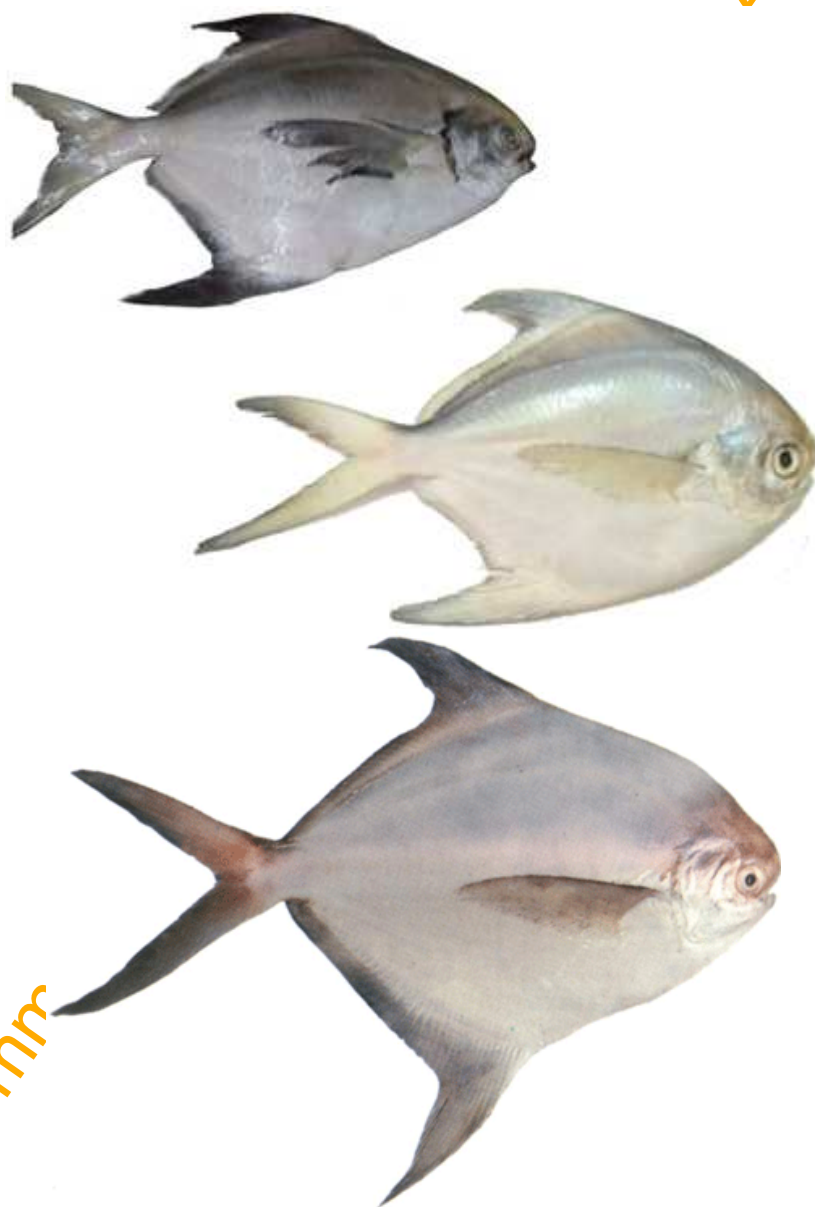


EAST AFRICAN STANDARD

Fresh pomfret — Specification



EAST AFRICAN COMMUNITY

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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Introduction

In the preparation of this East African Standard, the following sources were consulted extensively:

IS 4780:1978(R2005), *Specification for Pomfret, Fresh*

CAC/RCP 52:2003(Rev. 4:2008), *Code of practice for fish and fishery products*

IS 4303-1:1975, *Code of hygienic conditions for fish industry — Part 1: Pre-processing stage*

IS 4303-2:1975, *Code of hygienic conditions for fish industry — Part 2: Canning stage*

Codex Alimentarius website: http://www.codexalimentarius.net/mrls/vetdrugs/jsp/vetd_q-e.jsp

USDA Foreign Agricultural Service website: <http://www.mrlatabase.com>

USDA Agricultural Marketing Service website: <http://www.ams.usda.gov/AMSv1.0/Standards>

European Union: http://ec.europa.eu/enterprise/sectors/pharmaceuticals/veterinary-use/maximum-residue-limits/index_en.htm

Assistance derived from these sources is hereby acknowledged.

