A list permissible food additives, duly approved by the Minister of Health upon the recommendations of the Bureau of Food and Drugs, shall be the official reference for additives that are allowed for use in food products. Foodstuffs containing additives not found in the list shall be considered illegal and their local distribution shall not be permitted.
- 2.2. The additives are listed in separate labels according to their functional categories.
- 2.3. Every food additive included in the list shall meet the specification for identity and the purify set for that particular substance in any of the latest edition of the following publication;
  - a. U.S Code of Federal Regulations
  - b. Food Chemical Codes
  - c. JECFA Specifications ( published in FAO Food and Nutrition Paper)
- 2.4. The use of additives shall be in accordance with the specified restrictions. e.g the type of food where the substance may be added and or the quantitative limitations prescribe thereto. Whenever GMP is indicated. it means that the additives in question are self limiting in food for technological organoleptic or other reasons and that, thereto, the additives need not be subject to maximum limits but must be used according to good manufacturing practice
- 2.5. The list of permissible additives shall be subject to periodic review and the use of any substance may later be banned when circumstances render such action necessary.

### **3. Requirements For Approval Of Other Additive**

- 3.1 Any person for entity who wish to use a food additive that is not included in the approved list may file with the Minister of Health through the Bureau of Food and Drugs, a petition proposing the approval of such additive.
- 3.2 Petitions shall be accompanied by pertinent information concerning the food additive including, but not limited to the following:
- a) The chemical identity and composition of the additive, its physical, chemical and biological properties, and specifications for its purity;
  - b) A description of the method of manufacture and a list of substance used in the synthesis, extraction or another method of preparation;
  - c) The amount of the food additive proposed for use and the purpose for which it is proposed, together with the directions and recommendations regarding the proposed use;
  - d) Data establishing that the food additive will have intended physical or other technical effect or that it may reasonably be expected to become a component, or to affect the characteristics directly or indirectly of food and the amount necessary to accomplish this;
  - e) As say method (s) for determining the amount of the food additive in the raw, processed and/or finished food and of any substance formed in or on such Food because of its use;
  - f) Proposed tolerance or maximum level of use, if required to ensure its safety;
  - g) Full reports of investigation made with respect to the safety of the additives, including information as to the methods and controls used in conducting such investigations;
  - h) Or in lieu of clause (g) official documents from the country of origin containing the standard procedure adopted in evaluating the safety of food additives and a certification from the Health Authorities in that country indicating the present status of the additive and these documents shall be duly authenticated by the Phil. Consulate: and
  - i) A sample of the food additive and a sample of food containing the additive.
- 3.3 The Bureau of Food and Drugs shall, within ninety days after filling of a petition, notify the person or entity concerned whether or not the food additive in question shall be recommended for the approval of the Minister of Health.

This regulation shall take effect immediately upon approval and publication in the Official Gazette.

Recommending Approval:

**(SGD) CATALINA C. SANCHEZ**  
Director

APPROVED:

**(SGD) J.C. AZURIN**  
Minister of Health

Although substances found in the list are classified into specific functional categories, some of them are multi functional, example citric acid is usually to food as an acidulant but it can also be used as a sequestrant. Furthermore some additives listed in Group I may be used as processing aids.

The maximum levels of use in a particular type of food or in food products in general, are specified for some additives. The term GMP signifies the use of the least amount of the additive that is reasonably necessary to accomplish the intended effect.

Additives may be used in any food where applicable except when otherwise indicated in this list or when a food Standards precludes such in a particular food product.

The use of a combination of two or more substances to produce the same technological effect in any food shall be allowed only in the following condition: The quantity of each substance present in the food shall be expressed as percent based on the maximum permitted level for that substances, shall not exceed one hundred.

Specific regulatory guidelines pertaining to certain additives are stated in appropriate sections. Annexed hereto are Recommended Levels of Use of some additives in certain food products.

## LIST OF PERMISSABLE FOOD ADDITIVES

### Explanatory Notes:

The substances listed hereto are those that have been approved for use in foodstuffs. These food additives are divided into three major groups:

Group 1. Substances that are directly added to food and classified into the following functional categories:

- Anticaking Agents
- Antimicrobial agents
- Antioxidants
- Antioxidant Synergists
- Emulsifiers
- Firming Agents
- Flavor Enhancers
- Flour Treatment Agents Dough Conditioners
- Food Acidulant
- Food Colors
- Humectants
- Leavening Agents
- Nutrient Supplements
- Ph - Control Agents
- Sequestrants
- Stabilizers and Thickeners
- Surface- Finishing Agents
- Surface - Finishing Agents
- Sweeteners:
  - Non-Nutritive Sweeteners
  - Nutritive Sweeteners
- Miscellaneous

Group II - Substances that are considered as Processing Aids and classified into:

- Antifoaming Agents
- Clarifying Agents
- Catalyst
- Contact Freezing Agents
- Extraction/Carrier Solvents
- Fat Crystal Modifier
- Filtration Aids
- Flocculating Agents
- Lubricants, Anti Stick Agents and Molding Aids
- Propellant and Packaging Cases
- Enzyme Preparations

GROUP III Flavoring Substances  
(\* to be elaborated)

## **ANTI-CAKING AGENTS**

Substances added to finely powdered or crystalline food products to prevent caking, lumping or agglomeration.

	<b>Restriction/Maximum Level of Use</b>
Aluminum Calcium Silicate (calcium aluminum silicate)	2 % in salt; GMP
Calcium phosphate, tribasic	2% in salt; GMP
Calcium Silicate	2% in salt; 5% in baking powder GMP
Iron ammonium citrate	25 % ppm in salt
Magnesium carbonate	2 % in salt; GMP
Magnesium silicate	2 % in salt; GMP
Myristates, palmitates, stearates of aluminum, calcium, magnesium potassium and sodium	GMP
Silicon dioxide	2 %
Sodium aluminum silicate (sodium silica aluminate)	2 %
Sodium calcium aluminosilicate	2 %
Sodium ferrocyanide ( Yellow of Soda)	13 ppm in salt (calculated as anhydrous sodium ferrocyanide)
Tricalcium silicate	2 % in salt
Methyl paraben	0.1%
Nisin	100 ppm in processed cheese; subject to specific regulatory guidelines
Nitrate of potassium and sodium	500 ppm
Nitrite of sodium	200 ppm
Propyl paraben	0.1%
Propionic acid and its calcium and sodium salt	0.2%
Sorbic acid and its potassium, calcium and sodium salts	0.3%
Sodium or potassium sulfite	Not in sources of Vitamin B <sub>1</sub> *
Sulfur dioxide	Not in sources of Vitamin B <sub>1</sub> *

\*Refer to Annex 1 for Recommended levels in certain food products.

