

# Compendium of

## Orders of Fresh, Frozen and Processed Fish & Fishery Products

### Order

**S.O. 729 (E) dated 21st August 1995**

**Sub-sequently amended vide No. Orders**

**S.O. 792 (E) dated 17th August 2001,**

**S.O. 722 (E) dated 10th July 2002,**

**S.O. 464 (E) dated 24th April 2003,**

**S.O. 1227 (E) dated 23rd October 2003 &**

**S.O. 1227 (E) dated 31st July 2006.**

**MINISTRY OF COMMERCE**

**ORDER**

**New Delhi, the 21 August 1995**

**S.O. 729 (E).**- Whereas for the development of the export trade of India, certain proposals for subjecting Fresh, Frozen and Processed Fish & Fishery products to quality control and inspection, prior to export, were published as required by sub-rule (2) of rule 11 of the Export (Quality Control and Inspection) Rules, 1964 in the Gazette of India, Part-II, Section 3, Sub-section (ii) dated 1<sup>st</sup> November, 1994 under the Order of the Government of India in the Ministry of Commerce No. S.O. 785 (E) dated the 1-11-1994;

2. And, whereas, the objections and suggestions were invited from all persons likely to be affected thereby within a period of forty five days of the date of publication of the said order in the Official Gazette;

3. And, whereas, the copies of the said Gazette were made available to the public on 1-11-1994;

4. And, whereas, the objections and suggestions received from the public on the said draft have been considered by the Central Government;

5. And, whereas, it is necessary to maintain the highest quality standards as per health requirements of the importing countries that would encompass the standards like unified directive No. 91|493| EEC dated the 22 July, 1991 of the European Community, the proposed HACCP of United States of America, Quality Assurance Standards of Japan.

6. And, whereas, fish and fishery products freshly caught are in principle free of contamination with micro-organism;

7. And, whereas, however, contamination and subsequent decomposition may occur when handled and treated unhygienically;

8. And, whereas, therefore, the essential requirements should be laid down for correct hygienic handling of Fresh, Frozen and Processed Fish and Fishery Products at all stages of production and during storage and transport;

9. And, whereas, it is the responsibility primarily of the fisheries industry to ensure that fishery products meet the health requirements laid down in this notification;

10. And, whereas, it is expedient that these control measures should be introduced to guarantee the uniform application and to ensure smooth operation of the provisions of this notification and that the measures apply in an identical manner;

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11. And, whereas, provisions should, therefore, be made for procedure for monitoring to ensure the above conditions of equivalence with reference to the requirements of importing countries;

12. And, whereas, the Government nominated competent authority should ensure the effective compliance of the quality standards in the country;

13. Now, therefore, in exercise of the powers conferred by section 6 of the Export (Quality Control and Inspection) Act, 1963 (22 of 1963) and in supercession of the Notification in the Ministry of Commerce No. S.O. 1153 dated the 9<sup>th</sup> April, 1988 relating to Frozen Fish and Fishery Products, S.O. 952 dated 30-3-1987 relating to Frozen Claim Meat and S. O. 862 dated 12-2-1983 relating to Canned Fish & Fishery Products, the Central Government, after consulting the Export Inspection Council, being of the opinion that it is necessary and expedient to do so for the development of the export trade of India hereby:-

- i. notifies that Fresh, Frozen and Processed Fish and Fishery Products shall be subject to quality control, inspection and monitoring prior to export.
- ii. specifies that the type of quality control, inspection and monitoring shall be in accordance with the export of Fresh Frozen and Processed Fish and Fishery Products (Quality Control, Inspection and Monitoring) Rules, 1995 as the type of quality control, inspection and monitoring which shall be applied to such Fresh, Frozen and Processed Fish & Fishery Products prior to their export.
- iii. recognises the specifications as set out in Schedule I appended to this Order as the standard specifications for Fresh, Frozen and Processed Fish and Fishery Products.
- iv. prohibits the export of Fresh, Frozen and Processed Fish & Fishery Products by a unit in the Course of international trade unless it conforms to the standard specifications applicable to it, and is accompanied by a certificate stating that such unit is approved and monitored by the Export Inspection Agencies established under Section 7(1) of the Export (Quality Control & Inspection) Act, 1963 (the competent authority).