Draft for comments only — Not to be cited as East African Standard

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Fresh pomfret — Specification

1 Scope

This East African Standard specifies the requirements and the methods of sampling and test for fresh pomfret of the following species:

<i>Pampus argenteus</i>	Silver pomfret
<i>P. chinensis</i>	White pomfret
<i>Parastromateus niger</i>	black or brown pomfret

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CAC/GL 21, *Principles for the establishment and application of microbiological criteria for foods*

CAC/RCP 1, *Recommended international code of practice — General principles of food hygiene*

CAC/GL 30, *Principles and guidelines for the conduct of microbiological risk assessment*

CAC/GL 31, *Guidelines for the sensory evaluation of fish and shellfish in laboratories*

CD/K/572:2010, *Fish and fisheries products — Methods of sampling*

CAC/RCP 52[CD/K/521:2010], *Code of practice for fish and fishery products*

EAS 35, *Edible salt — Specification*

EAS 12, *Drinking (potable water) — Specification*

EAS 38, *Labelling of prepackaged foods — Specification*

EAS 41, *Fruits, vegetables and derived products — Sampling and methods of test*

EAS 103, *Schedule for permitted food additives*

EAS 123, *Distilled water — Specification*

ISO 4831, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Most probable number technique*

ISO 4832, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique*

ISO 4833, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of microorganisms — Colony-count technique at 30 degrees C*

ISO 6579, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of *Salmonella* spp.*

ISO 6887-1, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and decimal dilutions*

ISO 6887-3, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 3: Specific rules for the preparation of fish and fishery products*

ISO 6888-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using Baird-Parker agar medium*

ISO 6888-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 2: Technique using rabbit plasma fibrinogen agar medium*

ISO 6888-3, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers*

ISO 7251, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique*

ISO 7937, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of Clostridium perfringens — Colony-count technique*

ISO 13720, *Meat and meat products — Enumeration of Pseudomonas spp.*

ISO 16654, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Escherichia coli O157*

ISO 17239, *Fruits, vegetables and derived products — Determination of arsenic content — Method using hydride generation atomic absorption spectrometry*

ISO 6634, *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*

ISO 21567, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Shigella spp.*

ISO/TS 21872-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of potentially enteropathogenic Vibrio spp. — Part 1: Detection of Vibrio parahaemolyticus and Vibrio cholerae*

ISO/TS 21872-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of potentially enteropathogenic Vibrio spp. — Part 2: Detection of species other than Vibrio parahaemolyticus and Vibrio cholerae*

ISO 11290-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes — Part 1: Detection method*

ISO 11290-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes — Part 2: Enumeration method*

3 Definitions, presentation and processing

3.1 Definitions

For the purpose of this standard the following definitions shall apply:

3.1.1**fresh fin fish**

Fish that has not been frozen, dried or otherwise preserved, except by chilling. Fish in rigor shall be deemed to be fresh fish.

3.1.2**gutted fish**

Fish from which the guts have been removed. Gutting consists of bleeding the fish and removal of the stomach and gut.

3.1.3**rigor mortis**

The stiffening of the muscles of an animal which results from a series of complex changes that take place in the tissues shortly after death.

3.1.4**whole fish**

Fish as captured, ungutted.

3.1.5**chilling**

The process of cooling fish to a temperature approaching that of melting ice.

3.1.6**clean sea water**

Sea water which meets the same microbiological standards as potable water and is free from objectionable substance.

3.2 Forms of product presentation

3.2.1 Fresh pomfret may be presented as uneviscerated, eviscerated.

3.2.2 Any other presentation of the product may be permitted provided that it:

- a) is sufficiently distinctive from the forms of presentation set out in 3.2.1; and
- b) meets all other regulatory requirements; and
- c) is adequately described on the label and in accordance with all regulatory labelling requirements.

3.3 Handling and treatment of fresh fin fish on the deck

3.3.1 All fish caught shall be washed with potable water or clean sea water as soon as the fish come on the deck.

3.3.2 Sorting and removal of unwholesome fish shall be carried out as soon as the fish come on the deck.

3.3.3 The fish shall be carefully graded and sorted so that all the fish in a container shall be similar in size and of the same species.