## **ANTIOXIDANTS**

Substances used to preserve food by retarding deterioration, rancidity or discoloration due to oxidation.

	<b>Restriction/Maximum Level of Use</b>
Ascorbic Acid	GMP
Ascorbyl palmitate	GMP
Butylated hydroxyanisole	0.02 %*
Butylated hydroxyanisole	0.02 %*
Calcium ascorbate	GMP
Dilauryl thiodipropionate	0.02 %*
Erythorbic acid	GMP
Ethoxynquin	100 ppm for color preservation of chili powder and paprika
Lecithin	GMP
Propylgallate	0.02 %*
Sodium Ascorbate	GMP
Sodium erythorbate	GMP
Stannous chloride	11-20 ppm calculated as tin*
Thidipropionic acid	0.02 %*
Tertiary butyl hydroquinone (TBHQ)	0.02 %*

Alpha-tocopherol	GMP
Tocopherol (mixed concentrate)	GMP

\*Refer to Annex I for Recommended levels in certain food products.

### **ANTIMICROBAL AGENTS**

Substances used to preserve food by preventing growth of microorganism and subsequent spoilage.

	<b>Restrictions/Maximum level of use</b>
Benzoic acid and its potassium and sodium salts	0.1%
Dehydroacetic acid and its sodium salt	65 ppm in cu/peeled squash
Erythorbic acid	GMP
Metabisulfites of potassium and sodium	Not in meat or food recognized as source of Vit. B ( thiamine)*
Methyl paraben	0.1%
Nisin	100 ppm in processed cheese; subject to specific regulatory guidelines
Nitrate of potassium and sodium	500 ppm
Nitrate of sodium	200 ppm
Propyl paraben	0.1 %
Propionic acid and its calcium and sodium salt	0.2 %
Ascorbic acid and its potassium, calcium and sodium salts	0.3 %
Sodium or potassium sulfate	not in source of Vitamin B1*
Sulfur dioxide	not in source of Vitamin B1*

\*Refer to annex I for Recommended levels in certain products.

### **ANTIOXIDANT SYNERGIST**

Substances used to interact with antioxidants to produce a total greater than the sum of effects produced by the synergist and the antioxidant individually.

	<b>Restrictions/Maximum level of use</b>
Calcium disodium EDTA	25-340 ppm*
Citric acid	GMP
Disodium EDTA	36-500 PPM*
Gum guaiaic (guaiaic resin)	GMP
Isopropyl citrate	0.02 %
Monoglyceride Citrate	200 PPM
Phosphoric acid	GMP
Potassium citrate	GMP
Sodium citrate	GMP

\*Refers to annex I Recommended Levels in certain food products.

### **EMULSIFIERS**

Substances which modify surface tension in the component phase of an emulsion to establish a uniform dispersion or emulsion.

	<b>Restrictions/Medium Level of Use</b>
Acetic acid ester of mono and diglycerides	GMP
Ammonium salt of phosphatidic acid	50 ppm in cocoa powder and cocoa sugar mixtures
Brominated vegetable oil	15 ppm in beverages
Cholic/Desoxycholic acid	0.1 % in dried egg white

Diacetyl-tartaric acid ester of mono and di-glycerides	GMP
Diatyl sodium sulfosticinate	0.5 -25 ppm
Ethoxylated mono and diglycerides (Polyglycerate 60)	0.2 - 0.5 %
Glycerol ester of wood resin	110 ppm in beverages
Glyceryl lactoesters of fatty acids (Lactic acid esters of mono and diglycerides)	GMP
Glyceryl (glycol) monostearate	2 % in macaroni products; GMP
Hydroxylated lecithin	GMP
Lactylic esters of fatty acids	GMP
Lactylated fatty acids esters of glycerol and propylene glycol	GMP
Lecithin	GMP
Mono-and-di-glycerides	GMP*
OX bile extract (Purified oxgall or sodium choleate)	0.1 in dried egg white 0.002 % in cheese; GMP
Polyglycerol esters of fatty acids	GMP
Polyoxyethylene (8) stearate	0.5% in bakery products
Polyoxyethylene (20) sorbitan mono-stearate (Polysorbate 60)	0.05-1.0%*
Polyoxyethylene (20) sorbitan tristearate (Polysorbate 65)	0.05-0.5%*
Polyoxyethylene (20) sorbitan monnoleate (Polysorbate 80)	0.1-1.0%
Propylene glycol alginate	GMP
Propylene glycol esters of fatty acids	GMP
Sodium phosphate	GMP
Sodium stearoyl-2-lactylate	0.2-0.5%
Sorbitan monostearate	1.0% in margarine
Sorbitan tristearate	3.0% in liquid and plastic shortening
Succistearin (stearoyl propylene glycol hydrogen succinate)	GMP
Sucroglycerides	1.0-2.0%*
Sucrose esters of fatty acids	1.0-2.0%*
Tartaric acid esters of mono and di-glycerides	1.0-2.0%*

\*Refer to Annex 1 for Recommended Levels in certain food products

### **FIRMING AGENTS**

Substances added to precipitate residual pectin, thus strengthening the supporting tissue and preventing its collapse during processing.

	<b>Restrictions Maximum Level of Use</b>
Aluminum Sulfate	GMP
Calcium carbonate	GMP
Calcium Chloride	GMP
Calcium lactobionate	GMP
Calcium phosphate, monobasic	GMP
Calcium sulfate	GMP
Magnesium chloride	GMP

### **FLAVOR ENHANCERS**

Substances added to supplement, enhance, or modify the original taste and/or aroma of a food without imparting a characteristic taste or aroma.

