

MINISTRY OF HEALTH AND FAMILY WELFARE
(Food Safety and Standards Authority of India)

Notification

New Delhi, dated the 1st August, 2011

F.No. 2-15015/30/2010 Whereas in exercise of the powers conferred by clause (i) of sub section (2) section 92 read with section 20 of Food Safety and Standards Act, 2006 (34 of 2006) the Food Safety and Standards Authority of India proposes to make Food Safety and Standards Regulations in so far as they relate to Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011, and;

Whereas these draft Regulations were published in consolidated form at pages 1 to 776 in the Gazette of India Extraordinary Part III – Section 4 dated 20th October 2010 inviting objections and suggestions from all persons likely to be affected thereby before the expiry of the period of thirty days from the date on which the copies of the Gazette containing the said notification were made available to the public;

And whereas the copies of the Gazette were made available to the public on the 21st October 2010;

And whereas objections and suggestions received from the stakeholders within the specified period on the said draft Regulations have been considered and finalized by the Food Safety and Standards Authority of India.

Now therefore, the Food Safety and Standards Authority of India hereby make the following Regulations, namely,-

FOOD SAFETY AND STANDARDS (CONTAMINANTS, TOXINS AND RESIDUES) REGULATIONS, 2011

CHAPTER 1

GENERAL

1.1: Short title and commencement-

1.1.1: These regulations may be called the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

1.1.2: These regulations shall come into force on or after 5th August, 2011

1.2: Definitions-

1.2.1: In these regulations unless the context otherwise requires:

1. “Crop contaminant” means any substance not intentionally added to food, but which gets added to articles of food in the process of their production (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging transport or holding of articles of such food as a result of environmental contamination

CHAPTER 2

CONTAMINANTS, TOXINS AND RESIDUES

2.1 : METAL CONTAMINANTS

2.1.1

1. Chemicals described in monographs of the Indian Pharmacopoeia when used in foods, shall not contain metal contaminants beyond the limits specified in the appropriate monographs of the Indian Pharmacopoeia for the time being in force.

2. Notwithstanding the provisions of regulation 2.1.1 (1), no article of food specified in Column 2 of the table below shall contain any metal specified in excess of the quantity specified in Column 3 of the said table:

Table

Name of the metal contaminants	Article of food	Parts per Million by weight
(1)	(2)	(3)
1. Lead	(i) Beverages;	
	Concentrated soft drinks (but not including concentrates used in the manufacture of soft drinks)	0.5
	Fruit and vegetable juice (including tomato juice, but not including lime juice and lemon juice)	1.0
	Concentrates used in the manufacture of soft drinks, lime juice and lemon juice	2.0
	(ia) Baking powder	10
	(ib) Edible oils and fats	0.5
	(ic) Infant Milk substitute and Infant foods	0.2
	(id) Turmeric whole and powder	10.0
	(ii) Other foods	
	Anhydrous dextrose and dextrose monohydrate, edible oils & fats, refined white sugar (sulphated ash content not exceeding 0.03 per cent)	0.5
	Ice-cream, iced lollies and similar frozen confections	1.0
	Canned fish, canned meats, edible gelatin, meat extracts and hydrolysed protein, dried or dehydrated vegetables (other than onions)	5.0
	All types of sugar, sugar syrup, invert sugar and direct consumption coloured sugars with sulphated ash content exceeding 1.0 per cent	5.0
	Raw sugars except those sold for direct consumption or used for manufacturing purpose other than the manufacture of refined sugar.	5.0
	Edible molasses, caramel liquid and solid glucose and starch conversion products with a sulphated ash content exceeding 1.0 per cent	5.0
	Cocoa powder	5.0 on the dry fat free substance
	Yeast and yeast products	5.0 on the dry Matter
	Tea, dehydrated onions, dried herbs and spices flavourings, alginic acid, alignates, agar, carrageen and similar products derived from seaweed	10.0 on the dry matter
	Liquid pectin, chemicals not otherwise specified, used as ingredients or in the preparation or processing of food	10.0
	Food colouring other than caramel	10.0 on the dry colouring matter
	Solid pectin	50.0
	Hard boiled sugar confectionery	2.0
	Iron fortified common salt	2.0
	Corned beef, luncheon meat, Cooked Ham, Chopped meat, Canned chicken, Canned mutton and Goat meat and other related meat products	2.5
	Brewed vinegar and Synthetic vinegar	Nil
	(iii) Foods not specified	2.5

(1)	(2)	(3)
2. Copper	(i) Beverages:	
	Soft drinks excluding concentrates and Carbonated water	7.0
	Carbonated water	1.5
	Toddy	5.0
	Concentrates for soft drinks	20.0
	(ii) Other Foods	
	Chicory-dried or roasted, coffee beans, flavourings/pectin liquid	30.0
	Colouring matter	30.0 on dry colouring matter
	Edible gelatin	30.0
	Tomato ketchup	50.0 on the dried total solids
	Yeast and yeast products	60.0 on the dry matter
	Cocoa powder	70.0on the fat free substance
	Tomato puree, paste, powder, juice and cocktails	100.0 on the dried tomato solid
	Tea	150.0
	Pectin-solid	300.0
	Hard boiled sugar confectionery	5.0
	Iron Fortified Common Salt	2.0
	Turmeric whole and powder	5.0
	Juice of orange, grape, apple, tomato, pineapple and lemon	5.0
	Pulp and pulp products of any fruit	5.0
	Infant milk substitute and Infant foods	15.0(But not less than 2.8)
	Brewed Vinegar and Synthetic vinegar	Nil
	Caramel	20
	(iii) Foods not specified	30.0
3. Arsenic	(i) Milk	0.1
	(ii) Beverages :	
	Soft drink intended for consumption after dilution except carbonated water	0.5
	Carbonated water	0.25
	Infant Milk substitute and Infant foods	0.05
	Turmeric whole and powder	0.1
	Juice of orange, grape, apple, tomato, pineapple and lemon	0.2
	Pulp and pulp products of any fruit	0.2
	Preservatives, anti-oxidants, emulsifying and stabilising agents and synthetic food colours	3.0 on dry matter
	Ice-cream, iced lollies and similar frozen confections	0.5
	Dehydrated onions, edible gelatin, liquid pectin	2.0

(1)	(2)	(3)
	Chicory-dried or roasted	4.0
	Dried herbs, finings and clearing agents, solid pectin all grades, spices	5.0
	Food colouring other than synthetic colouring.	5.0 on dry colouring matter
	Hard boiled sugar confectionery	1.0
	Iron Fortified Common Salt	1.0
	Brewed Vinegar and Synthetic Vinegar	0.1
	(iii) Foods not specified	1.1
4. Tin	(i) Processed and canned products	250.0
	(i-a) Hard boiled sugar confectionery	5.0
	(i-aa) Jam, Jellies and Marmalade	250
	Juice of orange, apple, tomato, pineapple and lemon	250
	Pulp and pulp products of any fruit	250
	(i-b) Infant Milk substitute and Infant foods	5.0
	(i-c) Turmeric whole and powder	Nil
	(i-d) Corned beef, Luncheon meat, Cooked Ham, Chopped meat, Canned chicken, Canned mutton and Goat meat	250
	(ii) Foods not specified	250
5. Zinc	(i) Ready-to-drink beverages	5.0
	Juice of orange, grape, tomato, pipeapple and lemon	5.0
	Pulp and pulp products of any fruit	5.0
	(i-a) Infant milk substitute and Infant foods	50.0 (but) not less than 25.0)
	(ii) Edible gelatin	100.0
	(ii-a) Turmeric whole and powder	25.0
	(iii) Fruit and Vegetable products	50.0
	(iii-a) Hard boiled sugar confectionery	5.0
	(iv) Foods not specified	50.0
6. Cadmium	(i) Infant Milk substitute and Infant foods	0.1
	(ii) Turmeric whole and powder	0.1
	(iii) Other foods	1.5
7. Mercury	Fish	0.5
	Other foods	1.0
8. Methyl Mercury	All foods (Calculated as the element)	0.25
9. Chromium	Refined Sugar	20 ppb
10. Nickel	All hydrogenated, patially hydrogenated, interesterified vegetable oils and fats such as vanaspati, table margarine, bakery and industrial margarine, bakery shortening, fat spread and partially hydrogenated soyabean oil	1.5

2.2 Crop contaminants and naturally occurring toxic substances

2.2.1

1. No article of food specified in column (2) of the Table below shall contain any crop contaminant specified in the corresponding entry in column (1) thereof in excess of quantities specified in the corresponding entry in column (3) of the said table :

S. No	Name of the Contaminants	Article of Food	Limit µg/kg
1.	Aflatoxin	All articles of food	30
2.	Aflatoxin M ₁	Milk	0.5
3.	Patulin	Apple juice & Apple juice ingredients in other beverages	50
4.	Ochratoxin A	Wheat, barley & rye	20

2. Naturally occurring Toxic Substances.

The toxic substances specified in column (1) of the Table below, which may occur naturally in any article of food, shall not exceed the limit specified in the corresponding entry in column (2) of the said Table :-

S.No	Name of substance	Maximum limit
1	Agaric acid	100ppm
2	Hydrocyanic acid	5ppm
3	Hypericine	1ppm
4	Saffrole	10ppm

2.3: Residues

2.3.1: Restriction on the use of insecticides.

1) Subject to the Provisions of regulation 2.3.1 (2), no insecticides shall be used directly on articles of food

Provided that nothing in this regulation shall apply to the fumigants which are registered and recommended for use as such on articles of food by the Registration Committee, constituted under section 5 of the Insecticides Act, 1968 (46 of 1968).