14. In this Order, Fresh Frozen and Processed Fish & Fishery Products means:-  
all sea water and fresh water animals or part thereof, including their roes, in fresh, chilled, frozen or processed form but excluding Frogs.

[F. No. 6|2|94-ET&EP]  
A. DIDAR SINGH, Jt. Secy.

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**Foot Note :** The principal notifications were published vide No. S. O. 1153 dated 9-4-88, S.O. No. 862 dated 12-2-83 and 952 dated 30-3-1987.

**SCHEDULE-I**

Specifications for Fresh, Frozen and Processed Fish and Fishery Products recognized as per Section 6 (C) of the Export (Quality Control and Inspection) Act, 1963 shall be-

(a) National standards of the importing countries.

or

(b) Contractual specifications agreed to between the foreign buyer and the exporter provided the same is satisfying the health and other requirements of the importing country;

(c) In the absence of (a) or (b) above, the minimum specifications notified in this order as Appendix to this Schedule;

(d) In the case of any Fresh, Frozen & Processed Fish and Fishery Products for which no standard is available at (a), (b) & (c) above, the standard formulated by an Expert Committee consisting of the following members shall be made applicable :-

- Representative from Export Inspection Agency (Chairman)
- Representative from the Marine Products Export Development Authority.
- Representative from the Seafood Exporter's Association of India.
- Representative from Central Institute of Fishery Research Institute.
- Representative from Central Institute of Fisheries Technology.
- Representative from Central Marine Fishery Research Institute.

**(“e” inserted as per Order S.O.792 (E) dated 17<sup>th</sup> August, 2001)**

**“(e) Specifications for maximum residual limits (MRLs) for antibiotics, pesticides and heavy metals in fish and fishery products shall meet the requirements as given below:**

**Pesticides\***

<b>Serial number</b>	<b>Pesticides</b>	<b>Maximum permissible residual level in ppm</b>
1.	BHC	0.3
2.	Aldrin	0.3
3.	Dieldrin	0.3
4.	Endrin	0.3
5.	DDT	5.0

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**Antibiotics\***

Serial number	Antibiotics*	Maximum permissible residual level in ppm
1.	Chloramphenicol	Nil
2	Furazolidone	Nil
3	Neomycin	Nil
4.	Tetracycline	0.1
5	Oxytetracycline	0.1
6	Trimethoprim	0.05
7	Oxolinic acid	0.3
8	Nalidixic acid	Nil
9	Sulphamethoxazole	Nil

**Heavy Metals\***

Serial number	Heavy Metals	Maximum permissible residual level in ppm
1.	Mercury	1.0
2	Cadmium	3.0
3	Arsenic	75
4	Lead	1.5
5	Tin	250
6	Nickel	80
7	Chromium	12

Note : \* the residual limits are fixed based on the achievable levels in Indian conditions. However, for export to the European Union, USA and Japan, the residual levels fixed by individual countries for specified products are to be complied with”.

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**(“e” above has been substituted with below text- as per Order S.O.722 (E) dated 10<sup>th</sup> July, 2002)**

(e) Maximum Residual Limits (MRLs) for pesticides, heavy metals and antibiotics and other pharmacologically active substances in fish and fishery products shall meet the requirements as given below. However, if the MRLs fixed by the importing countries are more stringent than these prescribed limits, the standards specified by those countries will be complied with.

**Pesticides**

Pesticides	Max. permissible residual level in ppm
BHC	0.3
Aldrin	0.3
Dieldrin	0.3
Endrin	0.3
DDT	5.0

**Heavy Metals**

Heavy Metals	Max. permissible Residual level in ppm
Mercury	1.0
Cadmium	3.0
Arsenic	75
Lead	1.5
Tin	250
Nickel	80
Chromium	12

**Antibiotics and other Pharmacologically Active Substances**

Antibiotics	Max. permissible residual level in ppm
Tetracycline	0.1
Oxytetracycline	0.1
Trimethoprim	0.05
Oxolinic acid	0.3

(f) the use of any of the following antibiotics and other pharmacologically active substances shall be prohibited in the culture of; or in any hatchery for producing the juveniles or larvae or

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nauplii of; or in any unit manufacturing feed for; or in any unit pre-processing or processing shrimps, prawns or any other variety of fish and fishery products:

- (i) All Nitrofurans including
    - Furaltadone
    - Furazolidone
    - Furylfuramide
    - Nifuratel
    - Nifuroxime
    - Nifurprazine
    - Nitrofurantoin
    - Nitrofurazone
  - (ii) Chloramphenicol
  - (iii) Neomycin
  - (iv) Nalidixic acid
  - (v) Sulphamethoxazole
  - (vi) Aristolochia spp and preparations thereof
  - (vii) Chloroform
  - (viii) Chlorpromazine
  - (ix) Colchicine
  - (x) Dapsone
  - (xi) Dimetridazole
  - (xii) Metronidazole
  - (xiii) Ronidazole
  - (xiv) Ipronidazole
  - (xv) Other nitroimidazoles
  - (xvi) Clenbuterol
  - (xvii) Diethylstilbestrol (DES)
  - (xviii) Sulfonamide drugs
    - (except approved Sulfadimethoxine, Sulfabromomethazine and (Sulfaethoxyypyridazine)
  - (xix) Fluoroquinolones
  - (xx) Glycopeptides
- ("g" inserted as per Order S.O.464 (E) dated 24<sup>th</sup> April, 2003)

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“(g) The levels of dioxin in fish and fishery products shall not exceed 4 pg. per gm., Fresh Weight (i.e. 4 picogram per gram, fresh weight).”

**“(h” inserted as per order S.O 1227(E) dated 23<sup>rd</sup> October, 2003)**

“(h) the use of any of the following substances having anabolic effect and unauthorised substances, veterinary drugs and contaminants and other substances and other environmental contaminants shall be prohibited in the culture of, or in any hatchery for producing the juveniles or larvae or nauplii of, or any unit manufacturing feed for, or in any unit pre-processing or processing, shrimps, prawns or any other variety of fish and fishery products, namely:-

(i) substances having anabolic effect and unauthorised substances, namely :-

- (a) stilbenes, stibene derivatives and their salts and esters;
- (b) steroids.

(ii) Veterinary drugs and contaminants namely:-

- (a) antibacterial substances, including quinolones;
- (b) anthelmintics

(iii) Other substances and environmental contaminants namely :-

- (a) organochlorone compounds including PCBs;
- (b) mycotoxins;
- (c) dyes.

Provided that the use of items at sl. No. (i)(b), (ii) (a) and (b) for therapeutic or zoo-technical purposes may be authorised by qualified Veterinary surgeons or Fishery Scientists.”

**“(T” inserted as per order No.1227 (E) dated 31<sup>st</sup> July, 2006)**

- “(I) 1. The level of benzo (a) pyrene in muscle meat of smoked fish and smoked fishery products shall not exceed 5 ppb (wet weight);
2. The level of benzo (a) pyrene in muscle meat of fish other than smoked fish shall not exceed 2 ppb (wet weight) and ;
3. The level of benzo (a) pyrene in bivalve molluscs, crustacean and cephalopods other than smoked shall not exceed 5 ppb (wet weight).”



Appendix to Schedule-I

SPECIFICATIONS

I. SPECIFICATION FOR SHRIMPS|PRAWNS

(a) General: Appearance and colour shall be characteristic to the particular type|form of fresh| freshly cooked shrimps| prawns as the case may be. The material shall be reasonably free from dehydration, discolouration and black spot. The material shall not show any sign of deterioration and shall be free from off odour and foreign odour. The texture of meat shall be soft and consistent and shall have characteristic flavour of Fresh | Cooked Shrimps | Prawns. The Product shall be free from extraneous matter.

<b>(b) Bacteriological</b>	<b>Fresh  Chilled  Frozen</b>	<b>Cooked  Boiled</b>
(1)Total plate count at 37°C per gm maximum	5,00,000	1,00,000
(2)E. coli count per gm. max.	20	Nil
(3)Coagulase positive staphylococcus per gm. max.	100	100
(4)Salmonella & S. arizona per 25 gm	Nil	Nil.