3.3.4 The fish shall not be trampled or stood on, or thrown about or bruised.

3.3.5 The fish shall be protected from the sun and the drying effects of the wind.

3.3.6 On landing the fish shall be carried in designated carriers that are made of suitable material.

3.3.7 The fish shall be chilled until distributed.

5.4 Sanitary requirements

3.4.1 The area used in sorting and cleaning fish on the vessels shall be washed immediately before and after each haul is stowed.

3.4.2 The entire area of all fishing vessels shall be washed and scrubbed with clean water immediately after the discharge of fish taken on each fishing trip.

3.4.3 The holds of ships, storage tanks, bins, pens and shelves and all surfaces coming into contact with fish shall be made of suitable material, washed and scrubbed with potable water followed by a suitable disinfectant which is non-toxic to the consumer.

3.4.4 Wooden holds, bins, pens and shelves shall be dried and painted at least once a year.

3.5 Gutting

3.5.1 Gutting shall commence as soon as the fish is landed.

3.5.2 Where immediate gutting is not practicable, whole fish shall be washed and chilled within 6 hours of catching.

3.5.3 Gutting shall be complete and carried out with care.

3.5.4 Fish guts shall be not allowed to contaminate other fish.

3.5.5 Fish shall be washed with clean sea water or potable water (see EAS 12).

3.5.6 Whole fish taken for human consumption shall be free from obvious diseased or parasite tissue or any other abnormal condition.

3.5.7 All fish for filleting shall be free from debris.

3.5.8 Offal waste shall be kept clear of the fish and disposed at the earliest possible time.

3.5.9 Eviscerated fish shall be washed and the belly cavity cleaned in potable running water.

3.6 Chilling

3.6.1 The fish shall be thoroughly chilled. Chilling shall be accomplished by packing in clean, crushed flaked ice (ratio 1:1) or an equivalent technique so that the temperature of the fish shall at no time exceed temperature of melting ice.

3.6.2 Fish landed (in a chilled condition) shall be maintained at a temperature not exceeding that of melting ice.

3.6.3 Fresh fish in ice shall be packed in shallow containers.

3.7 Grades

Fresh pomfret shall be of the following three grades:

Grade designation	Mass, g	
	Silver and white pomfret	Brown or black pomfret
Large	Above 500	Above 1000
Medium	251 to 500	701 to 1000
Small	150 to 250	400 to 700

4 Essential composition and quality factors

4.1 The material shall be clean, wholesome and fresh and shall not show any sign of spoilage. The material shall be handled and transported under sanitary conditions complying with CAC/RCP 52.

4.2 The material shall be washed in clean potable water containing 1 mg/kg of chlorine to remove all adhering impurities and shall be properly iced in suitable containers. The sides, bottom and top of the containers shall be covered with layers of crushed ice. The ice shall be from potable water.

4.3 The temperature of fish in the container shall not exceed 5 °C at any time.

4.4 The material shall be grouped according to the grade of the fish (see 3.1).

4.5 The material shall also conform to the requirements prescribed in Table 1.

Table 1 — Requirements for fresh pomfret

Characteristic	Requirement		Method of test
	Silver and white pomfret	Brown or black pomfret	
(1)	(3)		(4)
i) Colour of the fish	Characteristic colour	Characteristic colour	—
ii) Colour and appearance of eyes	Bright	Bright	—
iii) Gills	Reddish and free from discoloured mucous and off-odour	Reddish and almost free from mucous and off-odour	—
iv) Appearance of skin		Clean	—
v) Colour of flesh	Characteristic colour	Characteristic colour	—
vi) Meat and stomach portion	Firm, shall not leave a mark when lightly pressed with finger	Firm, shall not leave a mark when lightly pressed with finger	—
vii) Odour	Characteristic odour	Characteristic odour	—
viii) Flavour on cooking	Characteristic flavour	Characteristic flavour	Annex A

5 Food additives

If used, food additives shall comply with EAS 103.