2) The amount of insecticide mentioned in Column 2 on the foods mentioned in column 3, shall not exceed the tolerance limit prescribed in column 4 of the Table given below :

Sl.No.	Name of Insecticides	Food	Tolerance limit mg/kg.ppm)
(1)	(2)	(3)	(4)
1	Aldrin, dieldrin (the limits apply to aldrin and dieldrin singly or in any combination and are expressed as dieldrin)	Foodgrains	0.01
		Milled Foodgrains	Nil
		Milk and Milk products	0.15 (on a fat basis)
		Fruits and Vegetables	0.1
		Meat	0.2
		Eggs	0.1 (on a shell free basis)
2	Carbaryl	Fish	0.2
		Foodgrains	1.5

(1)	(2)	(3)	(4)
		Milled food grains	Nil
		Okra and leafy vegetables	10.0
		Potatoes	0.2
		Other vegetables	5.0
		Cottonseed (whole)	1.0
		Maize cob (kernels)	1.0
		Rice	2.50
		Maize	0.50
		Chillies	5.00
3	Chlordane (residue to be measured as cis plus trans chlordane)	Food grains	0.02
		Milled food grains	Nil
		Milk and milk products	0.05 (on a fat basis)
		Vegetables	0.2
		Fruits	0.1
		Sugar beet	0.3
4	D.D.T. (The limits apply to D.D.T., D.D.D. and D.D.E. singly or in any combination)	Milk and milk products	1.25 (on a fat basis)
		Fruits and vegetables including potato	3.5
		Meat, poultry and fish	7.0 (on a whole product basis)
		Eggs	0.5 (on a shell free basis)
5.	D.D.T. (singly)	Carbonated Water	0.001
6.	D.D.D. (singly)	Carbonated Water	0.001
7.	D.D.E. (singly)	Carbonated Water	0.001
8	Diazinon	Foodgrains	0.05
		Milled foodgrains	Nil
		Vegetables	0.5
9.	Dichlorvos (content of di- chloroacetaldehyde (D.C.A.) be reported where possible)	Foodgrains	1.0
		Milled foodgrains	0.25
		Vegetables	0.15
		Fruits	0.1
10.	Dicofol	Fruits and Vegetables	5.0
		Tea (dry manufactured)	5.0
		Chillies	1.0
11.	Dimethoate (residue to be determined as dimethoate and expressed as dimethoate)	Fruits and Vegetables	2.0
		Chillies	0.5

(1)	(2)	(3)	(4)
12.	Endosulfan (residues are measured and reported as total of endosulfan A and B and endosulfan-sulphate)	Fruits and Vegetables Cottonseed Cottonseed oil (crude) Bengal gram Pigeon Pea Fish Chillies Cardamom	2.0 0.5 0.2 0.20 0.10 0.20 1.0 1.0
13.	Endosulfan A	Carbonated Water	0.001
14.	Endosulfan B	Carbonated Water	0.001
15.	Endosulfan-Sulphate	Carbonated Water	0.001
16.	Fenitrothion	Foodgrains Milled foodgrains Milk and Milk Products Fruits Vegetables Meat	0.02 0.005 0.05 (on a fat basis) 0.5 0.3 0.03
17.	Heptachlor (combined residues of heptachlor and its epoxide to be determined and expressed as Heptachlor)	Foodgrains Milled foodgrains Milk and Milk Products Vegetables	0.01 0.002 0.15(on a Fat basis) 0.05
18.	Hydrogen cyanide	Foodgrains Milled foodgrains	37.5 3.0
19.	Hydrogen Phosphide	Foodgrains Milled foodgrains	Nil Nil
20.	Inorganic bromide (determined and expressed as total bromide from all sources)	Foodgrains Milled Foodgrains Fruits Dried fruits Spices	25.0 25.0 30.0 30.0 400.00
21.	Hexachlorocycle hexane and its Isomers		
	(a) Alfa (α) Isomer:	Rice grain unpolished Rice grain polished Milk (whole) Fruits and vegetable Fish Carbonated Water	0.10 0.05 0.02 1.00 0.25 0.001
	(b) Beta (β) Isomer :	Rice grain Unpolished Rice grain polished	0.10 0.05

(1)	(2)	(3)	(4)
		Milk (whole)	0.02
		Fruits and vegetable	1.00
		Fish	0.25
		Carbonated Water	0.001
	(c) Gamma (γ) Isomer (Known as Lindane)	Food grains except rice	0.10
		Milled foodgrains	Nil
		Rice grain Unpolished	0.10
		Rice grain polished	0.05
		Milk	0.01 (on whole basis)
		Milk products	0.20
		Milk products (having less than 2 per cent fat)	0.20 (on whole basis)
		Fruits and vegetable	1.00
		Fish	0.25
		Eggs	0.10 (On shell free basis)
		Meat and poultry	2.00 (On Whole basis)
		Carbonated Water	0.001
	(d) Delta (δ) Isomer :	Rice grain Unpolished	0.10
		Rice grain Polished	0.05
		Milk (whole)	0.02
		Fruits & vegetables	1.00
		Fish	0.25
		Carbonated Water	0.001
22.	Malathion (Malathion to be determined and expressed as combined residues of malathion and malaoxon)	Foodgrains	4.0
		Milled foodgrains	1.0
		Fruits	4.0
		Vegetables	3.0
		Dried fruits	8.0
		Carbonated Water	0.001
23.	Parathion (Combined residues of parathion and paraoxon to be determined and expressed as parathion)	Fruits and Vegetables	0.5
24.	Parathion methyl (combined residues of parathion methyl and its oxygen analogue to be determined and expressed as parathion methyl)	Fruits	0.2
		Vegetables	1.0
25.	Phosphamidon residues (expressed as the sum of phosphamidon and its desethyl derivative)	Foodgrains	0.05
		Milled foodgrains	Nil
		Fruits and Vegetables	0.2

(1)	(2)	(3)	(4)
26.	Pyrethrins (sum of pyrethrins I & II and other structurally related insecticide Ingredients of pyrethrum)	Foodgrains	Nil
		Milled foodgrains	Nil
		Fruits and Vegetables	1.0
27.	Chlorienvinphos	Foodgrains	0.025
		Milled Foodgrains	0.006
	(Residues to be measured as alpha and beta isomers ofChlorienvinphos	Milk and Milk Products	0. 2 (fat basis)
		Meat and Poultry	0.2 (carcass fat)
		Vegetables	0.05
		Groundnuts	0.05 (shell free basis)
		Cotton seed	0.05
28.	Chlorobenzilate	Fruits	1.0
		Dry Fruits, Almonds and Walnuts	0.2 (shell free basis)
29.	Chlorpyrifos	Foodgrains	0.05
		Milled foodgrains	0.01
		Fruits	0.5
		Potatoes and Onions	0.01
		Cauli Flower and Cabbage	0.01
		Other vegetables	0.2
		Meat and Poultry	0.1 (carcass fat)
		Milk and Milk Products	0.01(fat basis)
		Cotton seed	0.05
		Cottonseed oil (crude)	0.025
		Carbonated Water	0.001
30	2,4D	Foodgrains	0.01
		Milled foodgrains	0.003
		Potatoes	0.2
		*Milk and Milk Products	0.05
		*Meat and Poultry	0.05
		Eggs	0.05 (shell free basis)
		Fruits	2.0
31	Ethion (Residues to bedetermined as ethion andIts oxygen analogueand expressed as ethion)	Tea (dry manufactured)	5.0
		Cucumber and Squash	0.5
		Other Vegetables	1.0
		Cotton seed	0.5
		*Milk and Milk Products	0.5 (fat basis)
		*Meat and Poultry	0.2 (carcass Fat basis)

(1)	(2)	(3)	(4)
		Eggs	0.2 (shell free basis)
		Food grains	0.025
		Milled food grains	0.006
		Peaches	1.0
		Other fruits	2.0
		Dry fruits	0.1 (shell free basis)
32.	Formothion (Determined as dinethoate and its oxygen Analogue and expressed as dimethoate except incase of citrus fruits where it is to be determined as formothion)	Citrus fruits	0.2
		Other fruits	1.0
		Vegetable	2.0
		Peppers and Tomatoes	1.0
33.	Monocrotophos	Food grains	0.025
		Milled Food grains	0.006
		Citrus fruits	0.2
		Other fruits	1.0
		Carrot, Turnip, Potatoes and Sugar beet	0.05
		Onion and Peas	0.1
		Other Vegetables	0.2
		Cottonseed	0.1
		Cottonseed oil (raw)	0.05
		*Meat and Poultry	0.02
		*Milk and Milk Products	0.02
		Eggs	0.02 (shell free basis)
		Coffee (Raw beans)	0.1
		Chillies	0.2
		Cardamom	0.5
34.	Paraquat Dichloride (Determined as Paraquat cations)	Food grains	0.1
		Milled food grains	0.025
		Potato	0.2
		Other vegetables	0.05
		Cotton seed	0.2
		Cottonseed oil (edible refined)	0.05
		*Milk (whole)	0.01
		Fruits	0.05
35.	Phosalone	Pears	2.0
		Citrus fruits	1.0
		Other fruits	5.0
		Potatoes	0.1

(1)	(2)	(3)	(4)
		Other vegetables	1.0
		Rapeseed/Mustard Oil (crude)	0.05
36.	Trichlorfon	Foodgrains	0.05
		Milled foodgrains	0.0125
		Sugar beet	0.05
		Fruits and Vegetables	0.1
		Oil seeds	0.1
		Edible Oil (refined)	0.05
		*Meat and Poultry	0.1
		*Milk (whole)	0.05
37.	Thiometon	Food grains	0.025
	(Residues determined as thiometon its sulfoxide and sulphone expressed as thiometon)	Milled food grains	0.006
		Fruits	0.5
		Potato, Carrots and Sugar beets	0.05
		Other vegetables	0.5
38.	Acephate	Safflower seed	2.0
		Cotton Seed	2.0
39.	Methamido-phos	Safflower seed	0.1
	(A metabolite of Acephate)	Cotton seed	0.1
40.	Aldicarb (sum of Aldicarb its sulfoxide and sulphone, expressed as Aldicarb)	Potato	0.5
		Chewing Tobacco	0.1
41.	Atrazine	Maize	Nil
		Sugarcane	0.25
42.	Carbendazim	Food grains	0.50
		Milled food grains	0.12
		Vegetables	0.50
		Mango	2.00
		Banana (whole)	1.00
		Other fruits	5.00
		Cotton seed	0.10
		Groundnut	0.10
		Sugar beet	0.10
		Dry fruits	0.10
		Eggs	0.10 (shell free basis)
		Meat & Poultry	0.10 (Carcass fat basis)
		Milk & Milk Products	0.10 (fat basis)
43.	Benomyl	Food grains	0.50
		Milled food grains	0.12

(1)	(2)	(3)	(4)
		Vegetables	0.50
		Mango	2.00
		Banana (whole)	1.00
		Other fruits	5.00
		Cotton seed	0.10
		Groundnut	0.10
		Sugar beet	0.10
		Dry fruits	0.10
		Eggs	0.10 (shell free basis)
		Meat & Poultry	0.10 (carcass fat basis)
		Milk & Milk Products	0.10 (fat basis)
44.	Captan	Fruit & Vegetables	15.00
45.	Carbofuran (sum of carbofuran and 3-hydroxy carbofuran expressed as carbofuran)	Food grains	0.10
		Milled food grains	0.03
		Fruit & Vegetables	0.10
		Oil seeds	0.10
		Sugarcane	0.10
		Meat & Poultry	0.10 (carcass fat basis)
		Milk & Milk Products	0.05 (fat basis)
46.	Copper Oxychloride (determined as copper)	Fruit	20.00
		Potato	1.00
		Other vegetables	20.00
47.	Cypermethrin (sum of isomers) (fat soluble residue)	Wheat grains	0.05
		Milled wheat grains	0.01
		Brinjal	0.20
		Cabbage	2.00
		Bhindi	0.20
		Oil seeds except groundnut	0.20
		Meat and Poultry	0.20 (carcass fat basis)
		Milk and Milk Products	0.01 (fat basis)
48.	Decamethrin / Deltamethrin	Cotton Seed	0.10
		Food grains	0.50
		Milled Foodgrains	0.20
		Rice	0.05
49.	Edifenphos	Rice	0.02
		Rice bran	1.00