	<b>Restriction Maximum Level of Use</b>
Disodium guanylate	GMP
Disodium inosinate	GMP
Glutamic acid	GMP
Monoammonium glutamate	GMP
Mopotassium glutamate	GMP
Monosodium glutamate	GMP

### **FLOUR TREATMENT AGENTS/DOUGH CONDITIONER**

Substances added to milled flour, at the mill, to improve its color and baking qualities, including bleaching and maturing agents. Dough conditioners modify starch and gluten, thereby producing a more stable dough.

	<b>Restriction Maximum Level of Use</b>
Acetone peroxide	GMP
Ammonium chloride	GMP
Ammonium persulphate	250 ppm of flour
Ammonium phosphate, monobasic	GMP
Ammonium phosphate, dibasic	GMP
Ammonium sulfate	GMP
Ascorbic acid	200 ppm of flour
Azodicalbonamide	45 ppm of flour
Benzoyl peroxide	150 ppm of flour
Calcium Bromate	75 ppm of flour
Calcium carbonate	GMP
Calcium iodate	45 ppm of flour
Calcium lactate	GMP
Calcium peroxide	100 ppm of flour
Calcium phophate, monobasic	GMP
Calcium phosphate, dibasic	GMP
Calcium stearoyl-2-lactylate	5000 ppm of flour
Calcium Sulfate	GMP
Chlorine/chlorine dioxide	GMP
L-Xysteine (hydrochloride)	GMP
Ethoxylated mono- and di-glycerides	5000 ppm of flour
Lactylic stearate	5000 ppm of flour
Potassium bromate (banned 1994)	100 ppm of flour
Potassium iodate	75 ppm of flour
Potassium persulphate	100 ppm of flour
Sodium stearoyl-2-lactylate	5000 ppm of flour
Sodium stearyl fumarate	5000 ppm of flour
Succinylated monoglycerides	5000 ppm of flour

### **FOOD ACIDULANTS**

Acids normally present in food which, when added to food, produces an agreeable sharp or tart taste in the product.

	<b>Restriction/Maximum Level of Use</b>
Acetic Acid	GMP*
Citric Acid	GMP
Fumaric Acid	GMP
Lactic Acid	GMP
Malic Acid	GMP
Phosphoric Acid	GMP

Tartaric Acid  
and their calcium, potassium and sodium salts.

GMP

\*not in vinegar or in food products where is claimed that vinegar is the acidulant added.

### **HUMECTANTS**

Substances incorporated in food to promote retention of moisture, including anti-dusting agents.

	<b>Restriction/Maximum Level of Use</b>
Glycerol (Glycerine)	GMP
Propylene Glycol	GMP
Sorbitol	GMP
Triacen (Glycerol triacetate)	GMP

\*The label of food whose reasonably foreseeable consumption may result in a daily ingestion of 50 grams of sorbitol shall bear the statement " Excess consumption may have a laxative effect".

### **FOOD COLORS**

Substances used to impart color or shade to a food

<b>Class 1</b>	<b>Code No.</b>	<b>Restriction/Maximum Level of Use</b>
Annatto extract	C1 75120/ C1 Natural Orange + ELEC No. E160b	GMP
Beet powder (dehydrated beets)		GMP
Beta-carotene	ELEC No.E160a	GMP
Beta-apo-8' carotenal	ELEC No.E160c	GMP
Canthaxanthin	ELEC No.E161g	GMP
Carrot oil		GMP
Caramel		GMP
Carmine/Cochineal extract	C1 75470	GMP
Curcumin	C1 Natural Red + C1 75300 EEC No. E10	GMP
Fruit Juice/Vegetable Juice		GMP
Grape skin extract (enocianine)		GMP
grape color extract		GMP
Iron oxides		GMP
a. Yellow (hydrated ferrie oxide)	C1 77492)	
b. Red (anhydrous ferrie oxide)	C177491)	
Paprika/Paprika oleoresin		GMP
Riboflavin (Lactoflavin/Riboflavin 5'		GMP
Phosphate-sodium		
Safron		GMP
Titanium dioxide (pigment white 6)	C1 774891	1.0 %
Turmeric/Turmeric eleoresin (Powdered turmeric, indian saffron)		GMP
Class 11		
Allura Red ( FD & C Red # 40)	C1 16035 C1Food Red 27	GMP*
Amaranth (FD & C Red # 2)	C116185 ELEC No. E123	GMP*
Brilliant Black PN ( Black PN, Brilliant Black PN)	C1 28-440 C1 Food Black 1	GMP

Chocolate Brown HT Brown HT, Brown HS)	ELEC. No E151 C1 20285	GMP*
Brilliant Blue FCF (FD & C Blue # 1)	C1 Food Brown 3 C1 42090	GMP*
Citrus Red 2	C1 Food BI	only for peel of ranges, 2 ppm
Fast Green FCF ( FD & C Green # 3)	C1 42053	GMP*
Indigotine (FD & C Blue # 2) ( Indigo Carmine )	C1 Food Green C1 73015	GMP*
Orange B	C1 Food Blue 2	only for surface of sausage casing; 150 ppm
Sunset Yellow (FD & C Yellow #6)	C1 15985 C1 Food Yellow 3 EEC #E110	GMP*
Tartrazine (FD & C Yellow #5)	C1 19140 C1 Food Yellow 4 EEC # E102	GMP*
Erythrosine (FD & C Red #3)	C1 45430 C1 Food Red 14 EEC No. E127	GMP*

\* singly or in combination should not exceed 300 ppm

### **LEAVENING AGENTS**

Substances used to produce or stimulate production of carbon dioxide in baked goods to impart a light texture.

	<b>Restrictions/Maximum Level of Use</b>
Ammonium bicarbonate	GMP
Ammonium phosphate, mono- and di-basic	GMP
Calcium phosphate, mono-basic	GMP
Dried yeast	GMP
Glucono-delta lactone	GMP
Sodium acid pyrophosphate	GMP
Sodium aluminum phosphate	GMP
Sodium bicarbonate	GMP

### **SURFACE-FINISHING AGENTS**

Substances used to enhance palatability, preserve gloss or inhibits discoloration of foods, including glazes, polishes, waxes and protective covering.

