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 regulation 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 wishes 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) Assay 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 conducing 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 acidulate 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
- 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 agglomentation.

	Restriction/Maximum Level of Use
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 alumeno silicate	2 %
Sodium ferrocyanide (Yellow of Soda)	13 ppm in salt (calculated as anhydrous sodium ferrocyanide)
Tricalcium silicate	2 % in salt

*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.

	Restriction/Maximum Level of Use
Ascorbic Acid	GMP
Ascorbyl palmitate	GMP
Butylated hydroxyanisole	0.02 %*
Butylated hydroxyanisole	0.02 %*
Calcium ascorbate	GMP
Dilauryl thiodipropropionate	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

	Restrictions/Maximum level of use
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
Prophyl 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.

	Restrictions/Maximum level of use
Calcium disodium EDTA	25-340 ppm*
Citric acid	GMP
Disodium EDTA	36-500 PPM*
Gum guaic (guaiac 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.

	Restrictions/Medium Level of Use
Accetic 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 sulfosticcinate	0.5 -25 ppm
Ethoxylated mono and diglycerides (Polyglycerate 60)	0.2 - 0.5 %
Glycerol ester of wood resin	100ppm in beverages
Glyceryl lactoesters of fauy acids (Lactic acid esters of mono and diglycerides)	GMP
Glyceryl (glycol) monostearate	2 % in macaroni products; GMP
Hydroxylated lecithin	GMP

Lactylic esters of fany acids	GMP
Lactylated fatty acids esters of glycerol and propylene glycol	GMP
Lecithin	GMP
Mono-and-di-glycerides	GMP*
OX bile extract	0.1 in dried egg white
(Purified oxgall or sodium choleate)	0.002 % in cheese. GMP
Polyglycerol esters of fatty acids	GMP
Polyoxyethylene (8) stearate	0.5% in bakery products
Polyoxyethylene (20) sorbitan mono-stearte (Polysorbate 60)	0.05-1.0%*
Polyoxyethylene (20) sorbitan tristearate (Polysorbate 65)	0.05-0.5%*
Polyoxyethylene (20) sorbitan monnoleate (Poysorbate 80)	0.1-1.0%
Propylene glycol alginate	GMP
Proplene 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
Sucgrolycerides	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.

	Restrictions Maximum Level of Use
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 characteristics taste or aroma.

	Restriction Maximum Level of Use
Disodium guanylate	GMP
Disodium inosinate	GMP
Glutamic acid	GMP
Monoammonium glutamate	GMP
Monopotassium 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.

	Restriction Maximum Level of Use
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-Cysteine (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 presently in food which, when added to food, produces an agreeable sharp or tart taste in the product.

	Restriction/Maximum Level of Use
Acetic Acid	GMP*
Citric Acid	GMP
Fumaric Acid	GMP
Lactic Acid	GMP
Malic Acid	GMP
Phosphoric Acid	GMP
Tartaric Acid	GMP

and their calcium, potassium and sodium salts.

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

HUMECTANTS

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

	Restriction/Maximum Level of Use
Glycerol (Glycerine)	GMP
Propylene Glycol	GMP
Sorbitol	GMP
Triacetin (Glycerol triacetate)	GMP

*The label of food whose reasonably forsceable 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

Class 1	Code No.	Restriction/Maximum Level of Use
Annatto extract	C1 75120/ C1 Natural Orange + EEC No. EL60b	GMP
Beet powder (dehydrated beets)		GMP
Beta-carotene	EEC No.E160a	GMP
Beta-apo-8' carotenal	EEC No.E160c	GMP
Canthaxanthin	EEC 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) 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' Phosphate-sodium	-	GMP
Saffron		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 C1 Food Red 17	GMP*
Amaranth (FD & C Red # 2)	C1 16185 EEC No. E123	GMP*
Brilliant Black PN (Black PN, Brilliant Black PN)	C1 28-440 C1 Food Black 1 EEC. No. E151	GMP
Chocolate Brown HT Brown Ht, Brown HS)	C1 20285 C1 Food Brown 3	GMP*
Brilliant Blue FCF (FD & C Blue # 2)	C1 42090 C1 Food B2	GMP*
Citrus Red 2		only for peel of ranges, 2 ppm

Fast Green FCF (FD & C Green # 3)	C1 42053 C1 Food Green	GMP*
Indigotine (FD & C Blue # 1; (Indigo Carmine)	C1 73015 C1 Food Blue 2	GMP*
Orange B		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.

	Restrictions/Maximum Level of Use
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.

	Restrictions/Maximum Level of Use
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
Polyethylene glycol	on fresh fruits;GMP
Rice bran Wax	50 ppm in candy; fresh fruits & veg. 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-Alginine	
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-Threonine	
L-Tryptophan	
L-Tyrosine	
L-Valine	
Aluminum nicotinate	
N-Acetyl-L-Methionine	(except in infant foods and foods containing, nitrities & 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 (Mono. di and tribasic)	
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 day 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	
Nacinamide	
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.