(1)	(2)	(3)	(4)
50.	Fenthion (sum of fenthion, its oxygen analogue and their sulfoxides and sulphones expressed as fenthion)	Eggs	0.01(shell free basis)
		Meat and poultry	0.02 (carcass fat basis)
		Milk and Milk products	0.01(fat basis)
		Food grains	0.10
		Milled food grains	0.03
		Onion	0.10
		Potatoes	0.05
		Beans	0.10
		Peas	0.50
		Tomatoes	0.50
		Other vegetables	1.00
		Musk melon	2.00
51.	Fenvalerate (fat soluble residue)	Meat and Poultry	2.00 (carcass fat basis)
		Milk and Milk products	0.05 (fat basis)
		Cauliflower	2.00
		Brinjal	2.00
		Okra	2.00
		Cotton Seed	0.20
		Cotton seed oil	0.10
52.	Dithiocarbamates (the residue tolerance limit are determined and expressed as mg/CS2/kg and refer separately to the residues arising from any or each group of dithiocarbamates)	Meat and Poultry	1.00 (carcass fat basis)
		Milk and Milk Product	0.01 (fat basis)
		Food Grains	0.20
		Milled food grains	0.05
		Potatoes	0.10
		Tomatoes	3.00
		Cherries	1.00
53.	Phenthoate	Other fruits	3.00
		Chillies	1.0
		Foodgrains	0.05
		Milled foodgrains	0.01
		Oilseeds	0.03
		Edible oils	0.01
		Eggs	0.05 (shell free basis)
		Meat & Poultry	0.05 (carcass fat basis)

(1)	(2)	(3)	(4)
54.	Phorate (sum of Phorate, its oxygen analogue and their sulphoxides and sulphones, expressed as phorate)	Milk & Milk products	0.01 (fat basis)
		Foodgrains	0.05
		Milled foodgrains	0.01
		Tomatoes	0.10
		Other vegetables	0.05
		Fruits	0.05
		Oil seeds	0.05
		Edible oils	0.03
		Sugarcane	0.05
		Eggs	0.05 (shell free basis)
55.	Simazine	Meat & Poultry	0.05 (carcass fat basis)
		Milk & Milk Products	0.05 (fat basis)
		Maize	Nil
56.	Pirimiphos-methyl	Sugarcane	0.25
		Rice	0.50
		Food grains except Rice	5.00
		Milled food grains except rice	1.00
		Eggs	0.05 (shell free basis)
57.	Alachlor	Meat & Poultry	0.05 (carcass fat basis)
		Milk & Milk Products	0.05 (fat basis)
		Cotton Seed	0.05
		Groundnut	0.05
		Maize	0.10
		Soyabeans	0.10
58.	Alfa Nephthyl Acetic Acid (A.N.A.)	Pine-Apple	0.50
59.	Bitertanol	Wheat	0.05
		Groundnut	0.10
60.	Captafol	Tomato	5.00
61.	Cartaphydrochloride	Rice	0.50
62.	Chlormequatchloride	Grape	1.00
		Cotton Seed	1.00
63.	Chlorothalonil	Groundnut	0.10
		Potato	0.10
		Cotton Seed	0.20
64.	Diflubenzuron	Apple	5.00
65.	Dodine	Cotton Seed	1.00
66.	Diuron	Banana	0.10

(1)	(2)	(3)	(4)
		Maize	0.50
		Citrus	1.00
		(Sweet Orange)	
		Grapes	1.00
67.	Ethephon	Pine Apple	2.00
		Coffee	0.10
		Tomato	2.00
		Mango	2.00
68.	Fluchloralin	Cotton Seed	0.05
		Soya Beans	0.05
69.	Malic Hydrazide	Onion	15.00
		Potato	50.00
70.	Metalyxyl	Bajra	0.05
		Maize	0.05
		Sorghum	0.05
71.	Methomyl	Cotton Seed	0.10
72.	Methyl Chloro-phenoxy-acetic Acid(M.C.P.A.)	Rice	0.05
		Wheat	0.05
73.	Oxadiazon	Rice	0.03
74.	Oxydemeton methyl	Food-grains	0.02
75.	Permethrin	Cucumber	0.50
		Cotton Seed	0.50
		Soya Beans	0.05
		Sunflower Seed	1.00
76.	Quinolphos	Rice	0.01
		Pigeon pea	0.01
		Cardamom	0.01
		Tea	0.01
		Fish	0.01
		Chillies	0.2
77.	Thiophenatemethyl	Apple	5.00
		Papaya	7.00
78.	Triazophos	Chillies	0.2
		Rice	0.05
		Cotton seed oil	0.1
		Soyabean oil	0.05
79.	Profenofos	Cotton seed oil	0.05
80.	Fenpropathrin	Cotton seed oil	0.05
81.	Fenarimol	Apple	5.0
82.	Hexaconazole	Apple	0.1

(1)	(2)	(3)	(4)
83	Iprodione	Rape seed	0.5
		Mustard seed	0.5
		Rice	10.0
		Tomato	5.0
		Grapes	10.0
84.	Tridemorph	Wheat	0.1
		Grapes	0.5
		Mango	0.05
85.	Penconazole	Grapes	0.2
86	Propiconazole	Wheat	0.05
87	Myclobutanil	Groundnut seed	0.1
		Grapes	1.0
88	Sulfosulfuron	Wheat	0.02
89	Trifluralin	Wheat	0.05
90	Ethoxysulfuron	Rice	0.01
91	Metolachlor	Soyabean Oil	0.05
92	Glyphosphate	Tea	1.0
93	Linuron	Pea	0.05
94	Oxyfluorfen	Rice	0.05
		Groundnut Oil	0.05
95	Carbosulfan	Rice	0.2
96	Tricyclazole	Rice	0.02
97	Imidacloprid	Cotton seed Oil	0.05
		Rice	0.05
98	Butachlor	Rice	0.05
99	Chlorimuron-ethyl	Wheat	0.05
100	Diclofop-methyl	Wheat	0.1
101	Metribuzin	Soyabean Oil	0.1
102	Lambdacyhalothrin	Cotton seed Oil	0.05
103	Fenazaquin	Tea	3.0
104	Pendimethalin	Wheat	0.05
		Rice	0.05
		Soyabean Oil	0.05
		Cotton seed Oil	0.05
105	Pretilachlor	Rice	0.05
106	Fluvalinate	Cotton seed Oil	0.05
107	Metasulfuron-methyl	Wheat	0.1
108	Methabenzthiazuron	Wheat	0.5
109	Imazethapyr	Soyabean oil	0.1
		Groundnut oil	0.1

(1)	(2)	(3)	(4)
110	Cyhalofop-butyl	Rice	0.5
111	Triallate	Wheat	0.05
112	Spinosad	Cotton seed oil	0.02
		Cabbage	0.02
		Cauliflower	0.02
113	Thiamethoxam	Rice	0.02
114	Fenobucarb	Rice	0.01
115	Thiodicarb	Cotton seed oil	0.02
116	Anilophos	Rice	0.1
117	Fenoxyp-prop-p-ethyl	Wheat	0.02
		Soyabean seed	0.02
118	Glufosinate-ammonium	Tea	0.01
119	Clodinafop-proparyl	Wheat	0.1
120	Dithianon	Apple	0.1
121	Kitazin	Rice	0.2
122	Isoprothiolane	Rice	0.1
123	Acetamiprid	Cotton seed oil	0.1
124	Cymoxanil	Grapes	0.1
125	Triadimefon	Wheat	0.5
		Pea	0.1
		Grapes	2.0
126	Fosetyl-A1	Grapes	10
		Cardamom	0.2
127	Isoproturon	Wheat	0.1
128	Propargite	Tea	10.0
129	Difenoconazole	Apple	0.01
130	b-Cyfluthrin	Cotton seed	0.02
131	Ethofenprox	Rice	0.01
132	Bifenthrin	Cotton seed	0.05
133	Benfuracarb	Red Gram	0.05
		Rice	0.05
134	Quizalofop-ethyl	Soyabean seed	0.05
135	Flufenacet	Rice	0.05
136	Buprofezin	Rice	0.05
137	Dimethomorph	Grapes	0.05
		Potatoes	0.05
138	Chlorfenopryr	Cabbage	0.05
139	Indoxacarb	Cotton seed	0.1
		Cottonseed oil	0.1
		Cabbage	0.1

(1)	(2)	(3)	(4)
140	Metiram	Tomato	5.0
		Ground nut seed	0.1
		Ground nut seed oil	0.1
141	Lufenuron	Cabbage	0.3
142	Carpropamid	Rice	1.0
143	Novaluron	Cottonseed	0.01
		Cottonseed oil	0.01
		Tomato	0.01
		Cabbage	0.01
144	Oxadiargyl	Rice	0.1
145	Pyrazosulfuron ethyl	Rice	0.01
146	Clomazone	Rice	0.01
		Soyabean seed	0.01
		Soyabean seed oil	0.01
147	Tebuconazole	Wheat	0.05
148	Propineb	Apple	1.0
		Pomegranate	0.5
		Potato	0.5
		Green Chillies	2.0
		Grapes	0.5
149	Thiochlorprid	Cotton seed	0.05
		Cotton seed oil	0.05
		Rice	0.01

*: Soluble in water, hence not necessary to mention on fat basis

Explanation :— For the purpose of this regulation :

(a) the expression “insecticide” shall have the meaning assigned to it in the Insecticide Act, 1968 (46 of 1968);

(b) unless otherwise stated :

(i) maximum levels are expressed in mg./kg. on a whole product basis.

(ii) all foods refer to raw agricultural products moving in commerce.

2.3.2: ANTIBIOTIC AND OTHER PHARMA-COLOGICALLY ACTIVE SUBSTANCES

1) The amount of antibiotic mentioned in column (2), on the sea foods including shrimps, prawns or any other variety of fish and fishery products, shall not exceed the tolerance limit prescribed in column (3) of the table given below:—

TABLE

S.No.	Name of Antibiotics	Tolerance limit mg/kg (ppm)
1.	Tetracycline	0.1
2.	Oxytetracycline	0.1
3.	Trimethoprim	0.05
4.	Oxolinic acid	0.3

2) The use of any of the following antibiotics and other Pharmacologically Active Substances shall be prohibited in any unit processing sea foods including shrimps, prawns or any other variety of fish and fishery products —

- (i) All Nitrofurans including
- (ii) Furaltadone
- (iii) Furazolidone
- (iv) Furfuramide
- (v) Nifuratel
- (vi) Nifuroxime
- (vii) Nifurpazine
- (viii) Nitrofurantoin
- (ix) Nitrofurazone
- (x) Chloramphenicol
- (xi) Neomycin
- (xii) Nalidixic acid
- (xiii) Sulphamethoxazole
- (xiv) Aristolochia spp and preparations thereof
- (xv) Chloroform
- (xvi) Chlorpromazine
- (xvii) Cholchicine
- (xviii) Dapsone
- (xix) Dimetridazole
- (xx) Metronidazole
- (xxi) Ronidazole
- (xxii) Iprnidazole
- (xxiii) Other nitromidazoles
- (xxiv) Clenbuterol
- (xxv) Diethylstilbestrol (DES)
- (xxvi) Sulfanoamide drugs (except approved Sulfadimethoxine, Sulfabromomethazine and Sulfaethoxypyridazine)
- (xxvii) Fluoroquinolones
- (xxviii) Glycopeptides.

