

Notice Calling for suggestions, views, comments etc from stakeholders within a period of 30 days on the draft notification related to Standards for list of Histamine Forming Fish Species and limits of Histamine level for Fish and Fishery Products.

1. In the Food Safety and Standards (Contaminants, toxins and Residues) Regulations, 2011, in regulation 2.5, relating to “Other Contaminants”, after sub-regulation 2.5.1 the following sub-regulation shall be inserted, namely:-

“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 atropos</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		

Sl.No.	Family	Scientific Name	Common Name
		<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

Sl.No.	Family	Scientific Name	Common Name
		<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>Opisthopterus 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

Sl.No.	Family	Scientific Name	Common Name
		<i>Tenualosa ilisha</i>	Hilsa shad
		<i>Tenualosa</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

Sl.No.	Family	Scientific Name	Common Name
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		

Sl.No.	Family	Scientific Name	Common Name
		<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</i> spp.	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

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 poisoning) fish	n=9, c=2; m=100 mg/kg, M=200 mg/kg
2. Dried/ Salted and Dried fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
3. Thermally Processed Fishery Products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
4. Smoked fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
5. Fish Mince/Surimi and analogues		n=9, c=2; m=100 mg/kg, M=200 mg/kg
6. Battered and breaded fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
7. Other Ready to Eat fishery		n=9, c=2; m=100 mg/kg, M=200 mg/kg

Product Category	Applicable to	Histamine Level
products		
8. Other value added fishery products		n=9, c=2; m=100 mg/kg, M=200 mg/kg
9. Other fish based products		n=9, c=2; m=100 mg/kg, M=200 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 $>M$.”