	Restrictions/Maximum Levels of Use
Acids	
Acetic acid	GMP
Adipic acid	GMP
Citric acid	GMP
Gluconic acid	GMP
Glucono-delta-lactone	GMP
Hydrochloride acid	GMP
Lactic acid	GMP
Malic acid	GMP
Phosphoric acid	GMP
Succinic acid	GMP*
Sulfuric acid	GMP*
Tartaric acid	GMP
Alkalies	
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
Sodium Bicarbonate	GMP
Sodium Carbonate	GMP
Sodium hydroxide	GMP
Buffers	
Aluminum ammonium sulfate	GMP
Aluminum potassium sulfate	GMP
Aluminum sodium sulfate	GMP
Ammonium phosphate, mono-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.

	Restrictions/Maximum Levels of Use
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 (sodium polyphosphate)	GMP
Sodium metaphosphate	GMP
Sodium potassium tartrate	GMP
Sodium phosphate	GMP
Sodium pyrophosphate (tetrasodium pyrophosphate)	GMP
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.

	Restrictions/Maximum Levels of Use
Vegetable	
Gum arabic (acacia)	GMP
Gum Guar	GMP
Gum karaya	GMP

Gum tragacanth	GMP
Larch gum (arabinogalactan)	GMP
Locust (carob) bean gum	GMP
Pectin	GMP
Seaweed Gums	
Agar	GMP*
Alginic acid and its ammonium, calcium, potassium and sodium	GMP*
Carraggeenan and its ammonium, calcium, potassium and sodium salts	GMP*
Furcelleran and its ammonium, calcium, potassium and sodium salts	GMP*
Modified Gums	
Dextrin/maltodextrin	GMP
Ethyl cellulose	GMP
Hydroxypropyl cellulose	GMP
Hydroxypropyl methy cellulose	GMP
Methyl Cellulose	GMP
Modified food starch	GMP
Sodium carboxymethyl cellulose	GMP*
Xanthan gum	GMP
Gelatin	GMP
Others	
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.

Asparatame

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.

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

*The label of food whose reasonably forseeable 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

	Specified Use	Restrictions/Maximum Levels of Use
Caffeine	In cola type beverages	200 ppm
Microcystalline	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
Quillaia 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

	Name of substances	Restriction/Maximum Level of Use
Antifoam Agent	Dimethyl polysiloxane	No residue in milk 100 ppm in dry gelatin dessert mixes 10 ppm in other food & beverages
Clarifying Agents	Bentonite	GMP
	Polyvinylpolypyrrolidone	To be removed by filtration in beverages & vinegar
	Polyvinylpyrrolidone	10 ppm in beer 40 ppm in vinegar 60 ppm in wine
Catalyst	Tannic	GMP
	Trifluoromethane	In production of cocoa powder
	Sulfunic acid	Substitute from palm oil; 2ppm fluoride as residue in the finished product
Contact Freezing Agent	Dichlorodifluoromethane	GMP
Extraction/Carrier Solvents	Acetone	Residue not to exceed 30 ppm
	Ethylene dichloride (dichloroethane)	Residue not to exceed 30 ppm
	Hexane	Residue not to exceed 25 ppm In spices & natural extracts; 6ppm In lemon oil. 2% in hop extracts; 0 15 in fish protein
	Methyl alcohol	Residue not to exceed 50 ppm In spices & natural extracts; 2% in hop extracts
	Methylene chloride (Dichloromethane)	Residue not to exceed 30 ppm In spices & natural extracts; 2% in hop extracts; 10 ppm in decaffeinated coffee

	Trichloroethylene	25 ppm in decaffeinated ground coffee 10 ppm in decaffeinated soluble (instant) coffee 30 ppm in spices/oleoresins
Fat Crystal Modifier Filtration Aids	Oxystearin	0.125% combined weight or oil
	Diatomaceous earth	
	Ion-exchange membranes	in accordance w/ CFR 173.25
	Ion-exchange resins	in accordance w/ CFR 173.25
	Vegetable carbon activated	
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	GM
	Castor Oil	GMP
	Hydrogenated sperm oil	GMP
	Mineral oil	GMP
	Petrolatum	GMP
Propellant and Packaging Cases	Butane	GMP
	Carbon dioxide	GMP
	Chloropentafluoroethane	GMP
	Nitrogen	GMP
	Nitrous Oxide	GMP
	Octafluorocyclobutane	GMP
	Propane	GMP

Enzyme Preparations	**Source**	**Restrictions/Maximum Level of Use**
Animal Derived Preparations		
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 porbine or bovine pancreas	GMP
Plant Derived Preparations		
Amylase	Barley Malt	GMP
Bromelain	Pineapples-Ananas comosus and Anans bracteatus	GMP
Ficin	Latex of fig tree (Fiscus sp)	GMP
Papain	Carica papaya L.	GMP