II. SPECIFICATIONS FOR LOBSTERS IN ANY FORM

(a) General: Appearance and colour shall be characteristic to the particular type /form of fresh| freshly cooked lobsters as the case may be. The material shall be reasonably free from dehydration, discolouration and extraneous matter. The product all not show any sign of deterioration. The product shall be free from off odour and any foreign odour. The material shall be free from extraneous matter like sand, and dirt, etc. The material shall be free from eggs unless permitted by the buyer. Lobsters of uniform size shall be packed together. Texture of the meat that be soft and consistent.

<b>(b) Bacteriological</b>	<b>Fresh  Chilled /Frozen</b>	<b>Cooked  Boiled</b>
(1)Total plate count at 37°C per gm. maximum	5,00,000	1,00,000
(2)E. coli per gm. max	20	Nil

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(3)Coagulase positive staphylococcus per gm. max.	100	100
(4)Salmonella & S.arizona per 25 gms	Nil	Nil

**III. SPECIFICATIONS FOR CEPHALOPODS (CUTTLEFISH,SQUID, OCTOPUS ETC.) AND THEIR BODY PARTS INCLUDING ROES**

(a) General: Cephalopods of different varieties shall not be packed together. Material of uniform colour and size shall be packed together. The product shall be clean and shall be characteristic to the particular type| form appearance, colour and odour of fresh| freshly cooked cephalopods. The products shall be reasonably free from dehydration, discolouration and extraneous matter. The product shall not show any sign of deterioration and shall be free from off odour and any foreign odour. The texture of meat shall be soft a consistent.

<b>(b) Bacteriological</b>	<b>Fresh  Chilled  Frozen</b>	<b>Cooked  Boiled</b>
(1) Total Plate count at 37°C per gm. max	5,00,000	1,00,000
	2,00,000 for products meant for raw Consumption	
(2) E.Coli count per gm. max.	20	Nil
(3) Coagulase positive staphylococcus count per gm. maximum	100	100
(4) Salmonella & S. arizona per 25 gms.	Nil	Nil

**IV. SPECIFICATIONS FOR FISHES – WHOLE, DRESSED, FILLETS OR ANY OTHER TYPE (POMFRETS, SEER, PEARL SPOT, SARDINE, MACKEREL, HILSA ETC.)**

(a) General: Fishes| Fillets of uniforms size and colour shall be packed together, Fishes| Fillets of different species shall not be packed together. The products shall be clean and shall have appearance, colour and odour characteristic to the particular type|form of fresh|freshly cooked fishes. The products shall be free from dehydration and discolouration. The products shall not

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show any sign of deterioration and shall be free from off odour and any foreign odour. The products shall be free from softening of texture and any objectionable extraneous matter.

<b>b) Bacteriological</b>	<b>Fresh  Chilled  Frozen</b>	<b>Cooked / Boiled</b>
(1) Total Plate count at 37° C per gm. maximum	5,00,000	1,00,000
(2) E.coli per gm. max.	20	Nil
(3) Coagulase positive staphylococcus per gm.	100	100
(4) Salmonella & S. arizona per 25 gms.	Nil	Nil

**V. SPECIFICATIONS FOR CRAB AND CRAB MEAT**

(a) General: Crab|Crab Meat of uniform colour shall be packed together. Body meat and clawmeat shall be packed separately or as sandwich pack or any other manner as required by the buyer. The material shall be clean having characteristic of the particular type|form appearance, colour and odour of fresh|freshly cooked crabs as the case may be and shall not have deterioration off odour or any foreign odour. The products shall be reasonably free from dehydration, discolouration and objectionable extraneous matter and shall be soft and consistent.

<b>(b) Bacteriological</b>	<b>Fresh Chilled Frozen</b>	<b>Cooked Boiled</b>
1)Total Plate count at 37°C per gm. maximum	10,00,000	1,00,000
(2) E.coli count per gm. Max.	20	Nil
(3)Coagulase positive staphylococcus count per gm. maximum	100	100
(4)Salmonella & S. arizona per 25 gms.	Nil	Nil

**NOTE:**

1) Crab dipped in boiled water for the purpose of extracting meat shall not be treated as cooked variety.

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2) Cooked crab meat shall not be prepared by boiling the eviscerated and cleaned crab for sufficient length of time to make it fit for direct consumption.