6 Hygiene and handling

6.1 The product shall be free from any foreign material, that poses a threat to human health.

6.2 When tested by appropriate methods of sampling and examination in accordance with the standards listed in Clause 2, the product:

- (i) shall be free from micro-organisms capable of development under normal conditions of storage; and
- (ii) shall not contain any other substances including substances derived from micro organisms in amounts which may represent a hazard to health; and
- (iii) shall be free from container integrity defects which may compromise the hermetic seal.

6.3 The products covered by the provisions of this standard shall be prepared and handled in accordance with the appropriate sections of the current edition of CAC/RCP 1 and the sections on the Products of Aquaculture in the International Code of Practice for Fish and Fishery Products CAC/RCP 52.

6.4 The material shall meet the microbiological and heavy metal requirements as given in Table 1 and Table 2.

Table 2 — Microbiological and heavy metal limits for fresh pomfret

Characteristic	Requirement	Method of test
	Fresh	
(1)	(2)	(4)
i) Total bacterial count/g, in the finished product, Max	500 000	ISO 4833
ii) <i>Escherichia coli</i> count/g, Max	10	ISO 7251
iii) Faecal <i>Streptococci</i> count/g, Max	100	Annex C
iv) Coagulase positive <i>Staphylococci</i> /g, Max	100	ISO 6888
v) <i>Salmonella</i> , per 25 g	Absent	ISO 6579
vi) <i>Shigella</i> , per 25 g	Absent	ISO 21567
vii) <i>Vibrio cholerae</i> , per 25 g	Absent	ISO/TS 21872
viii) <i>Listeria monocytogenes</i> , per 25 g	Absent	ISO 11290
ix) Formaldehyde mg/kg, Max	10.0	Annex D
x) Indole, mg/kg, Max	2.5	Annex E
xi) Heavy metals:		
a) Mercury, mg/kg, Max	0.5	EAS 41
b) Copper, mg/kg, Max	20.0	EAS 41
c) Zinc, mg/kg, Max	50.0	EAS 41
f) Arsenic, mg/kg, Max	0.1	EAS 41
e) Lead, mg/kg, Max	0.3	EAS 41
f) Tin, mg/kg, Max		
(i) For product packed in tin plate	50.0	EAS 41
(ii) For product packed in other packing containers	250.0	EAS 41
g) Cadmium	0.3	EAS 41
h) Methylmercury	0.5	EAS 41

7 Packing and marking

7.1 Packing

The fresh material shall be packed in polyethylene-lined insulated containers, made of either plywood, countrywood or plastic.

The thickness of the insulation may vary from 15 mm to 30 mm depending upon the storage period and mode of transport. Thermocole or fibreglass may be used as insulation material. Adequate drainage of melted ice may be provided.

7.2 Marking

7.2.1 In addition to provisions of EAS 38 each container of fresh material or each wrapped frozen material shall be marked or labelled with the following particulars:

- a) Name and type of the material;
- b) Name and address of the processor;
- c) Batch or code number;
- d) Grade;
- e) Net mass;
- f) Date of packing;

- g) The words 'Best before (month and year to be indicated)'; and
 h) Any other requirement as given OIML R87, *Quantity of product in prepackages*.

7.2.2 Certification marking

The product may also be marked with the relevant Standard Mark.

8 Sampling, examination and analyses

8.1 Sampling of fresh pomfret fish

8.1.1 General

8.1.1.1 The samples shall be stored in such a manner that there is no deterioration of the material during storage.

8.1.1.2 The samples shall be protected against adventitious contamination.

8.1.1.3 The sampling instruments shall be clean, dry and sterile.

8.1.2 Scale of sampling

8.1.2.1 Lot — All the containers in a single consignment of the material packed on the same day and of the same grade shall constitute a lot. If the consignment is declared to consist of material packed on different dates, the material shall be separated datewise and the containers of the same type and grade shall be grouped to constitute a lot.

Samples shall be tested from each lot for ascertaining conformity of the material to the requirement of this specification.

8.1.2.2 The number of containers to be selected from a lot shall depend on the size of the lot and shall be as given in Table 3.

8.1.2.3 The containers shall be selected at random. In order to ensure randomness of selection, a random number table shall be used. If such tables are not available the following procedure may be adopted:

Starting from any container in the lot, count them as 1, 2, 3, . . . , etc, up to r in one order, where r is equal to the integral part of the value of N/n , N being the total number of containers, and n the number of containers to be chosen (see Table 3). Every r th container thus counted shall be separated until the requisite number of containers is obtained from the lot to give samples for test.