[F.No. 2-15015/30/2010]

V.N. GAUR,
Chief Executive Officer

FOOD SAFETY AND STANDARDS (CONTAMINANTS, TOXINS AND RESIDUES) REGULATIONS, 2011

CHAPTER 1

GENERAL

1.1: Short title and commencement-

1.1.1: These regulations may be called the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011.

1.1.2: These regulations shall come into force on or after 5th August, 2011.

1.2: Definitions-

1.2.1: In these regulations unless the context otherwise requires:

1. "Crop contaminant" means any substance not intentionally added to food, but which gets added to articles of food in the process of their production (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging transport or holding of articles of such food as a result of environmental contamination

CHAPTER 2

CONTAMINANTS, TOXINS AND RESIDUES

2.1 : METAL CONTAMINANTS

2.1.1

1. Chemicals described in monographs of the Indian Pharmacopoeia when used in foods, shall not contain metal contaminants beyond the limits specified in the appropriate monographs of the Indian Pharmacopoeia for the time being in force.

2. Notwithstanding the provisions of regulation 2.1.1 (1), no article of food specified in Column 2 of the table below shall contain any metal specified in excess of the quantity specified in Column 3 of the said table:

Table

Name of the metal contaminants	Article of food	Parts per Million by weight
(1)	(2)	(3)
1. Lead	(i) Beverages;	
	Concentrated soft drinks (but not including concentrates used in the manufacture of soft drinks)	0.5
	Fruit and vegetable juice (including tomato juice, but not including lime juice and lemon juice)	1.0
	Concentrates used in the manufacture of soft drinks, lime juice and lemon juice	2.0
	(ia) Baking powder	10
	(ib) Edible oils and fats	0.5
	(ic) Infant Milk substitute and Infant foods	0.2

(1)	(2)	(3)
	(id) Turmeric whole and powder	10.0
	(ii) Other foods	
	Anhydrous dextrose and dextrose monohydrate, refined white sugar (sulphated ash content not exceeding 0.03 per cent)	0.5
	Ice-cream, iced lollies and similar frozen confections	1.0
	Canned fish, canned meats, edible gelatin, meat extracts and hydrolysed protein, dried or dehydrated vegetables (other than onions)	5.0
	All types of sugar, sugar syrup, invert sugar and direct consumption coloured sugars with sulphated ash content exceeding 1.0 per cent	5.0
	Raw sugars except those sold for direct consumption or used for manufacturing purpose other than the manufacture of refined sugar.	5.0
	Edible molasses, caramel liquid and solid glucose and starch conversion products with a sulphated ash content exceeding 1.0 per cent	5.0
	Cocoa powder	5.0 on the dry fat free substance
	Yeast and yeast products	5.0 on the dry Matter
	Tea, dehydrated onions, dried herbs and spices flavourings, alginic acid, alginates, agar, carrageen and similar products derived from seaweed	10.0 on the dry matter
	Liquid pectin, chemicals not otherwise specified, used as ingredients or in the preparation or processing of food	10.0
	Food colouring other than caramel	10.0 on the dry colouring matter
	Solid pectin	50.0
	Hard boiled sugar confectionery	2.0
	Iron fortified common salt	2.0
	Corned beef, luncheon meat, Cooked Ham, Chopped meat, Canned chicken, Canned mutton and Goat meat and other related meat products	2.5
	Brewed vinegar and Synthetic vinegar	Nil
	(iii) Foods not specified	2.5
	⁷ [Assorted subtropical fruits, edible peel	0.1
	Assorted subtropical fruits, inedible peel	0.1
	Berries and other small fruits	0.2
	Citrus fruits	0.1
	Pome fruits	0.1
	Stone fruits	0.1
	Brassica vegetables excluding Kale	0.3
	Bulb vegetables	0.1
	Fruiting vegetables, cucurbits	0.1
	Fruiting vegetables other than cucurbits (excluding mushrooms)	0.1
	Leafy vegetables (including brassica leafy vegetables but excluding spinach)	0.3
	Legume vegetables	0.2
	Pulses	0.2
	Root and tuber vegetables	0.1
	Canned fruit cocktail	1
	Canned grapefruit	1

(1)	(2)	(3)
	Canned mandarin oranges	1
	Canned mangoes	1
	Canned pineapple	1
	Canned raspberries	1
	Canned strawberries	1
	Canned tropical fruit salad	1
	Jams (fruit preserves) and jellies	1
	Mango chutney	1
	Table olives	1
	Canned asparagus	1
	Canned carrots	1
	Canned green beans and Canned wax beans	1
	Canned green peas	1
	Canned mature processed peas	1
	Canned mushrooms	1
	Canned palmito	1
	Canned sweetcorn	1
	Canned tomatoes	1
	Pickled cucumbers (cucumber pickles)	1
	Processed tomato concentrates	1.5
	Fruit Juices (including nectars; ready to drink)	0.05
	Cereal grains, except buckwheat, canihua and quinoa	0.2
	Canned chestnuts and canned chestnut puree	1
	Meat of cattle, sheep and pig (also applies to fat from meat)	0.1
	Poultry meat	0.1
	Cattle, edible offal of	0.5
	Pig, edible offal of	0.5
	Poultry, edible offal of	0.5
	Edible fats and oils (edible fats and oils not covered by individual standards)	0.1
	Fish	0.3
	Margarine	0.1
	Minarine	0.1
	Named animal fats (lard, rendered pork fat, premier jus and edible tallow)	0.1
	Olive oil, refined	0.1
	Olive oil, virgin	0.1
	Olive, residue oil (olive pomace oil)	0.1

(1)	(2)	(3)
	Poultry fats	0.1
	Vegetable oils, crude (oils of arachis, babasu, coconut, cotton seed, grape seed, maize, mustard seed, palm kernel, palm, rape seed, safflower seed, sesame seed, soya bean, and sunflower seed, and palm olein, stearin and superolein and other oils but excluding cocoa butter)	0.1
	Vegetable oils, edible (oils of arachis, babasu, coconut, cotton seed, grape seed, maize, mustard seed, palm kernel, palm, rape seed, safflower seed, sesame seed, soya bean, and sunflower seed, and palm olein, stearin and superolein and other oils but excluding cocoa butter)	0.1
	Milks (A concentration factor applies to partially or wholly dehydrated milks.)	0.02
	Secondary milk products (as consumed)	0.02
	Natural mineral water, expressed in mg/L	0.01
	Infant formula (ready to use)	0.02
	Salt, food grade	2.0
	Wine	0.2
	Crustaceans	0.5
	Cephalopods	1.0
	Bivalve Molluscs	1.5]
2. Copper	(i) Beverages:	
	Soft drinks excluding concentrates and Carbonated water	7.0
	Carbonated water	1.5
	Toddy	5.0
	Concentrates for soft drinks	20.0
	(ii) Other Foods	
	Chicory-dried or roasted, coffee beans, flavourings/pectin liquid	30.0
	Colouring matter	30.0 on dry colouring matter
	Edible gelatin	30.0
	Tomato ketchup	50.0 on the dried total solids
	Yeast and yeast products	60.0 on the dry matter
	Cocoa powder	70.0 on the fat free substance
	Tomato puree, paste, powder, juice and cocktails	100.0 on the dried tomato solid
	Tea	150.0
	Pectin-solid	300.0
	Hard boiled sugar confectionery	5.0
	Iron Fortified Common Salt	2.0
	Turmeric whole and powder	5.0
	Juice of orange, grape, apple, tomato, pineapple and lemon	5.0
	Pulp and pulp products of any fruit	5.0
	Infant milk substitute and Infant foods	15.0 (But not less

		than 2.8)
	Brewed Vinegar and Synthetic vinegar	Nil
	Caramel	20
	(iii) Foods not specified	30.0
3. Arsenic	(i) Milk	0.1
	(ii) Beverages :	
	Soft drink intended for consumption after dilution except carbonated water	0.5
	Carbonated water	0.25
	Infant Milk substitute and Infant foods	0.05
	Turmeric whole and powder	0.1
	Juice of orange, grape, apple, tomato, pineapple and lemon	0.2
	Pulp and pulp products of any fruit	0.2
	Preservatives, anti-oxidants, emulsifying and stabilising agents and synthetic food colours	3.0 on dry matter
	Ice-cream, iced lollies and similar frozen confections	0.5
	Dehydrated onions, edible gelatin, liquid pectin	2.0
	Chicory-dried or roasted	4.0
	Dried herbs, finings and clearing agents, solid pectin all grades, spices	5.0
	Food colouring other than synthetic colouring.	5.0 on dry colouring matter
	Hard boiled sugar confectionery	1.0
	Iron Fortified Common Salt	1.0
	Brewed Vinegar and Synthetic Vinegar	0.1
	(iii) Foods not specified	1.1
	⁷ [Edible fats and oils (edible fats and oils not covered by individual standards)	0.1
	Margarine	0.1
	Minarine	0.1
	Named animal fats (lard, rendered pork fat, premier jus and edible tallow)	0.1
	Olive oil, refined	0.1
	Olive oil, virgin	0.1
	Olive, residue oil (olive pomace oil)	0.1
	Vegetable oils, crude (oils of arachis, babasu, coconut, cottonseed, grapeseed, maize, mustardseed, palm kernel, palm, rapeseed, safflower seed, sesameseed, soya bean, and sunflowerseed, and palm olein, stearin and superolein).	0.1
	Vegetable oils, edible (oils of arachis, babasu, coconut, cottonseed, grapeseed, maize, mustardseed, palm kernel, palm, rapeseed, safflower seed, sesameseed, soya bean, and sunflowerseed, and palm olein, stearin and superolein).	0.1
	Natural mineral water, expressed in mg/L	0.01
	Salt, food grade	0.5
	Fish and Crustaceans	76
	Molluscs	86]
4. Tin	(i) Processed and canned products	250
	(i-a) Hard boiled sugar confectionery	5.0