	<b>Restrictions/Maximum Level of Use</b>
Beeswax	0.4% in confectionary; GMP
Cadelila Wax	0.4 % in confectionery;GMP
Carnauba Wax	0.4 % in confectionery;GMP
Castor Oil	500 ppm in hard candy;GMP
Mineral Oil	0.2 % in confectionery;GMP
Petrolatum	0.2 % in confectionery 0.15 % in bakery products 0.02 % in dried fruits & vegetables on fresh fruits;GMP
Polyethylene glycol	50 ppm in candy; fresh fruits & veg.
Rice bran Wax	2.5 % in chewing gum

## NUTRIENT SUPPLEMENTS

Substances that are necessary for human body's nutritional and metabolic process.

### Restrictions/Maximum Level of Use

Amino acids in the free hydrated or anhydrous form or as the hydrochloride, sodium or potassium salts.

L-Alanine

L-Alanine

L-Asparagine

L-Aspartic acid

L-Cystine

L-Cysteine

L-Glutamic acid

Glycine ( Aminoacetic acid )

( not for infant foods)

L-Histidine

L-Isoleucine

L-Leucine

L-Lysine

DL-Methionine

L-Methionine

L-Phenylalanine

L-Proline

L-Serine

L-Theonine

L-Tryptophan

L-Tyrosine

L-Valine

Aluminum nicotinate

N-Acetyl-L-Methionine

( except in infant foods and foods containing, nitrites & nitrates)

Ascorbic acid

Bakers Yeast Protein ( Saccharomyces cerevisiae)

Biotin

Calcium citrate

Calcium carbonate

Calcium glycerophosphate

Calcium oxide

Calcium Pantothenate ( Calcium chloride Double

Salt of)

Calcium Phosphate

Calcium pyrophosphate

Caroteten

Choline Bitartrate

Choline Chloride

Copper Gluconate

0.005 %

Copper ( Cuprous) Iodide Ferric Phosphate

0.01 % in table salt

Ferric Pyrophosphate

Ferric Sodium Pyrophosphate

Ferrous Fumarate

Ferrous Gluconate

Ferrous Lactate

Ferrous Sulfate

Fish Protein Concentrate

Folic Acid ( Folacin)	0.1 mg per for infants- below 0.3 mg per day for children (4 years) old 0.4 mg per day for adults and children above 4 years old 0.8 mg per day for pregnant or lactating women
Glutamic acid ( or hydrochloride)	
Inositol	
Iron, reduced	
Iron-Choline Citrate Complex	
Kelp	As source of Iodine dietary foods 0.045 mg I / day for infants 0.105 mg I / day for children below 4 years old 0.25 mg I / day for adults and children above years old 0.03 mg I / day for pregnant or lactating women
Niacin	
Niacinamide	
Niacinamide ascorbate	
Nicotinamide -ascorbic acid complex	
D-Pantothenamide	
D-Pantothenyl alcohol	
Potassium chloride	
Potassium iodide	0.01 mg in salt 0.045 mg I / day for infants 0.105 mg I / day for children below 4 years old 0.225 mg I / day for adults and 0.30 mg I / day for pregnant or lactating women
Pyridoxine hydrochloride	
Riboflavin	
Riboflavin-5-phosphate	
Sodium pantothenate	
Sodium phosphate	
Thiamine Hydrochloride	
Thiamine mononitrate	
Tocopherols	
L-Tocopheryl acetate	
Vitamin A	
Vitamin A acetate	
Vitamin A palmitate	
Vitamin B6	
Vitamin B12	
Vitamin D2	
Vitamin D3	
Vitamin K	
Zinc chloride	
Zinc gluconate	
Zinc methionine sulfate	
Zinc oxide	
Zinc stearate	
Zinc sulfate	

Linoleic acid  
 Magnesium oxide prepared from edible fats & oils  
 Magnesium phosphate ( di, & Tri basic)  
 Magnesium Sulfate  
 Manganese - Chloride ( Citrate, gluconate,  
 glycerophosphate, orthphosphate, oxide, sulfate)  
 Manganous oxide

**pH-CONTROL AGENTS**

Substances added to change or maintain active or basicity, including buffers, acids and alkalies.

	<b>Restrictions/Maximum Levels of Use</b>
<u>Acids</u>	
Acetic acid	GMP
Adipic acid	GMP
Citric acid	GMP
Gluconic acid	GMP
Hydrochloride acid	GMP
Lactic acid	GMP
Malic acid	GMP
Phosphoric acid	GMP
Succinic acid	GMP
Sulfuric acid	GMP
Tartaric acid	GMP
<u>Alkalies</u>	
Ammonium bicarbonate	GMP
Ammonium carbonate	GMP
Ammonium hydroxide	GMP
Calcium carbonate	GMP
Calcium hydroxide	GMP
Calcium oxide	GMP
Magnesium carbonate	GMP
Magnesium hydroxide	GMP
Magnesium oxide	GMP
Potassium bicarbonate	GMP
Potassium carbonate	GMP
Potassium hydroxide	GMP
Magnesium carbonate	GMP
Magnesium hydroxide	GMP
Magnesium oxide	GMP
Potassium hydroxide	GMP
Bicarbonate	GMP
Sodium Sodium carbonate	GMP
Sodium hydroxide	GMP
<u>Buffers</u>	
Aluminum ammonium sulfate	GMP
Aluminum potassium sulfate	GMP
Aluminum sodium sulfate	GMP
Ammonium phosphatemmono-and-di-basic	GMP
Ammonium sulfate	GMP
Calcium citrate	GMP
Calcium gluconate	GMP
Calcium lactate	GMP
Calcium phosphate, mono-and-di-basic	GMP
Calcium pyrophosphate	GMP
Potassium citrate	GMP

Potassium phosphate, mono-and-di-basic	GMP
Sodium acetate	GMP
Sodium citrate	GMP
Sodium Phosphate,mono-and-di-basic	GMP
Sodium pyrophosphate	GMP

\*Refers to annex 1 for Recommended Levels in certain food products.

### **SEQUESTRANTS**

Substances which combine with polyvalent metal ions to form a soluble metal complex to improve the quality and stability of products.