**VI. SPECIFICATIONS FOR WHELK**

(a) General: Appearance, colour and odour shall be characteristic to the particular type/form of fresh/cooked whelk as the case may be. The products shall reasonably be free from dehydration and discolouration and shall not have any sign of deterioration off odour or any foreign odour. The products shall be free from extraneous matter and sand and shall not show grittiness. Texture shall be soft and consistent of whelk meat shall be reasonably free from shell or shell pieces.

<b>Bacteriological</b>	<b>Fresh Chilled Frozen</b>	<b>Cooked Boiled</b>
(1)Total Plate count at 37°C per gm. max	10,00,000	1,00,000
(2) E. Coli count per gm. max.	20	Nil
(3)Colagulase positive staphylococcus count per gm. maximum	100	100
(4) Salmonella & S. arizona per 25 gms	Nil	Nil

**NOTE :**

The Whelk treated with hot water for removing the meat from the shell shall be treated as raw.

**VII. SPECIFICATIONS FOR CLAM|MUSSEL MEAT**

(a) General: Appearance and colour of the product shall be characteristic to the particular type| form of fresh| cooked calm| cooked mussel as the case may be. The product shall reasonably be free from dehydration and discolouration. The product shall have characteristic odour of fresh /cooked calm| mussel. The product shall not show any sign of deterioration. The product shall be free from off colour, foreign odour|sand (grittiness detected by chewing) and objectionable foreign matter. The texture of meat shall be soft and consistent.

<b>b) Bacteriological</b>	<b>Fresh  Chilled  Frozen</b>	<b>Cooked  Boiled</b>
(1)Total Plate count at 37°C per gm. max	10,00,000	1,00,000
(2)E. Coli Count per gm. max.	20	Nil

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(3)Coagulase positive staphylococcus count per gm. maximum	100	100
Salmonella & S. arizona per 25 gms.	Nil	Nil

NOTE: Clam| Mussel treated with hot water for opening the shell and the meat then packed, shall not be treated as cooked| boiled variety.

**VIII. SPECIFICATIONS FOR PRAWNS (SHRIMPS) CANNED IN BRINE OR IN ANY OTHER INTERNATIONALLY APPROVED MEDIUM OR DRY PACK**

**1. Raw material**

1.1 The raw material used for preparation of Prawns (Shrimps) canned in brine shall be fresh, sound, wholesome, properly cleaned and free from en' rails.

1.2 Only refined salt conforming to IS: 594 – 1962 shall be used.

**2. Cans:**

2.1 The material shall be packed in suitable internally and uniformly lacquered cans. The cans may also be lacquered externally. The lacquer used shall be such that it does not impart any foreign unpleasant taste and smell to the contents of the can and does not peel off during processing and storage. The lacquer shall not be soluble in brine to any extent. The can exterior shall be free from major dents, rust, perforations and seam distortions.

2.2 The cans after sealing harmetically shall not show leaking, panelling or swell. The interior of the Can on opening shall not show any visible black discolouration, rust or pitting and the inside lacquer shall be in good condition.

**3. Brine :**

3.1 The brine, if used shall be clear and shall not be discoloured.

**4. Packing and Labelling**

4.1 Only material of the same species shall be packd in a Can.

4.2 The labels, if used, shall be in accordance with the rules and regulations of the country to which the material is to be exported.

**5. Drained weight and size grade:**

5.1 The net drained weight of contents shall not be less than the declared weight.

5.2 The size count (Number of pieces per unit weight) shall conform to the size grade declared on the Can.

**6. Organoleptic Quality:**

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6.1 The contents of the Can on opening shall present a good appearance and shall not display any appreciable disintegration places from which portions have separated out would be treated as disintegrated shrimps.

6.2 The surface of the prawns shall not be slimy to the touch. The meat shall be soft but firm and shall not crumble to granular forms when pressed between fingers.

6.3 The prawn pieces shall not appear to be pressed together and it should be possible to separate the pieces easily. The pieces shall be of uniform size and shall be clean and free from loose hanging pieces of meat.

6.4 The material shall have the odour and flavour of fresh and cooked prawn meat and shall be free from scorched bitter or any other objectionable flavour.

6.5 The material shall be free from pale bleached colour with a greenish yellow tint indicative of pre-processed spoilage. The material shall also be free from any black discolouration.