(1)	(2)	(3)
	(i-aa) Jam, Jellies and Marmalade	250
	Juice of orange, apple, tomato, pineapple and lemon	250
	Pulp and pulp products of any fruit	250
	(i-b) Infant Milk substitute and Infant foods	5.0
	(i-c) Turmeric whole and powder	Nil
	(i-d) Corned beef, Luncheon meat, Cooked Ham, Chopped meat, Canned chicken, Canned mutton and Goat meat	250
	(ii) Foods not specified	250
	⁷ [Canned foods other than beverages	250
	Canned beverages	150
	Canned citrus fruits	250
	Canned stone fruits	250
	Canned vegetables	250
	Canned fruit cocktail	250
	Canned mangoes	250
	Canned pineapple	250
	Canned raspberries	250
	Canned strawberries	250
	Canned tropical fruit salad	250
	Mango Chutney	250
	Table olives	250
	Canned mushrooms	250
	Canned tomatoes	250
	Pickled cucumber	250
	Processed tomato concentrates	250
	Canned chestnuts and chestnut puree	250
	Cooked cured chopped meat (for products in tins)	250
	Cooked cured chopped meat (for products in other containers)	50
(1)	(2)	(3)
	Cooked cured ham (for products in tins)	200
	Cooked cured ham (for products in other containers)	50
	Cooked cured pork shoulder (for products in tins)	200
	Cooked cured pork shoulder (for products in other containers)	50
	Corned beef (for products in tins)	200
	Corned beef (for products in other containers)	50
	Luncheon meat (for products in tins)	200
	Luncheon meat (for products in other containers)	50
	Canned fish products	200]
⁸ [***]		

(1)	(2)	(3)
6. Cadmium	(i) Infant Milk substitute and Infant foods	0.1
	(ii) Turmeric whole and powder	0.1
	(iii) Other foods	1.5
	⁷ [Brassica vegetables	0.05
	Bulb vegetables	0.05
	Fruiting vegetables, cucurbits	0.05
	Fruiting vegetables other than cucurbits (excluding tomatoes and edible fungi)	0.05
	Leafy vegetables	0.2
	Legume vegetables	0.1
	Potato, peeled	0.1
	Pulses, excluding soybean dry	0.1
	Root and tuber vegetables, excluding potato and celeriac	0.1
	Stalk and stem vegetables	0.1
	Cereal grains, except buckwheat, canihua and quinoa (excluding wheat and rice; and bran and germ	0.1
	Rice, polished	0.4
	Wheat	0.2
	Natural mineral water, expressed in mg/L	0.003
	Salt, food grade	0.5
	Fish	0.3
	Crustaceans	0.5
	Cephalopods	2.0
	Bivalve Molluscs	2.0]
7. Mercury	Fish	0.5
	Other foods	1.0
	⁷ [Natural mineral water, expressed in mg/L	0.001
	Salt, food grade	0.1
	Non-predatory fish, crustaceans, cephalopods, molluscs	0.5
	Predatory Fish (Tuna, Marlin, Sword Fish, Elasmobranch)	1.0]
8. Methyl Mercury (Calculated as the element)	All foods	0.25
(1)	(2)	(3)
9. Chromium	Refined Sugar	20 ppb
	³ [Gelatin	10]
	⁷ [All fishery products	12]
10. Nickel	All hydrogenated, patially hydrogenated, interesterified vegetable oils and fats such as vanaspati, table margarine, bakery and industrial margarine, bakery shortening, fat spread and partially hydrogenated margarine, bakery shortening, fat spread and partially hydrogenated soyabean oil	1.5

2.2 Crop contaminants and naturally occurring toxic substances

2.2.1

⁴ [1. No article of food specified in column (3) of the Table below shall contain any crop contaminant specified in the corresponding entry in column (2) thereof in excess of quantities specified in the corresponding entry in column (4) of the said Table:

Table

S.No.	Name of the Contaminants	Article of the food	Limit µg/kg
(1)	(2)	(3)	(4)
1.	Aflatoxin	Cereal and Cereal Products	15
		Pulses	15
		Nuts	
		Nuts for further processing	15
		Ready to eat	10
		Dried figs	10
		Oilseeds or oil	
		Oilseeds for further processing	15
		Ready to eat	10
		Spices	30
2.	Aflatoxin M ₁	Milk	0.5
3.	Ochratoxin A	Wheat, barley and rye	20
4.	Patulin	Apple juice and Apple juice ingredients in other beverages	50
5.	Deoxynivalenol	wheat	1000]

² [2. Naturally occurring Toxic Substances:

Table

Sl.No	Name of naturally occurring toxic substances (NOTS)	Article of food	Maximum limits (ppm)
(1)	(2)	(3)	(4)
1	Agaric acid	Food containing mushrooms	100
		Alcoholic beverages	100
(1)	(2)	(3)	(4)
2	Hydrocyanic acid	Nougat, marzipan or its substitutes or similar products	5
		Canned stone fruits	5

		Alcoholic beverages	5
		Confectionery	5
		Stone fruit juices	5
		¹⁰ [Sago, Cassava flour, Tapioca flour, Manihot flour and their products	10]
3	Hypericine	Alcoholic beverages	1
4	Saffrole	Meat preparations and meat products, including poultry and game	10
		Fish preparations and fish products	10
		Soups and sauces	10
		Non-alcoholic beverages	10
		Food containing mace and nutmeg	10
		Alcoholic beverages	10]

⁵ [3. Polychlorinated biphenyls (PCBs) and Polycyclic Aromatic Hydrocarbon (PAH) compounds in Fish and Fishery Products:

Sl.No.	Name of the contaminants	Article of food	Limit
(1)	(2)	(3)	(4)
1.	Polychlorinated biphenyls (Sum of PCB28, PCB52, PCB101, PCB138, PCB153 and PCB180)	Inland and Migratory Fish	2.0 ppm
2.	Polychlorinated biphenyls (Sum of PCB28, PCB52, PCB101, PCB138, PCB153 and PCB180)	Marine Fish, Crustaceans and molluscs	0.5 ppm
3.	Benzo(a)pyrene	Smoked Fishery Products	5.0 ppb]

2.3: Residues

2.3.1: Restriction on the use of insecticides.

1) Subject to the Provisions of regulation 2.3.1 (2), no insecticides shall be used directly on articles of food

Provided that nothing in this regulation shall apply to the fumigants which are registered and recommended for use as such on articles of food by the Registration Committee, constituted under section 5 of the Insecticides Act, 1968 (46 of 1968).

2) The amount of insecticide mentioned in Column 2 on the foods mentioned in column 3, shall not exceed the tolerance limit prescribed in column 4 of the Table given below :

Table

Sl.No.	Name of Insecticides	Food	Tolerance limit mg/kg.(ppm)
(1)	(2)	(3)	(4)
1.	Aldrin, dieldrin (the limits apply to aldrin and dieldrin singly or in any combination and are expressed as dieldrin)	Foodgrains	0.01
		Milled Foodgrains	Nil
		Milk and Milk products	0.15 (on a fat basis)
		Fruits and Vegetables	0.1

		Meat	0.2
		Eggs	0.1 (on a shell free basis)
(1)	(2)	(3)	(4)
2.	Carbaryl	Fish	0.2
		Food grains	1.5
		Milled food grains	Nil
		Okra and leafy vegetables	10.0
		Potatoes	0.2
		Other vegetables	5.0
		Cottonseed (whole)	1.0
		Maize cob (kernels)	1.0
		Rice	2.50
		Maize	0.50
		Chillies	5.00
3.	Chlordane (residue to be measured as cis plus trans chlordane)	Food grains	0.02
		Milled food grains	Nil
		Milk and milk products	0.05 (on a fat basis)
		Vegetables	0.2
		Fruits	0.1
		Sugar beet	0.3
4.	D.D.T. (The limits apply to D.D.T., D.D.D. and D.D.E. singly or in any combination)	Milk and milk products	1.25 (on a fat basis)
		Fruits and vegetables including potato	3.5
		Meat, poultry and fish	7.0 (on a whole product basis)
		Eggs	0.5 (on a shell free basis)
5.	D.D.T. (singly)	Carbonated Water	0.001
6.	D.D.D. (singly)	Carbonated Water	0.001
7.	D.D.E. (singly)	Carbonated Water	0.001
8	Diazinon	Food grains	0.05
		Milled food grains	Nil
		Vegetables	0.5
9.	Dichlorvos (content of di- chloroacetaldehyde (D.C.A.) be reported where possible)	Food grains	1.0
		Milled food grains	0.25
		Vegetables	0.15
		Fruits	0.1
10.	Dicofol	Fruits and Vegetables	5.0
		Tea (dry manufactured)	5.0
		Chillies	1.0
11.	Dimethoate (residue to be determined as dimethoate and expressed as dimethoate)	Fruits and Vegetables	2.0
		Chillies	0.5

12.	Endosulfan (residues are measured and reported as total of endosulfan A and B and endosulfan-sulphate)	Fruits and Vegetables	2.0
		Cottonseed	0.5
		Cottonseed oil (crude)	0.2
(1)	(2)	(3)	(4)
		Bengal gram	0.20
		Pigeon Pea	0.10
		Fish	0.20
		Chillies	1.0
		Cardamom	1.0
13.	Endosulfan A	Carbonated Water	0.001
14.	Endosulfan B	Carbonated Water	0.001
15.	Endosulfan-Sulphate	Carbonated Water	0.001
16.	Fenitrothion	Food grains	0.02
		Milled food grains	0.005
		Milk and Milk Products	0.05 (on a fat basis)
		Fruits	0.5
		Vegetables	0.3
		Meat	0.03
17.	Heptachlor (combined residues of heptachlor and its epoxide to be determined and expressed as Heptachlor)	Food grains	0.01
		Milled food grains	0.002
		Milk and Milk Products	0.15(on a Fat basis)
		Vegetables	0.05
18.	Hydrogen cyanide	Food grains	37.5
		Milled food grains	3.0
19.	Hydrogen Phosphide	Food grains	Nil
		Milled food grains	Nil
20.	Inorganic bromide (determined and expressed as total bromide from all sources)	Foodgrains	25.0
		Milled Foodgrains	25.0
		Fruits	30.0
		Dried fruits	30.0
		Spices	400.0
21.	Hexachlorocycle hexane and its Isomers		
	(a) Alfa (α) Isomer:	Rice grain unpolished	0.10
		Rice grain polished	0.05
		Milk (whole)	0.05
		Fruits and vegetable	1.00
		Fish	0.25
		Carbonated Water	0.001
	(b) Beta (β) Isomer :	Rice grain Unpolished	0.10
		Rice grain polished	0.05
		Milk (whole)	0.02