8.1.2.4 From each of the selected containers, in order to select at random the required number of fresh seer fish, the Table 3 may be applied here. Column 1 may be taken to represent the number of seer fish in a container and col2 may be taken to represent the number of fresh seer fish to be selected.

Table 3 — Selection of containers

Number of containers in the lot	Sample size
(1)	(2)
2 to 15	2
16 to 40	3
41 to 65	5
66 to 110	7
111 to 180	8
181 to 300	9
301 and above	10

8.1.3 Number of tests

Each of the fresh seer fish selected in 8.1.2.4 shall be tested for all the requirements of this specification.

8.1.4 Criterion for conformity

The lot shall be declared to be in conformity with all the requirements of this specification when all the fresh pomfret fish selected in 8.1.2.4 satisfy the corresponding requirements (see Clause 4).

8.2 Determination of flavour on cooking

8.2.1 Determine the flavour and texture of the material after cooking as given in 8.2.2.

8.2.2 Steam a transverse section of the material for about 15 minutes. Cool and determine the flavour.

9 Definition of defects

9.1 Taint

A unit will be considered tainted when more than 10% of the declared weight is affected by any of the following conditions:

a) Rancid

- Odour characterized by the distinct or persistent odour of oxidized oil; or
- Flavour characterized by that of oxidized oil which leaves a distinct bitter aftertaste.

b) **Abnormal** — Distinct and persistent uncharacteristic odours or flavours such as burnt or acrid, metallic, associated with feed or strong iodoform and not defined as rancid or decomposed.

9.2 Decomposition

A unit will be considered decomposed when more than 10% of the declared weight is affected by any of the following conditions:

a) **Odour or flavour** — Persistent, distinct and uncharacteristic odour or flavour including but not limited to the following: ammonia, bilge, faecal, fruity, hydrogen sulphide, musty, putrid, saltfish-like, sour, sour milk-like, vegetable, and yeasty.

b) **Discolouration** — Fish showing abnormal discolouration of the flesh, such as green or black as associated with decomposition.

c) **Texture** — Textural breakdown of the flesh associated with decomposition which is characterized by muscle structure which is very tough or dry, or muscle structure which is mushy, or in the case of whole or dressed fish, perforated bellies or broken bellies or belly walls, caused by enzymatic action.

9.3 A sample unit shall be classified as defective when more than 10% of the declared weight of the sample unit is affected by any combination of tainted or decomposed conditions.

9.4 Unwholesome

a) **Critical foreign material** — A lot will be considered defective when any of the following conditions are found:

- the presence of any material which has not been derived from fish and which poses a threat to human health (such as glass, etc.); or
 - distinct and persistent odour or flavour of any material which has not been derived from fish and which poses a threat to human health (such as solvents, fuel oil, etc.).
- b) **Foreign material** — A unit will be considered defective when the following condition is found:
- the presence of readily detectable material which has not been derived from fish but does not pose a threat to human health (such as insect pieces, sand, etc.).
- c) **Other defects** — A unit will be considered defective when any of the following conditions are found:
- 1) **Dehydration (Freezer burn)** — More than 10% of the declared weight of the fish or fillets in the unit are affected by dehydration affecting more than 10% of their surface area.
 - 2) **Parasites** — Only nematodes or copepod parasites having capsular diameter of greater than 3 mm or, if not encapsulated, a length of greater than 10 mm will be considered in determining whether the lot is acceptable with respect to parasites. For packs of 1 kg and greater, the presence of 2 or more parasites per kg of sample unit will result in rejection of the sample. For packs of less than 1 kg, the presence of parasites at a rate of infestation greater than an average of 1 parasite per kg of total sample will result in rejection of the sample. For example, a sample consisting of 13 units of 500g each would be rejected if 7 or more parasites were found.