	<b>Restrictions/Maximum Levels of Use</b>
Calcium acetate	GMP
Calcium chloride	GMP
Calcium citrate	GMP
Calcium diacetate	GMP
Calcium diacetate	GMP
Calcium disodium EDTA	GMP
Calcium gluconate	GMP
Calcium hexa metaphosphate	GMP
Calcium phosphate,monbasic	GMP
Calcium phytate	GMP
Calcium sulfate	GMP
Citric acid	GMP
Dipotassium phosphate	GMP
Disodium EDTA	GMP
Disodium phosphate	GMP
Isopropyl citrate	GMP
Phosphoric Acid	GMP
Potassium Citrate	GMP
Sodium Acid Phosphate	GMP
Sodium diacetate	GMP
Sodium gluconate	GMP
Sodium hexametaphosphate	GMP
(sodium polyphosphate)	
Sodium metaphosphate	GMP
Sodium potassium tartrate	GMP
Sodium phosphate	GMP
Sodium pyrophosphate	GMP
(tetrasodium pyrophosphate)	
Sodium tartrate	GMP
Sodium tripolyphosphate	GMP
Tartaric acid	GMP
Stearyl Citrate	0.15%
Triethyl citrate	0.25%

\*Refer to Annex 1 for Recommended levels in certain food products

### **STABILIZERS AND THICKENERS**

Substances used to produced viscous solutions or dispersions, to impart body, improve consistency or stabilize emulsions including suspending and bodying agents, setting and gelling agents.

	<b>Restrictions/Maximum Levels of Use</b>
<b><u>Vegetable</u></b>	
Gum arabic (acacia)	GMP
Gum Guar	GMP

Gum karaya	GMP
Gum tragacanth	GMP
Larch gum (arabinogalactan)	GMP
Locust (carob) bean gum	GMP
Pectin	GMP
<b><u>Seaweed Gums</u></b>	
Agar	GMP*
Alginic acid and its ammonium, calcium, potassium and sodium	GMP*
Carrageenan and its ammonium, calcium, potassium and sodium salts	GMP*
Furcelleran and its ammonium, calcium, potassium and sodium salts	GMP*
<b><u>Modified Gums</u></b>	
Dextrin/maltodextrin	GMP
Ethyl cellulose	GMP
Hydroxypropyl cellulose	GMP
Hydroxypropyl methyl cellulose	GMP
Methyl Cellulose	GMP
Modified food starch	GMP
Sodium carboxymethyl cellulose	GMP*
Xanthan gum	GMP
Gelatin	GMP
<b><u>Others</u></b>	
Calcium caseinate	GMP
Sodium caseinate	GMP

\*Refer to Annex 1 for Recommended levels in certain food products

## **SWEETENERS**

### **Non-Nutritive Sweeteners**

Substances with less than 2% of the caloric value of sucrose per equivalent unit of sweetening capacity.

#### **Aspartame**

Saccharin and its ammonium, calcium or sodium salts

The above listed substances are subject to restrictions stipulated in the Regulatory Guidelines for Non-Nutritive Sweeteners.

#### **Nutritive Sweeteners**

Substances with more than 2% of the caloric value of sucrose per equivalent unit of sweetening capacity.

	<b>Restrictions/Maximum Levels of Use</b>
Fructose	GMP
Glucose (Dextrose)	GMP
Lactose	GMP
Maltose	GMP
Mannitol	GMP*
Sorbitol	GMP*
Xylitol	GMP

\*The label of food whose reasonably foreseeable consumption may result in a daily ingestion of 20 grams of mannitol or 50 grams of sorbitol shall bear the statement "Exceeds consumption may have a laxative effect."

## MISCELLANEOUS FOOD ADDITIVES

	<b>Specified Use</b>	<b>Restrictions/Maximum Levels of Use</b>
Caffeine	In cola type beverages	200 ppm
Microcrystalline	Texturizer	2.0% in frozen desserts
Ferrous gluconate	Color retention in ripe olives	GMP
Gibberellic acid and its potassium salt	Enzyme activator in malting of Barley	GMP
Quilaja extract	foaming agent in beverages	GMP
Butadiene styrene rubber	)	
Isobutylene-Isoprene Copolymer	)	
Natural Masticatory Substances	) As component of chewing gum base	
Lanolin	)	
Polyisobutylene	)	
Polyvinyl acetate	)	
Terpene resin	)	
Whey	As source of nutrients	GMP

## PROCESSING AIDS

	<b>Name of substances</b>	<b>Restriction/Maximum Level of Use</b>
Antifoam Agent	Dimethyl polysiloxane	No residue in milk 100 ppm in dry gelatin dessert mixes 10 ppm in other food & beverages
Clarifying Agents	Bentonite Polyvinylpolypyrrolidone  Polyvinylpolypyrrolidone	GMP To be removed by filtration in beverages & vinegar 10 ppm in beer 40 ppm in vinegar 60 ppm in wine
Catalyst	Tannic Trifluoromethane Sulfonic acid	GMP In production of cocoa powder Substitute from palm oil; 2ppm fluoride as residue in the finished product
Contact Freezing Agent Extraction/Carrier Solvents	Dichlorodifluoromethane Acetone Ethylene dichloride (dichloroethane) Hexane  Methyl alcohol  Methylene chloride (Dichloromethane)	GMP Residue not to exceed 30 ppm Residue not to exceed 30 ppm      Residue not to exceed 25 ppm In spices & natural extracts; 6ppm In lemon oil' 2% in hop extracts; 0.15 in fish protein Residue not to exceed 50 ppm In spices & natural extracts; 2% in hop extracts Residue not to exceed 30 ppm In spices & natural extracts' 2% in hop extracts' 10 ppm in

	Trichloroethylene	decaffeinated coffee 25 ppm in decaffeinated ground coffee 10 ppm in decaffeinated soluble (instant) coffee 30 ppm in spices/oleoresins
Fat Crystal Modifier Filtration Aids	Oxystearin Diatomaceous earth Ion-exchange membranes Ion-exchange resins Vegetable carbon activated	0.125% combined weight or soil in accordance w/ CFR 173.25 in accordance w/ CFR 173.25
Floculating Agent	Acrylate-acrylamide-resin	In beet or cane sugar production 5 ppm of juice 100 ppm of liquor
Lubricants, Anti-Stick Agents, Molding Aids	Acetylated monoglycerides Castor Oil Hydrogenated sperm oil Mineral oil Petrolatum	GM GMP GMP GMP GMP
Propellant and Packaging Cases	Butane Carbon dioxide Chloropentafluoroethane Nitrogen Nitrous Oxide Octafluorocyclobutane Propane	GMP GMP GMP GMP GMP GMP GMP