		Fruits and vegetable	1.00
		Fish	0.25
		Carbonated Water	0.001
(1)	(2)	(3)	(4)
	(c) Gamma (γ) Isomer (Known as Lindane)	Food grains except rice	0.10
		Milled food grains	Nil
		Rice grain Unpolished	0.10
		Rice grain polished	0.05
		Milk	0.01 (on whole basis)
		Milk products	0.20
		Milk products (having less than 2 per cent fat)	0.20 (on whole basis)
		Fruits and vegetable	1.00
		Fish	0.25
		Eggs	0.10 (on shell free basis)
		Meat and poultry	2.00 (on whole basis)
		Carbonated Water	0.001
	(d) Delta (δ) Isomer :	Rice grain Unpolished	0.10
		Rice grain Polished	0.05
		Milk (whole)	0.02
		Fruits & vegetables	1.00
		Fish	0.25
		Carbonated Water	0.001
22.	Malathion (Malathion to be determined and expressed as combined residues of malathion and malaaxon)	Food grains	4.0
		Milled food grains	1.0
		Fruits	4.0
		Vegetables	3.0
		Dried fruits	8.0
		Carbonated Water	0.001
23.	Parathion (Combined residues of parathion and paraoxon to be determined and expressed as parathion)	Fruits and Vegetables	0.5
24.	Parathion methyl (combined residues of parathion methyl and its oxygen analogue to be determined and expressed asparathion methyl)	Fruits	0.2
		Vegetables	1.0
25.	Phosphamidon residues (expressed as the sum of phosphamidon and its desethyl derivative)	Foodgrains	0.05
		Milled foodgrains	Nil
		Fruits and Vegetables	0.2
26.	Pyrethrins (sum of pyrethrins I & II and other structurally related insecticide Ingredients of pyrethrum)	Foodgrains	Nil
		Milled foodgrains	Nil
		Fruits and Vegetables	1.0
27.	Chlorienvinphos (Residues to be measured as alpha and beta isomers of Chlorienvinphos)	Foodgrains	0.025
		Milled Foodgrains	0.006
		Milk and Milk Products	0.2 (fat basis)

		Meat and Poultry	0.2 (carcass fat)
		Vegetables	0.05
		Groundnuts	0.05 (shell free basis)
		Cotton seed	0.05
28.	Chlorobenzilate	Fruits	1.0
		Dry Fruits, Almonds and Walnuts	0.2 (shell free basis)
29.	Chlorpyrifos	Foodgrains	0.05
		Milled foodgrains	0.01
		Fruits	0.5
		Potatoes and Onions	0.01
		Cauli Flower and Cabbage	0.01
		Other vegetables	0.2
		Meat and Poultry	0.1 (carcass fat)
		Milk and Milk Products	0.01(fat basis)
		Cotton seed	0.05
		Cottonseed oil (crude)	0.025
		Carbonated Water	0.001
30.	2,4D	Foodgrains	0.01
		Milled foodgrains	0.003
		Potatoes	0.2
		*Milk and Milk Products	0.05
		*Meat and Poultry	0.05
		Eggs	0.05 (shell free basis)
		Fruits	2.0
31.	Ethion (Residues to be determined as ethion and its oxygen analogue and expressed as ethion)	Tea (dry manufactured)	5.0
		Cucumber and Squash	0.5
		Other Vegetables	1.0
		Cotton seed	0.5
		*Milk and Milk Products	0.5 (fat basis)
		*Meat and Poultry	0.2 (carcass Fat basis)
		Eggs	0.2 (shell free basis)
		Food grains	0.025
		Milled food grains	0.006
		Peaches	1.0
		Other fruits	2.0
		Dry fruits	0.1 (shell free basis)
32.	Formothion (Determined as dimethoate and its oxygen Analogue and expressed as dimethoate except in case of citrus fruits where it is to be determined as formothion)	Citrus fruits	0.2
		Other fruits	1.0
		Vegetable	2.0
		Peppers and Tomatoes	1.0

33.	Monocrotophos	Food grains	0.025
		Milled Food grains	0.006
(1)	(2)	(3)	(4)
		Citrus fruits	0.2
		Other fruits	1.0
		Carrot, Turnip, Potatoes and Sugar beet	0.05
		Onion and Peas	0.1
		Other Vegetables	0.2
		Cottonseed	0.1
		Cottonseed oil (raw)	0.05
		*Meat and Poultry	0.02
		*Milk and Milk Products	0.02
		Eggs	0.02 (shell free basis)
		Coffee (Raw beans)	0.1
		Chillies	0.2
		Cardamom	0.5
34.	Paraquat Dichloride (Determined as Paraquat cations)	Food grains	0.1
		Milled food grains	0.025
		Potato	0.2
		Other vegetables	0.05
		Cotton seed	0.2
		Cottonseed oil (edible refined)	0.05
		*Milk (whole)	0.01
		Fruits	0.05
35.	Phosalone	Pears	2.0
		Citrus fruits	1.0
		Other fruits	5.0
		Potatoes	0.1
		Other vegetables	1.0
		Rapeseed/Mustard Oil (crude)	0.05
36.	Trichlorfon	Foodgrains	0.05
		Milled foodgrains	0.0125
		Sugar beet	0.05
		Fruits and Vegetables	0.1
		Oil seeds	0.1
		Edible Oil (refined)	0.05
		*Meat and Poultry	0.1
		*Milk (whole)	0.05
37.	Thiometon(Residues determined as thiometon its sulfoxide and sulphone expressed as thiometon)	Food grains	0.025
		Milled food grains	0.006
		Fruits	0.5

		Potato, Carrots and Sugar beets	0.05
		Other vegetables	0.5
(1)	(2)	(3)	(4)
38.	Acephate	Safflower seed	2.0
		Cotton Seed	2.0
39.	Methamido-phos (A metabolite of Acephate)	Safflower seed	0.1
		Cotton seed	0.1
40.	Aldicarb (sum of Aldicarb its sulphoxide and sulphone, expressed as Aldicarb)	Potato	0.5
		Chewing Tobacco	0.1
41.	Atrazine	Maize	Nil
		Sugarcane	0.25
42.	Carbendazim	Food grains	0.50
		Milled food grains	0.12
		Vegetables	0.50
		Mango	2.00
		Banana (whole)	1.00
		Other fruits	5.00
		Cotton seed	0.10
		Groundnut	0.10
		Sugar beet	0.10
		Dry fruits	0.10
		Eggs	0.10 (shell free basis)
		Meat & Poultry	0.10 (Carcass fat basis)
		Milk & Milk Products	0.10 (fat basis)
43.	Benomyl	Food grains	0.50
		Milled food grains	0.12
		Vegetables	0.50
		Mango	2.00
		Banana (whole)	1.00
		Other fruits	5.00
		Cotton seed	0.10
		Groundnut	0.10
		Sugar beet	0.10
		Dry fruits	0.10
		Eggs	0.10 (shell free basis)
		Meat & Poultry	0.10 (carcass fat basis)
		Milk & Milk Products	0.10 (fat basis)
44.	Captan	Fruit & Vegetables	15.00
45.	Carbofuran (sum of carbofuran and 3-hydroxy carbofuran expressed as carbofuran)	Food grains	0.10
		Milled food grains	0.03

		Fruit & Vegetables	0.10
		Oil seeds	0.10
(1)	(2)	(3)	(4)
		Sugarcane	0.10
		Meat & Poultry	0.10 (carcass fat basis)
		Milk & Milk Products	0.05 (fat basis)
46.	Copper Oxychloride (determined as copper)	Fruit	20.00
		Potato	1.00
		Other vegetables	20.00
47.	Cypermethrin (sum of isomers) (fat soluble residue)	Wheat grains	0.05
		Milled wheat grains	0.01
		Brinjal	0.20
		Cabbage	2.00
		Bhindi	0.20
		Oil seeds except groundnut	0.20
		Meat and Poultry	0.20 (carcass fat basis)
		Milk and Milk Products	0.01 (fat basis)
48.	Decamethrin/ Deltamethrin	Cotton Seed	0.10
		Food grains	0.50
		Milled Foodgrains	0.20
		Rice	0.05
49.	Edifenphos	Rice	0.02
		Rice bran	1.00
		Eggs	0.01 (shell free basis)
		Meat and poultry	0.02 (carcass fat basis)
		Milk and Milk products	0.01 (fat basis)
50.	Fenthion (sum of fenthion, its oxygen analogue and their sulphoxides and sulphones expressed as fenthion)	Food grains	0.10
		Milled food grains	0.03
		Onion	0.10
		Potatoes	0.05
		Beans	0.10
		Peas	0.50
		Tomatoes	0.50
		Other vegetables	1.00
		Musk melon	2.00
		Meat and Poultry	2.00 (carcass fat basis)
		Milk and Milk products	0.05 (fat basis)
51.	Fenvalerate (fat soluble residue)	Cauliflower	2.00
		Brinjal	2.00

		Okra	2.00
		Cotton Seed	0.20
(1)	(2)	(3)	(4)
		Cotton seed oil	0.10
		Meat and Poultry	1.00 (carcass fat basis)
		Milk and Milk Product	0.01 (fat basis)
52.	Dithiocarbamates (the residue tolerance limit are determined and expressed as mg/CS2/kg and refer separately to the residues arising from any or each group of dithiocarbamates)	Food Grains	0.20
		Milled food grains	0.05
		Potatoes	0.10
	(a) Dimethyl dithiocarbamates residue resulting from the use of ferbam or ziram, and	Tomatoes	3.00
	(b) Ethylene bis- dithiocarbamates resulting from the use of mancozeb, maneb or zineb (including zineb derived from nabam plus zinc sulphate)	Cherries	1.00
		Other fruits	3.00
	(c) Mancozeb	Chillies	1.0
53.	Phenthoate	Foodgrains	0.05
		Milled foodgrains	0.01
		Oilseeds	0.03
		Edible oils	0.01
		Eggs	0.05 (shell free basis)
		Meat & Poultry	0.05 (carcass fat basis)
		Milk & Milk products	0.01 (fat basis)
54.	Phorate (sum of Phorate, its oxygen analogue and their sulphoxides and sulphones, expressed as phorate)	Foodgrains	0.05
		Milled foodgrains	0.01
		Tomatoes	0.10
		Other vegetables	0.05
		Fruits	0.05
		Oil seeds	0.05
		Edible oils	0.03
		Sugarcane	0.05
		Eggs	0.05 (shell free basis)
		Meat & Poultry	0.05 (carcass fat basis)
		Milk & Milk Products	0.05 (fat basis)
55.	Simazine	Maize	Nil
		Sugarcane	0.25
56.	Pirimiphos-methyl	Rice	0.50
		Food grains except Rice	5.00
		Milled food grains except rice	1.00
		Eggs	0.05 (shell free basis)
		Meat & Poultry	0.05 (carcass fat basis)