The following parasite occurrences will result in the sample unit being classified as defective:

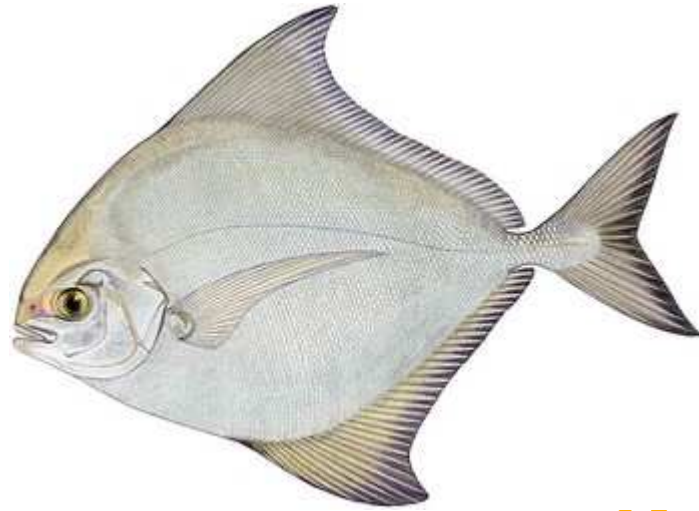
Pack Size	Reject Parasite Level
1 kg	Use average as described above
5lb	3
10 lb	5
15 lb	7
16.5 lb	8
18.5 lb	9
20 lb	10
50 lb	23

- 3) **Bones (Boneless packs only)** — One bone A 1 mm in diameter or A 10 mm in length per kg fish.
- 4) **Undesireable parts** — Each incidence of viscera.

10 Lot acceptance

A lot shall be considered as meeting the requirements of this standard when:

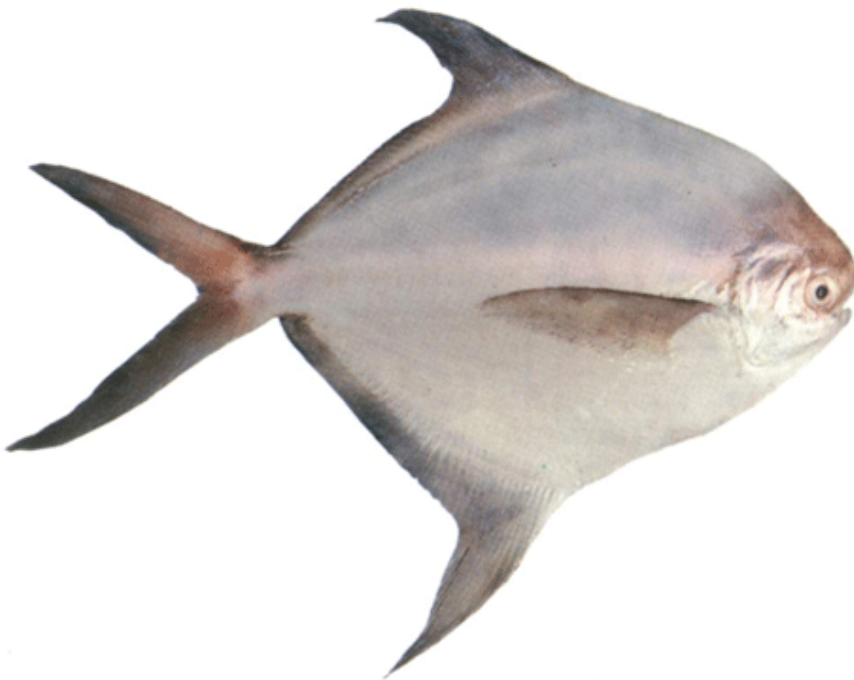
- (i) not any single instance of critical foreign matter occurs; or
- (ii) the total number of sample units found defective for taint, decomposition or unwholesomeness, individually or in combination, does not exceed the acceptance number for the sample size designated in the sampling plans in CD-K-572:2010; or
- (iii) the total number of sample units found defective for decomposition does not exceed the acceptance number (c) shown in parentheses for the sample size designated in the sampling plans in CD-K-572:2010; or
- (iv) the Food Additives, Hygiene and Labelling requirements of Sections 5, 6, and 7 are met.



Black pomfret



Atlantic pomfret



Pomfret fish

African Standard

Ea

No

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Chinese pomfret



Fresh pomfret fish

Draft



Golden pomfret



Pomfret fish



Sickle pomfret



White pomfret

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