6.6 The material shall be free from sand, dirt, insect, hair or any other extraneous matter. It shall be reasonably free from bits of veins, shell particles and pieces of appendages.

6.7 The material shall be free from any poisonous and deleterious substances.

6.8 The Cans on opening shall not give any odour, indicative of bacterial spoilage, shall not show liquefaction of contents and shall not show blackening.

6.9 The product shall also conform to the following requirements:

Sl No	Characteristics	Requirements	Methods of test	
			Ref. to	
			Appendix	Appendix
			In IS:2236 – 1960**	In IS:2168- 1971*
(1)	(2)	(3)	(4)	(5)
(i)	Vacuum of the can in mm Hg. min.	100	A	-
(ii)	Drained weight of the contents of the can, as percentage by weight of the water capacity of the can, min.	64	B	-
(iii)	Sodium chloride in brine Per cent (W/V) Max.	3.5	C	-
(iv)	Acidity of brine as citric acid	0.06 to	D	-

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	(anhydrous) per cent (W/V)	0.20		
(v)	Arsenic parts per million max,	1	-	B
(vi)	Lead parts, per million, max.	5	-	C
(vii)	Copper, parts per million, max.	10	-	D
(viii)	Zinc, parts per million, max.	50	-	E
(ix)	Tin, parts per million, max.	250	-	F

7. Bacteriological Requirements:

7.1 The initial incubation of the sampled Cans shall be done at  $37\pm 1^{\circ}\text{C}$  for seven days or  $37\pm 1^{\circ}\text{C}$  for ten days. After this incubation, necessary quantity of the liquid portion is aseptically pipetted out and inoculated into thioglycollate cystine broth and incubated at  $37\pm 1^{\circ}\text{C}$  for 18 hours. The incubated broth shall not show bacterial growth.

8. Coding;

8.1 The can shall be embossed with the markings of grade, size, drained weight, name of the manufacturer, or his factory code, year, month and batch of manufacture. An illustration for embossing the code in the abbreviated forms is given below:

T 5 X

4 B05

T5 stands for 'Tiny' packed with 5 oz. drained weight, 'X' stands for the name of the manufacturer in the abbreviated form or the factory code. '4' stands for the year of manufacture, and in this illustration it signifies the year 1994. 'B' stands for the month of manufacture (here is signifies the month of February) and '05' stands for the date of manufacture during the month. In case PUD material is used for canning, the letter 'U' shall be embossed prior to the marking for size grade. For the purpose of denoting the size grade and the drained weight, the following nomenclature shall be followed :

(A) Size-Grade\*:

Nomenclature	Count /100 gms.	Abbreviation
Colossal (Supreme Jumbo)	Below 8	C/SJ
Jumbo	9 to 13	J
Large	14 to 22	L
Medium	23 to 36	M

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Small	37 to 63	S
Tiny	64 to 102	T
Cocktail/Mini/Sealed	103 to above	CT/MI/SD
Broken/Whole& Broken	No limit	B/WB

\*Pack having more than 10% broken pieces by weight irrespective of the total number of pieces in the can shall be treated as 'Broken'. Any piece showing less than 4 segments shall be treated as broken.

**(B) Drained weight**

Except in the case of 4.5 oz. pack, which being the standard pack, the actual drained weight shall be embossed in oz. on the Cans.

**(C) The month of manufacture shall be designated as –**

Month	Abbreviation	Month	Abbreviation
January	A	July	G
February	B	August	H
March	C	September	J
April	D	October	K
May	E	November	L
June	F	December	M

**IX. SPECIFICATIONS FOR CRAB MEAT CANNED IN BRINE OR ANY OTHER INTERNATIONALLY APPROVED MEDIUM**

**1. Raw material:**

1.1 The meat used for canning shall be obtained from healthy freshly caught crabs of the species *Scylla serreta*, *Portunus pelagicus*, *Neptunus pelagicus* and *Neptunus sanguinolentus*.

**2. Cans:**

2.1. The material shall be packed in suitable internally and uniformly lacquered Cans. The Cans may also be lacquered externally. The lacquer used shall be such that it does not impart any foreign unpleasant taste to the contents of the Can and does not peel off during processing and storage. The lacquer shall not be soluble in brine to any extent. The Can interior shall be free from major dents, rust, perforations and seam distortions.