<b>Enzyme Preparations</b>	<b>Source</b>	<b><u>Restrictions/Maximum Level of Use</u></b>
<b><u>Animal Derived Preparations</u></b>		
Catalase	Bovine Liver	GMP
Lipase	Edible forestomach Tissue of calves, kids, or lambs; animal pancreatic tissue	GMP
Pepsin	Glandular layer of porcine stomach	GMP
Rennet	Aqueous extracts from the fourth stomach of bovine animals, sheep and goats	GMP
Trypsin	Purified extracts of porcine or bovine pancreas	GMP
<b><u>Plant Derived Preparations</u></b>		
Amylase	Barley Malt	GMP
Bromelain	Pineapples- <u>Ananas comosus</u> <u>and Anans bracteatus</u>	GMP
Ficin	Latex of fig tree (Ficus sp.)	GMP
Papain	<u>Carica papaya L.</u>	GMP

<b><u>Microbially derived Preparations</u></b>	<b><u>Source</u></b>	<b><u>Restrictions/Maximum Level of Use</u></b>
Carbohydrates (may contain one or more of the following: Amylase, cellulase, glucoamylase, b-bluconase, hemi-cellulase, invertase, lactase, pectinase)	Aspergillus niger va. Aspergillus oryzae var.	GMP
Catalase	Saccharomyces sp. Aspergillus niger var. Micrococcus lysodeikticus	GMP

Glucose lomerase	Bacillus coagulans var. Steptomyces olivochromogenes var.	GMP
Glucose Oxidase Lipase Protease	Actinoplanes missourieness var. Aspergillus niger var. Aspergillus niger var. Aspergillus niger var. Aspergillus oryzae var. Bacillus subtilis var.	GMP GMP
Rennet	Mucor species	GMP

## Recommended Levels of Use for some Food Additives

AGAR

Ice cream, Ice cream mix, Ice milk Ice milk mix	0.5%
--	------

ALGINIC ACID

Infant Formula	0.3% as consumed. If in combination with carrageenan or guar gum or both, the total not to exceed 0.03%.
Cottage Cheese, Creamed cottage cheese, Ice Cream, Ice Cream Mix Sherbet	0.5% 0.75%

BHA

Dehydrated potato shreds	50 ppm
Active dry yeast	1000 ppm
Beverages & desserts prepared	2 ppm
Dry breakfast cereals	50 ppm
Dry diced glazed fruit	32 ppm
Dry mixes for beverages & desserts	90 ppm
Emulsion stabilizers for shortening	200 ppm
Potato flakes	50 ppm
Potato granules	10 ppm
Sweet potato flakes	50 ppm
Chewing gum	0.02%; If BHT or propyl gallate is also used, the total must not exceed 0.02%
Chewing gum base	1000 ppm
Essential oils, citrus oil flavors	0.125%, If BHT or propyl gallate is also used, the total must not exceed 0.12%
Citrus oil	0.5%; If BHT or propyl gallate is also used, the total must not exceed 0.15
Partially defatted pork fatty tissue, Partially defatted beef fatty tissue,	0.0065%; If BHT is also used, the total must not exceed 0.0065%
Vitamin A Liquid for addition to foo	5 mg/1,000,000 units
Other unstandardized tools (except) unstandardized preparations of: meat by-products	0.02% of the fat or the oil content of the food. If BHT or propyl gallate is also used, a) meat and the total must not exceed 0.02g of the fat or b) fish the oil content of the food.
c) poultry meat and poultry meat by-products)	

BHT

Dehydrated potato shreds	50 ppm
Dry breakfast cereals	50 ppm

Emulsion stabilizers for shortening	200 ppm
Potato flakes	50 ppm
Sweet potato flakes	50 ppm
Chewing gum	0.02%; If BHA or propyl gallate is also used, the total must not exceed 0.02%
Chewing gum base	1000 ppm
Essential oils, citrus oil flavours, dry flavours	0.125%; If BHA or propyl gallate is also used, to total must not exceed 0.25%
Citrus oils	0.5; If BHA or propyl gallate is also used the total must not exceed 0.5%
Partially defatted pork fatty tissues,	0.0065%; If BHA is also used the total not
Partially defatted beef fatty tissues,	exceed 0.0065%.
Vitamin A liquid for addition to food	5 mg/1,000,000 units
Parboiled rice	0.0035%
Rice, enriched	33 ppm

### CALCIUM DISODIUM EDTA

Cabbage, pickled	220 ppm
Canned carbonated softdrinks	33 ppm
Canned white potatoes	110 ppm
Clams (cooked, canned)	340 ppm
Crabmeat (cooked, canned)	275 ppm
Cucumbers pickled	220 ppm
Distilled alcoholic beverages	25 ppm
Dressings, nonstandardized	75 ppm
Egg product that is hard-cooked and consist in a cylindrical shape of egg	220 ppm by weight of egg yolk portion
Fermented malt beverages	25 ppm
French dressing	75 ppm
Mayonnaise	75 ppm
Mushroom (cooked, canned)	200 ppm
Oleomargarine	75 ppm
Pecan pie filling	100 ppm
Potato salad	100 ppm
Processed dry pinto beans	800 ppm
Sandwich spread	100 ppm
Salad dressing	75 ppm
Sauces	75 ppm
Shrimp (cooked, canned)	250 ppm
Spice extractives in soluble carriers	60 ppm
Spreads, artificially colored and lemon flavored or orange flavored	100 ppm

### CARRAGEENAN

#### Carrageenan Concentrated

Cottage cheese, Creamed cottage cheese, Ice cream, Ice cream mix, Ice Milk, Ice milk mix	0.5%
Evaporated milk	0.015%
Sherbet	0.75%
Infant formula based on isolated amino acids or protein hydrolysates or both	0.1% as consumed. If used in combination with algain or guar gum or bothe, the total must not exceed 0.1%
Infant formula	0.3% as consumed. If used on combination with algin or guar not exceed 0.03%
Sour cream	0.5%