Microbially derived Preparations	**Source**	**Restrictions/Maximum Level of Use**
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. Saccharomyces sp.	GMP
Catalase	Aspergillus niger var. Micrococcus lysodeikticus	GMP
Glucose Iomerase	Bacillus coagulans var.	GMP

	Steptomyces olivochromogenes var.	
	Actinoplanes missourieness var	
Glucose Oxidase	Aspergillus niger var.	GMP
Lipase	Aspergillus niger var.	GMP
Protease	Aspergillus niger var.	
	Aspergillus oryzae var.	
	Bacillus subtilis var.	
Rennet	Mucor species	GMP
Vegetable Gums		
Gum arabic (acacia)		GMP
Gum guar		GMP
Gum karaya		GMP
Gum tragacanth		GMP
Larch gum (arabinogalactan)		GMP
Locust (carob) bean gum		GMP
Pectin		GMP
Seaweed Gums		
Agar		GMP*
Alginic acid and its ammonium calcium, potassium and sodium		GMP*
Carraggeanan and its ammonium, calcium, potassium and sodium, and salts		GMP*
Forcelleran and its ammonium, calcium, potassium and sodium, and salts		GMP*
Modified Gums		
Dextrin maltodextrin		GMP
Ethyl cellulose		GMP
Hydroxypropyl cellulose		GMP
Hydroxypropyl methyl cellulose		GMP
Many cellulose		GMP
Methyl ethyl cellulose		GMP
Modified food starch		GMP
Sodium carboxymethyl cellulose		GMP*
Xanthan gum		GMP
Gelatin		GMP
Others		
Calcium caseinate		GMP
Sodium caseinate		GMP

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

ANNEX I

Recommended Levels of Use for some Food Additives

AGAR

Ice cream, Ice cream mix, Ice milk Ice milk mix	0.5%
Sherbet	0.75%

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 dry flavours	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 food	5 mg/1,000,000 units
Other unstandardized tools (except) unstandardized preparations of: a) meat and meat by-products b) fish c) poultry meat and poultry meat by-products)	0.02% of the fat or the oil content of the food. If BHT or propyl gallate is also used, the total must not exceed 0.02g of the fat or the oil content of the food.

BHT

Dehydrated potato shreds	50 ppm
Dry breakfast cereals	50 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 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 0.125%
Citrus oils	0.5; If BHA or propyl gallate is also used the total must not exceed 0.5%
Partially defatted pork fatty tissues, Partially defatted beef fatty tissues,	0.0065%; If BHA is also used the total not 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 consists in a cylindrical shape of egg white with an inner core of egg yolk.	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 TARTARIC 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 succrose in the juice, syrup or masseruite being processed so the final molasses will contain no more than 25 ppm
Cocao 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 Sherbet Sour cream Unstandardized foods Cream cheese spread	0.5%

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 of mixed alcoholic drinks	4.5% by weight of the non-alcoholic mix
Yeast leavened bakery products	0.5% by wet. of the flour used.
Artificially sweetened gelatin dessert and mixes	0.5% on dry weight basis
Chocolate flavored syrup	0.5% in the finished product
Powdered soft drink mixes	4.5% by 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 soup base or 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	0.1%
cakes	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 Vegetable oil creaming agent Whipped vegetable oil topping Vegetable oil topping 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

Ice cream, Ice cream mix, Ice milk, Ice milk mix, Sherbet	0.1% If polysorbate 65 is also used the total must not exceed 0.1%
Unstandardized frozen desserts	0.1%
Pickles and relishes	0.05%
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.
Imitation dry cream mix	0. 1%; 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 products in candy 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
Pie crust filling	1.25-3.12 g/kg batter, filing

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 crust 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

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	Maximum of 0.1% by weight
Artificially sweetened jams, jellies and preserves	0.025-0.05%, the higher level being more appropriate to sweeter products
Pickles and pickled 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.
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, Polysobate 65, 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 in combination is also used, the total must not exceed 0.5% of the finished icing.
Beverage base or mix	0.05% of the beverage. If Polysorbate 80 is also used, the total must not exceed 0.05% of the beverage. If polysorbate 60 Is also used, the total must not exceed 0.05% and also with Polysorbate 65.
Dry soup base or mix	250 ppm is soup as prepared for sonsumption

STANNOUS CHLORIDE

Asparagus packed in glass containers or fully-lined (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 emulsifers
Edible fats and oils	20 g/kg singly or in combination with other emulsifers

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
Nactarines	2000
Pears	1000
Golden, bleached raisins	800
Sulfur bleached raisins	1500
Apples	800
Cabbage	750-1500
Potatoes	200-250
Carrots	200-250