		Milk & Milk Products	0.05 (fat basis)
57.	Alachlor	Cotton Seed	0.05
(1)	(2)	(3)	(4)
		Groundnut	0.05
		Maize	0.10
		Soyabeans	0.10
58.	Alfa Nephthyl Acetic Acid (A.N.A.)	Pine-Apple	0.50
59.	Bitertanol	Wheat	0.05
		Groundnut	0.10
60.	Captafol	Tomato	5.00
61.	Cartaphydrochloride	Rice	0.50
62.	Chlormequatchloride	Grape	1.00
		Cotton Seed	1.00
63.	Chlorothalonil	Groundnut	0.10
		Potato	0.10
64.	Diflubenzuron	Cotton Seed	0.20
65.	Dodine	Apple	5.00
66.	Diuron	Cotton Seed	1.00
		Banana	0.10
		Maize	0.50
		Citrus (Sweet Orange)	1.00
		Grapes	1.00
67.	Ethephon	Pine Apple	2.00
		Coffee	0.10
		Tomato	2.00
		Mango	2.00
68.	Fluchloralin	Cotton Seed	0.05
		Soya Beans	0.05
69.	Malic Hydrazide	Onion	15.00
		Potato	50.00
70.	Metalyxyl	Bajra	0.05
		Maize	0.05
		Sorghum	0.05
71.	Methomyl	Cotton Seed	0.10
72.	Methyl Chloro-phenoxy-acetic Acid(M.C.P.A.)	Rice	0.05
		Wheat	0.05
73.	Oxadiazon	Rice	0.03
74.	Oxydemeton methyl	Food-grains	0.02
75.	Permethrin	Cucumber	0.50
		Cotton Seed	0.50

		Soya Beans	0.05
		Sunflower Seed	1.00
76.	Quinolphos	Rice	0.01
(1)	(2)	(3)	(4)
		Pigeon pea	0.01
		Cardamom	0.01
		Tea	0.01
		Fish	0.01
		Chillies	0.2
77.	Thiophenatemethyl	Apple	5.00
		Papaya	7.00
78	Triazophos	Chillies	0.2
		Rice	0.05
		Cotton seed oil	0.1
		Soyabean oil	0.05
79	Profenofos	Cotton seed oil	0.05
80	Fenpropathrin	Cotton seed oil	0.05
81	Fenarimol	Apple	5.0
82	Hexaconazole	Apple	0.1
83	Iprodione	Rape seed	0.5
		Mustard seed	0.5
		Rice	10.0
		Tomato	5.0
		Grapes	10.0
84.	Tridemorph	Wheat	0.1
		Grapes	0.5
		Mango	0.05
85.	Penconazole	Grapes	0.2
86	Propiconazole	Wheat	0.05
87	Myclobutanil	Groundnut seed	0.1
		Grapes	1.0
88	Sulfosulfuron	Wheat	0.02
89	Trifluralin	Wheat	0.05
90	Ethoxysulfuron	Rice	0.01
91	Metolachlor	Soyabean Oil	0.05
92	Glyphosphate	Tea	1.0
93	Linuron	Pea	0.05
94	Oxyfluorfen	Rice	0.05
		Groundnut Oil	0.05
95	Carbosulfan	Rice	0.2
96	Tricyclazole	Rice	0.02
97	Imidacloprid	Cotton seed Oil	0.05

		Rice	0.05
98	Butachlor	Rice	0.05
99	Chlorimuron-ethyl	Wheat	0.05
(1)	(2)	(3)	(4)
100	Diclofop-methyl	Wheat	0.1
101	Metribuzin	Soyabean Oil	0.1
102	Lambdacyhalothrin	Cotton seed Oil	0.05
103	Fenazaquin	Tea	3.0
104	Pendimethalin	Wheat	0.05
		Rice	0.05
		Soyabean Oil	0.05
		Cotton seed Oil	0.05
105	Pretilachlor	Rice	0.05
106	Fluvalinate	Cotton seed Oil	0.05
107	Metasulfuron-methyl	Wheat	0.1
108	Methabenzthiazuron	Wheat	0.5
109	Imazethapyr	Soyabean oil	0.1
		Groundnut oil	0.1
110	Cyhalofop-butyl	Rice	0.5
111	Triallate	Wheat	0.05
112	Spinosad	Cotton seed oil	0.02
		Cabbage	0.02
		Cauliflower	0.02
113	Thiamethoxam	Rice	0.02
114	Fenobucarb	Rice	0.01
115	Thiodicarb	Cotton seed oil	0.02
116	Anilophos	Rice	0.1
117	Fenoxyp-prop-p-ethyl	Wheat	0.02
		Soyabean seed	0.02
118	Glufosinate-ammonium	Tea	0.01
119	Clodinafop-propargyl	Wheat	0.1
120	Dithianon	Apple	0.1
121	Kitazin	Rice	0.2
122	Isoprothiolane	Rice	0.1
123	Acetamiprid	Cotton seed oil	0.1
124	Cymoxanil	Grapes	0.1
125	Triadimefon	Wheat	0.5
		Pea	0.1
		Grapes	2.0
126	Fosetyl-A1	Grapes	10
		Cardamom	0.2
127	Isoproturon	Wheat	0.1

128	Propargite	Tea	10.0
129	Difenoconazole	Apple	0.01
130	b-Cyfluthrin	Cotton seed	0.02
(1)	(2)	(3)	(4)
131	Ethofenprox	Rice	0.01
132	Bifenthrin	Cotton seed	0.05
133	Benfuracarb	Red Gram	0.05
		Rice	0.05
134	Quizalofop-ethyl	Soyabean seed	0.05
135	Flufenacet	Rice	0.05
136	Buprofezin	Rice	0.05
137	Dimethomorph	Grapes	0.05
		Potatoes	0.05
138	Chlorfenopyr	Cabbage	0.05
139	Indoxacarb	Cotton seed	0.1
		Cottonseed oil	0.1
		Cabbage	0.1
140	Metiram	Tomato	5.0
		Ground nut seed	0.1
		Ground nut seed oil	0.1
141	Lufenuron	Cabbage	0.3
142	Carpropamid	Rice	1.0
143	Novaluron	Cottonseed	0.01
		Cottonseed oil	0.01
		Tomato	0.01
		Cabbage	0.01
144	Oxadiargyl	Rice	0.1
145	Pyrazosulfuron ethyl	Rice	0.01
146	Clomazone	Rice	0.01
		Soyabean seed	0.01
		Soyabean seed oil	0.01
147	Tebuconazole	Wheat	0.05
148	Propineb	Apple	1.0
		Pomegranate	0.5
		Potato	0.5
		Green Chillies	2.0
		Grapes	0.5
149	Thiochlorprid	Cotton seed	0.05
		Cotton seed oil	0.05
		Rice	0.01

*: Soluble in water, hence not necessary to mention on fat basis

Explanation :— For the purpose of this regulation :

(a) the expression “insecticide” shall have the meaning assigned to it in the Insecticide Act, 1968 (46 of 1968);

(b) unless otherwise stated :

(i) maximum levels are expressed in mg./kg. on a whole product basis.

(ii) all foods refer to raw agricultural products moving in commerce.

2.3.2: ANTIBIOTIC AND OTHER PHARMA-COLOGICALLY ACTIVE SUBSTANCES

1) The amount of antibiotic mentioned in column (2), on the sea foods including shrimps, prawns or any other variety of fish and fishery products, shall not exceed the tolerance limit prescribed in column (3) of the table given below:—

Table

S.No.	Name of Antibiotics	Tolerance limit mg/kg (ppm)
(1)	(2)	(3)
1.	Tetracycline	0.1
2.	Oxytetracycline	0.1
3.	Trimethoprim	0.05
4.	Oxolinic acid	0.3

2) The use of any of the following antibiotics and other Pharmacologically Active Substances shall be prohibited in any unit processing sea foods including shrimps, prawns or any other variety of fish and fishery products —

- (i) All Nitrofurans including
 - (a) Furaltadone
 - (b) Furazolidone
 - (c) Furfuramide
 - (d) Nifuratel
 - (e) Nifuroxime
 - (f) Nifurprazine
 - (g) Nitrofurantoin
 - (h) Nitrofurazone
- (ii) Chloramphenicol
- (iii) Neomycin
- (iv) Nalidixic acid
- (v) Sulphamethoxazole
- (vi) Aristolochia spp and preparations thereof
- (vii) Chloroform
- (viii) Chlorpromazine
- (ix) Cholchicine
- (x) Dapsone
- (xi) Dimetridazole
- (xii) Metronidazole

- (xiii) Ronidazole
- (xiv) Ipronidazole
- (xv) Other nitromidazoles
- (xvi) Clenbuterol
- (xvii) Diethylstilbestrol (DES)
- (xviii) Sulfanoamide drugs (except approved Sulfadimethoxine, Sulfabromomethazine and Sulfaethoxypyridazine)
- (xix) Fluoroquinolones
- (xx) Glycopeptides.

¹ [(3) The limit of antibiotics mentioned in column(2), in Honey on the basis of Limit of Quantification, shall not exceed the tolerance limit prescribed in column(3) when determined by the LC-MS/MS method in the table given below:—

Table

Sr.No.	Name of Antibiotics	Tolerance Limit (microgram/kg)
(1)	(2)	(3)
1.	Chloramphenicol	0.3*
2.	Nitrofurans and its metabolites	0.5* either individually or collectively
3.	Sulphonamides and its metabolites	5.0* either individual or collectively
4.	Streptomycin	5.0*
5.	Tetracycline	5.0*
	(a) Oxytetracycline	5.0*
	(b) Chlortetracycline	5.0*
6.	Ampicillin	5.0*
7.	Enrofloxacin	5.0*
8.	Ciprofloxacin	5.0*
9.	Erythromycin	5.0*
10.	Tylosin	5.0*

* Limit of Quantification on the basis of LC-MS/MS method.]