Cream cheese and Cream cheese spread 0.05%

**DIACETYL TARTATIC ESTERS OF MONO AND DIGLYCERIDES**

Edible fats and oils	20g/kg singly or in combination with other emulsifier.
Margarine	10g/kg singly or in combination with other emulsifier
Fumaric acid-acidulated foods:	
Dry gelatin dessert	15 ppm of the finished gel. Dess
Dry beverages base	10 ppm of the finished drink
Unrefined cane sugar	0.5 ppm per percentage point of sucrose in the juice, syrup or masseruite being processed so the final molasses will contain no more than 25 ppm
Cocoa fat in noncarbonated beverage containing cocoa	25 ppm of the finished beverage

**DISODIUM EDTA**

Canned black eyes peas	145 ppm
Canned cooked chickpeas	165 ppm
Canned kidney beans	165 ppm
Canned strawberry pie filling	50 ppm
Cooked sausages	36 ppm
Dressings, nonstandardized	75 ppm
French dressing	75 ppm
Frozen white potatoes including cut potatoes	100 ppm
Mayonnaise	75 ppm
Ready to eat cereal products containing dried bananas	315 ppm in dried banana component of cereal products
Salad dressing	75 ppm
Sandwich spread	100 ppm
Sauces	75 ppm

**FURCELLERAN**

Ice cream and ice cream mix 0.5%

**GELATIN**

Cottage cheese, cream cottage cheese, ice cream, ice cream mix, ice milk, ice milk mix 0.5%

Sherbet

Sour cream

Unstandardized foods

Cream cheese spread

**MONO-AND DIGLYCERIDES**

Cocoa, Ice cream, Ice cream mix, Ice milk, Ice milk mix, Milk chocolate, sweet chocolate	A total of 0.55 of emulsifying agents
Infant formula	0.25% as consumed
Non-edible sausage casings	0.35% of the casings
Margarine	0.75%
Shortening	10.0% (except that the total combined mono & diglycerides, lactylate mono & diglycerides must not exceed 20.0% of the shortening)
Sherbet	0.75%
Sour cream	0.3%
Processed cheese, Processed cheese foods, and Processed cheese spread-with or without added ingredients	0.5%

## **POLYSORBATE 60**

Whipped edible oil topping	0.4% of the wt. Of the finished whipped edible oil topping. Combination of sorbitan mono-stearate may be used in excess of 0.4%, provided that the amount does not exceed 0.77% and the sorbitan monostearate does not exceed 0.27% of the finished whipped edible oil toppings.
Cake and cake mixes	0.46% on a dry weight basis. When used with Polysorbate 65 or Sorbitan monostearate, it shall not exceed 0.46% not the Polysorbate 65 exceed 0.32% or Sorbitan monostearate exceed 0.61% and no combination shall exceed 0.66% as calculated on a dry weight basis.
Nonalcoholic mixes to be added to alcoholic beverage in the preparation	4.5% by weight of the non-alcoholic mix
Yeast leavened bakery products	0.5% by wet. Of the flour used.
Artificially sweetened gelatin	0.5% on dry weight basis
Chocolate flavored syrup	0.5% in the finished product
Powdered soft drink mixes	4.5% bt wt. Of the mix
Unstandardized confectionery coatings	0.5% if any combination of Polysorbate 65, Sorbitan monostearate or Sorbitan tristearate are also used, the total must not exceed 1.0%
Cake icing, cake icing mix	0.5% of the finished cake icing; If Polysorbate 80 or Sorbitan mono-stearate, either singly or in combination is also used, the total must not exceed 0.5% of the finished cake icing.
Pudding, Pie filling	0.5% on dry weight basis
Beverage base or mix	0.05% of the beverage. If Sorbitan Monostearate is also used the total must not exceed 0.05% of the beverage
Sour cream substitute	0.1%
Unstandardized dressings, unstandardized prepared canned cooking sauces	0.3%
Unstandardized sandwich spreads and dips	0.2%
Dry batter coating mix	250 ppm in soup as prepared for consumption
Dry batter coating mixes	0.5% of the dry mix

## **POLYSORBATE 65**

Flavored milk	0.5%
Ice cream, Ice cream mix, Ice milk, Ice milk mix, Sherbet	0.1% If polysorbate 80 is also used the total must not exceed 0.1%
Unstandardized frozen desserts cakes	0.1%
	0.3% on dry wt. Basis. If Polysorbate 60 is also used, the total must not exceed 0.5% on dry weight basis.
Unstandardized confectionery coatings	0.5% If any combination of Polysorbate 60, Sorbitan monostearate or Sorbitan tristearate are also used, the total must not exceed 1.0%
Beverage base or mix	0.5% of the beverage; If Sorbitan monostearate is also used, the total must not exceed 0.05% of the beverage
Imitation dry cream mix	0.4%; If Polysorbate 60, Sorbitan monostearate or Polysorbate 80 either singly or combination is also used, the total must not exceed 0.4%
Breath freshener products in candy tablet or gum form	200 ppm

### **POLYSORBATE 80**

Flavored Milk	0.5%
Ice cream, Ice cream mix, Ice milk, Ice milk mix, Sherbet	0.1% If polysorbate 80 is also used the total must not exceed 0.1%
Unstandardized frozen desserts	0.1%
Pickles and relishes	0.5%
Beverage base of mix	0.05% of the beverage. If Sorbitan monostearate is also used, the total must not exceed 0.05% of the beverage.
Imitation dry cream mix	0.01%; If polysorbate 60 or Polysorbate 65 or Sorbitan monostearate, either singly or combination is also used, the total must not exceed 0.4%
Whipped vegetable oil topping	0.05%; If polysorbate 60 or Polysorbate 65 or Sorbitan monostearate, either singly or combination is also used, the total must not exceed 0.4%
Cake icing, cake icing mix	0.5% of the finished cake icing. If polysorbate 60 or Polysorbate 65 or Sorbitan monostearate, either singly or combination is also used, the total must not exceed 0.5%
Salt	10 ppm
Whipped cream	0.1%
Breath freshener product for use in tablet or gum form	100 ppm
Cream cottage cheese	80 ppm
Spice oils and spice oleoresins for use in pumping pickle employed in the curing of preserved meat or preserved meat by-products	0.2% of the pumping pickle
Non-edible sausage casings	0.15% of the casing