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2.2 The cans after sealing hermetically shall not show leaking, panelling or swell. The interior of the can on opening shall not show any visible black/bluish discoloration, rusting or pitting. The inside lacquer shall be in good condition.

3. Brine.

3.1 Vacuum dried salt or common salt conforming to IS : 594-1962 shall be used for preparing brine. The sodium chloride content of the brine, if used, shall not exceed 2% W/V, maximum.

3.2 Acidity of brine as Citric acid (Anhydrous) shall be 0.20% W/V maximum.

4. Packing and Labelling

4.1 Crab meat shall be packed using parchment paper lining.

4.2 The body meat and claw meat of the crab shall be packed according to the terms of contract agreed upon between the buyer and seller.

In the absence of contractual specifications, the claw meat shall be packed on the top and at the bottom in distinctly separate layers.

4.3 Only the meat of one species of crab shall be packed in a particular Can. The meat obtained from crab caught from back waters and sea shall not be mixed or packed in a particular Can.

5. Drained Weight:

5.1 The net water capacity of the Can shall be as per the requirements of the importing country.

5.2 The drained weight of the meat shall not be less than the declared weight.

6. Requirements for finished products:

6.1 The content of the Can on opening shall present the characteristic colour and odour of crab meat and shall not give any foreign odour.

6.2 The material shall be free from scorched, bitter or any objectionable flavour.

6.3 The material shall be free from stains; dirt, insect, hair or any other extraneous matter. It shall be free from veins; membrane shall particles and pieces of appendages.

6.4 The material shall be free from blush/black colour.

6.5 The material shall be free from any poisonous and deleterious substance.

6.6 Crab meat canned in brine should conform to the following requirements also:

Sl. No	Characteristic	Limits	Methods of test	
			Retito	Appendix of
			IS 7143 1973*	IS 2236 1968**
(1)	Vacuum in can in mm	150	-	A

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	min. Hg.			
(2)	Sodium Chloride in brine per cent by weight	2%	-	C
(3)	Acidity of brine as citric acid anhydrous per cent (W/V) maximum	0.2%	-	D
(4)	Acid insoluble ash, per cent by weight max.	2%	A	-

\* Specifications for Crab meat canned in brine

\*\* Specification for prawns/ Shrimps canned in brine

(First Revision)

TABLE –II LIMITS OF METALLIC IMPURITIES IN CRAB MEAT CANNED IN BRINE

SL .No.	Characteristic	Limits	Method of test Re. To Appendix In 2168-1971*
(1.)	Arsenic, ppm Max.	1	B
(2)	Lead, ppm. Max:	5	C
(3)	Copper ppm max.	10	D
(4.)	Zinc ppm, max.	50	E
(5)	Tin ppm max.	250	F

\* Specification for pomfret canned in oil (First revision)

7. Bacteriological requirements:

The initial incubation of the sampled Cans shall be done at  $37 \pm 1$  °C for seven days or at  $35 \pm 1$  °C for 10 days. After this initial incubation, the brine of the Cans, on inoculation into, thioglycollate cystine broth and incubation at  $37 \pm 1$  °C for 40 hours, shall not show any sign of bacterial growth.

8. Coding:

8.1 The Cans shall be embossed with the markings of the drained weight, name of the manufacturer or his factory code and year, month and date of manufacture. An illustration for embossing the code in the abbreviated form is given below:

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C B 5 X

4 B05

In the above illustration 'CB' stands for Crab Meat Canned in brine "5" stands for drained weight and, in this illustration, it signifies 5 oz. drained weight, "X" stands for the name of the manufacturer in the abbreviated form or his factory code "4" stands for the year of the manufacture and in this illustration, it signifies the year 1994. "B" stands for the month of manufacturer and , in this illustration, it signifies month of February. "05" stands for the date of manufacture during the month.

The months of manufacture shall be designated as:

Month	Abbreviation	Month	Abbreviation
January	A	July	G
February	B	August	H
March	C	September	J
April	D	October	K
May	E	November	L
June	F	December	M

#### 8.2 Drained Weight:

Except in the case of 4.5 oz. pack, which being the standard pack, the actual drained weight shall be embossed in oz. on the cans.

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