⁵ [2.4. Limits of biotoxins in fish and fishery products:

Sl. No.	Name of the contaminants	Article of food	Limit (µg/kg)
(1)	(2)	(3)	(4)
1.	Paralytic Shellfish Poison (PSP)	Bivalve Molluscs	80 µg/100g (Saxitoxin Equivalent)
2.	Amnesic Shellfish Poison (ASP)	Bivalve Molluscs	20 µg/g (Domoic acid equivalent)
3.	Diarrhetic shellfish poison (DSP)	Bivalve Molluscs	160 µg of Okadaic acid equivalent/Kg

4.	Azaspiracid poison (AZP)	Bivalve Molluscs	160 µg of azaspiracid equivalent/Kg
5.	Brevetoxin (BTX)	Bivalve Molluscs	200 mouse units or equivalent/Kg]

⁶ [2.5 Other Contaminants

2.5.1: The contaminant mentioned in column 2 on the foods mentioned in column 3, shall not exceed the Maximum Level prescribed in column 4 of the Table given below:

Sl.No.	Name of the contaminants	Food	Maximum level (mg/kg)
(1)	(2)	(3)	(4)
1.	Melamine	Powdered infant formula	1.0
		Liquid infant formula	0.15
		Other foods	2.5]

⁹ [2.5.2 Histamine in Fish and Fishery Products contaminants, toxins and Residues

1. Fish species having potential to cause histamine poisoning

Sl.No.	Family	Scientific Name	Common Name
1.	Carangidae	<i>Alectis indica</i>	Indian Threadfish
		<i>Alepes</i> spp.	Scad
		<i>Atropus atropus</i>	Cleftbelly trevally
		<i>Carangoides bartholomaei</i>	Yellow Jack
		<i>Carangoides</i> spp.	Trevally
		<i>Caranx crysos</i>	Blue runner
		<i>Caranx</i> spp.	Jack/Trevally
		<i>Decapterus koheru</i>	Koheru
		<i>Decapterus russelli</i>	Indian scad
		<i>Decapterus</i> spp.	Scad
		<i>Elagatis bipinnulata</i>	Rainbow Runner
		<i>Megalaspis cordyla</i>	Horse Mackerel/Torpedo Scad
		<i>Nematistius pectoralis</i>	Roosterfish
		<i>Oligoplites saurus</i>	Leather Jacket
		<i>Pseudocaranx dentex</i>	White trevally
		<i>Scomberoides commersonnianus</i>	Talang queenfish
		<i>Scomberoides</i> spp.	Leather Jacket/Queen Fish
		<i>Selene</i> spp.	Moonfish
		<i>Seriola dumerili</i>	Greater/Japanese Amberjack or Rudder Fish
		<i>Seriola lalandi</i>	Yellowtail Amberjack

		<i>Seriola quinqueradiata</i>	Japanese Amberjack
		<i>Seriola rivoliana</i>	Longfin Yellowtail
		<i>Seriola</i> spp.	Amberjack or Yellowtail
		<i>Trachurus capensis</i>	Cape Horse Mackerel
		<i>Trachurus japonicas</i>	Japanese Jack Mackerel
		<i>Trachurus murphyi</i>	Chilean Jack Mackerel
		<i>Trachurus novaezelandiae</i>	Yellowtail Horse Mackerel
		<i>Trachurus</i> spp.	Jack Mackerel/Horse Mackerel
		<i>Trachurus trachurus</i>	Atlantic Horse Mackerel
		<i>Uraspis secunda</i>	Cottonmouth jack
2.	Chanidae	<i>Chanos chanos</i>	Milkfish
3.	Clupeidae	<i>Alosa pseudoharengus</i>	Alewife
		<i>Alosa</i> spp.	Herring
		<i>Amblygaster sirm</i>	Spotted Sardinella
		<i>Anodontostoma chacunda</i>	Chacunda gizzard shad
		<i>Brevoortia patronus</i>	Gulf Menhaden
		<i>Brevoortia</i> spp.	Menhaden
		<i>Brevoortia tyrannus</i>	Atlantic Menhaden
		<i>Clupea bentincki</i>	Araucanian herring
		<i>Clupea harengus</i>	Atlantic herring
		<i>Clupea pallasii pallasii</i>	Pacific herring
		<i>Clupea</i> spp.	Pichard/Shad/Herring
		<i>Dorosoma</i> spp.	Gizaard Shad
		<i>Ethmalosa fimbriata</i>	Bonga Shad
		<i>Ethmidium maculatum</i>	Pacific Menhaden
		<i>Etrumeus sadina</i>	Red-eye round herring
		<i>Harengula</i> spp.	Sprat/Herring
		<i>Harengula thrissina</i>	Pacific flatiron herring
		<i>Hilsa</i> spp.	Shad
		<i>Nematolosa</i> spp.	Gizzard Shad
		<i>Opisthonema libertate</i>	Pacific thread herring
		<i>Opisthonema</i> spp	Thread Herring
		<i>Opisthopecterus tardoore</i>	Tardoore
		<i>Sardina pilchardus</i>	European Pilchard
		<i>Sardinella aurita</i>	Round Sardinella
		<i>Sardinella gibbosa</i>	Gold stripe Sardinella
		<i>Sardinella longiceps</i>	Indian Oil Sardine
		<i>Sardinella maderensis</i>	Madeiran Sardinella
		<i>Sardinella</i> spp.	Sardine
		<i>Sardinops sagax</i>	South American Pilchard
		<i>Sardinops</i> spp.	South American Pilchard
		<i>Spratelloides gracilis</i>	Silver-stripe round herring
		<i>Tenuulosa ilisha</i>	Hilsa shad
		<i>Tenuulosa</i> spp.	Shad
4	Coryphaenidae	<i>Coryphaena hippurus</i>	Mahi-Mahi /Dolphin fish

5	Engraulidae	<i>Anchoa</i> spp.	Anchovy
		<i>Anchoviella</i> spp.	Anchovy
		<i>Cetengraulis mysticetus</i>	Pacific anchoveta
		<i>Engraulis capensis</i>	Southern African anchovy
		<i>Engraulis encrasicolus</i>	European anchovy
		<i>Engraulis japonicus</i>	Japanese anchovy
		<i>Engraulis ringens</i>	Peruvian anchovy
		<i>Engraulis</i> spp.	Anchovy
		<i>Stolephorus</i> spp.	Anchovy
6	Istiophoridae	<i>Istiompax indica</i>	Black Marlin
		<i>Istiophorus albicans</i>	Atlantic sailfish
		<i>Istiophorus platypterus</i>	Indo-Pacific sailfish
		<i>Kajikia albida</i>	Atlantic white marlin
		<i>Kajikia audax</i>	Striped Marlin
		<i>Makaira mazara</i>	Indo-Pacific blue marlin
		<i>Makaira</i> spp.	Marlin/Sailfish
		<i>Tetrapturus</i> spp.	Marlin/Spearfish
		<i>Tetrapturus</i> spp.	Spearfish
7	Mugilidae	<i>Mugil cephalus</i>	Flathead Grey Mullet
8	Pristigasteridae	<i>Ilisha</i> spp.	Ilisha/Pellona
		<i>Pellona ditchella</i>	Indian pellona
9	Scombridae	<i>Acanthocybium solandri</i>	Wahoo
		<i>Auxis</i> spp.	Bullet Tuna/Frigate Tuna
		<i>Cybiosarda elegans</i>	Leaping Bonito
		<i>Euthynnus affinis</i>	Little tuna or Kawakawa
		<i>Euthynnus</i> spp.	Bonito
		<i>Gasterochisma melampus</i>	Butterfly kingfish
		<i>Grammatorcynus</i> spp.	Short Mackerel
		<i>Gymnosarda unicolor</i>	Dogtooth tuna
		<i>Katsuwonus pelamis</i>	Skipjack Tuna
		<i>Orcynopsis unicolor</i>	Plain Bonito
		<i>Rastrelliger brachysoma</i>	Short Mackerel
		<i>Rastrelliger kanagurta</i>	Indian Mackerel
		<i>Sarda</i> spp	Bonito
		<i>Scomber australasicus</i>	Blue mackerel
		<i>Scomber japonicas</i>	Chub mackerel
		<i>Scomber scombrus</i>	Atlantic mackerel
		<i>Scomber</i> spp.	Mackerel
		<i>Scomberomorus cavalla</i>	King Mackerel
		<i>Scomberomorus commerson</i>	Narrow-barred Spanish mackerel
		<i>Scomberomorus guttatus</i>	Indo-Pacific king mackerel/Spotted Spanish Mackerel
		<i>Scomberomorus niphonius</i>	Japanese Spanish mackerel
		<i>Scomberomorus</i> spp.	Spanish Mackerel
		<i>Scomeromorus lineolatus</i>	Streaked seerfish

		<i>Thunnus alalunga</i>	Albacore Tuna
		<i>Thunnus albacares</i>	Yellowfin Tuna
		<i>Thunnus atlanticus</i>	Blackfin Tuna
		<i>Thunnus maccoyi</i>	Southern bluefin tuna
		<i>Thunnus obesus</i>	Bigeye Tuna
		<i>Thunnus orientalis</i>	Pacific bluefin tuna
		<i>Thunnus spp.</i>	Tuna
		<i>Thunnus thynnus</i>	Atlantic bluefin tuna
		<i>Thunnus tonggol</i>	Longtail Tuna
10	Xiphiidae	<i>Xiphias gladius</i>	Swordfish

2. Limits of histamine level in fish and fishery products

S. No.	Product Category	Applicable to	Histamine Level
1.	Raw/Chilled/Frozen Finfish	Species with high amount of free histidine (Listed fish species with potential to cause histamine fish poisoning)	n=9, c=2; m=100 mg/kg, M=200 mg/kg
2.	Thermally Processed Fishery Products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
3.	Smoked fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
4.	Fish Mince/Surimi and analogues		n=9, c=2; m=100 mg/kg, M=200 mg/kg
5.	Battered and breaded fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
6.	Other Ready to Eat fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
7.	Other value added fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
8.	Other fish based products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
9.	Dried/ Salted and Dried fishery products		n=9, c=2; m=200 mg/kg, M=400 mg/kg
10.	Fermented Fishery products		n=9, c=2; m=200 mg/kg, M=400 mg/kg
11.	Fish Pickle		n=9, c=2; m=200 mg/kg, M=400 mg/kg

Where,

n : Number of units comprising the sample

c : Maximum allowable number of defective sample units

m : Acceptable level in a sample

M : Specified level when exceeded in one or more samples would cause the lot to be rejected

Satisfactory, if the following requirements are fulfilled:

1. the mean value observed is $\leq m$
2. a maximum of c/n values observed are between m and M
3. no values observed exceed the limit of M,

Unsatisfactory, if the mean value observed exceeds m or more than c/n values are between m and M or one or more of the values observed are $>M$.

Note:

- 1. Inserted by notification no. F. No. 1-12/Sci.Panel/(Notification)/FSSAI/2012, dated the 3rd December, 2014*
- 2. Substituted by notification no. F.No. P.15025/264/13-PA/FSSAI, dated the 4th November, 2015*
- 3. Inserted by notification no. F.No. 1-99/4/SP(Contaminants)/FSSAI/2014, dated the 4th November, 2015*
- 4. Substituted by notification no. F.No.1-99/1/SP(contaminants)/FSSAI/2009, dated the 4th November, 2015*
- 5. Inserted by notification no. F. No. 1-10(6)/Standards/SP(Fish and Fisheries Products)/FSSAI-2013, dated the 4th January, 2016*
- 6. Inserted by notification no. F. No. P. 15025/264/13-PA/FSSAI, dated the 5th January, 2016.*
- 7. Inserted by notification no. F. No. P.15025/264/13-PA/FSSAI, dated the 3rd May, 2016*
- 8. Omitted by Notification F. No.1-99/SP (Contaminants)/REG/FSSAI/201,5 dated the 10th October, 2016*
- 9. Inserted by notification no. F. No. 1-10(2)/Standards/SP(Fish and Fisheries Products)/FSSAI-2013, dated the 18th January , 2017*
- 10. Inserted by notification no. F. No. P/15025/264/13-PA/FSSAI, dated the 21st July, 2017.*