### **PROPIONATES**

Bread, buns, rolls, whole or crackles wheat	1.57-3.76 g/kg of flour
Cakes	0.94-4.47 g/kg of batter
Fruit cake	1.26-3.78 g/kg of batter; the higher content, the less proportionate needed
Pic crast filling	1.27-3.12 g/kg batter, filling

### **SODIUM CARBOXYMETHYCELLULOSE**

Cottage cheese, cream cottage cheese, ice cream, ice cream mix, ice milk, ice milk mix	0.5%
Sherbet	0.75%
Processed cheese, Processed cheese foods, and Processed cheese spread (with or without added ingredients)	0.5%
Cream cheese, cream cheese spread (with or without added ingredients)	0.5%

### **SODIUM DIACETATE**

Breads and other yeast raised white flour products	2.2-3.78 g/kg of flour
Pie crast and filling	1.9-3.15 g/kg of flour filling
Cakes	0.063-2.83 g/kg of batter
Fruit cake (low fruit)	2.2-2.83, g/kg of batter

### **SODIUM STEAROYL LACTYLATE**

Baked products, pancakes, waffles	0.5% parts for each 100 parts by weight for flour used
Icings, fillings, puddings, toppings and prepared mixes	0.4%-0.7% of drug ingredient weight

Substitutes for milk or cream in coffee	0.3% by wt. Of the finished edible fat-water emulsion
Dehydrated potatoes	0.5% of the dry wt. Of the food
Snack dips	0.2% by wt. Of the finished product
Cheese substitute & imitations & cheese product substitute	0.2% by wt. Of the finished product
Sources or gravies	0.25% by wt. Of the finished product
Sour cream substitute	1.0% of dry ingredient weight

### **SODIUM SULPHITE, POTASSIUM SULPHITE**

#### **HYDROGEN SODIUM SULPHITE**

Quick frozen shrimps and prawns	100 mg/kg in the edible part of the raw product 30 mg/kg in the edible part of cooked product
Quick frozen lobsters	100 mg/kg in the edible part of the raw product 30 mg/kg in the edible part of cooked product
Biscuit dough	500 ppm calc. As Sulphur dioxide
Gelatin	GMP provided the finished product does not contain more than 500 ppm calc. As Sulphur dioxide
Cake; cake mix	0.6% on a dry weight basis. If Polysorbate 60 is also used, the total must not exceed 0.7% on a dry weight basis.
Unstandardized confectionery coatings	1.0%; If any combination of Polysorbate 60, or Sorbitan tristearate are also used, the total must not exceed 1.0%.
Cake icing; cake icing mix	0.5% If the finished cake icing. If Polysorbate 80, Polysorbate 60, either singly or combination is also used, the total must not exceed 0.5% of the finished cake icing
Beverage base or mix	0.05% of the beverage. If Polysorbate 80 is also used, the total must not exceed 0.5% on the beverage total must not exceed 0.255 and also with Polysorbate 65.
Dry soup base mix	250 ppm is soup as prepared for consumption

#### **STANNOUS CHLORIDE**

Asparagus packed in glass containers or fully-line (lacquered) cans	25 ppm calculated as tin
---	--------------------------

#### **SUCCINIC ACID**

Condiments & relished	0.084%
Meat products	0.0061%

#### **SUCROGLYCERIDES**

Edible fats & oil	20 g/kg. singly or in combination with other emulsifiers
Margarine	10 g/kg

#### **SUCROSE ESTERS OF FATTY ACIDS**

Cocoa powder & dry cocoa-sugar mixtures	10 g/kg singly or in combination with other emulsifiers
Edible fats and oils	20 g/kg singly or in combination with other emulsifiers

#### **SULFURIC ACID**

Alcoholic beverages	0.014%
Cheeses	0.0003%

### **SULPHUR DIOXIDE & OTHER SULPHITES**

White sugar (Specification A)	20 mg/kg
(Specification B)	70 mg/kg
Powdered sugar	20 mg/kg (residue resulting from white sugar used)
Soft sugars	40 mg/kg
Anhydrous dextrose	20 mg/kg
Dextrose monohydrate	20 mg/kg
Glucose syrup	400 mg/kg for the manufacture of sugar confectionery only
Dried glucose syrup	40 mg/kg 150 mg/kg for the manufacture of sugar confectionery only
Fructose	20 mg/kg (residue resulting from raw material)
Jam, jellies, citrus marmalade	100 mg/kg resulting from carry-over
SO 2 in Dried & Dehydrated Fruits & Vegetable	SO 2 (ppm)
Apricots	2000
Peaches	2000
Nectarines	2000
Pears	1000
Golden, bleached raisins	800
Sulfur bleached raisins	1500
Apples	800
Cabbage	750-1500
Potatoes	200-250
Carrots	200-250

### **SORBATES**

Bakery products	Level of Antimycotic (g/kg Batter)
Cake	0.32-3.15 g/kg
Cake mixes, doughnut mixes	0.5-0.944 g/kg
Fillings, fudges, icings, toppings	
Artificially sweetened jams, jellies and preserves	Maximum of 0.1% by weight
Pickles and pickled products	0.025-0.05%; the higher level being more appropriate to sweeter products

### **SORBITAN MONOPALMITATE**

Edible fats and oils	20 g/kg singly or combination of other emulsifiers
Margarine	10 g/kg

### **SORBITAN MONOSTEARATE**

Imitation dry cream mix; vegetables oil. Creaming agent; whipped veg. Oil topping; veg. Oil topping mix	0.4%; If Polysorbate 65, Polysorbate 60 or Polysorbate 80, either singly or in combination is also used, the total must not exceed 0.4%, except that in the case of whipped veg. Oil topping a combination of Sorbitan monostearate & Polysorbate 60 may be used in excess of 0.%, If the amount of Sorbitan monostearate does not exceed 0.27% and the amount of polysorbate 60 does not exceed 0.77% of the weight of the whipped vegetable oil topping.
---	--