

CHAPTER 3, STANDARD 1**FRESH & FROZEN GROUND FISH BLOCK AND FILLET STANDARD****1. INTRODUCTION**

This standard for fresh and frozen groundfish fillets and blocks including minced fish derives its authority from the Fish Inspection Act and Regulations. It defines minimum acceptability for taint, decomposition, and unwholesomeness and other requirements, other than weight, as defined in the Fish Inspection Act and Regulations and describes methods for determining that acceptability.

2. SCOPE

This standard applies to fresh, frozen or defrosted fillets or fillet blocks or minced blocks of groundfish, prepared from any one of the following families or orders of groundfish:

- a) The family Gadidae - including cod, haddock, pollock, hake and cusk;
- b) The family Anarchichadidae - wolffish or catfish;
- c) The family Scorpaenidae - including ocean perch (redfish) and black belly rosefish;
- d) The family Hexagrammidae - ling cod;
- e) The order Pleuronectiformes - including flounder, sole, greysole, turbot and other related flatfish species;
- f) The family Lophiidae - monkfish.

Fresh, frozen or defrosted groundfish fillets or fillet blocks or minced blocks should be prepared from sound, wholesome raw material and processed using good manufacturing practices.

Documents which are used for interpreting good manufacturing practices include:

- 1) Recommended International Code of Practice - General Principles of Food Hygiene, CAC/RCP 1-1969 REV. 1.
- 2) Codex Alimentarius Sampling Plans for Prepackaged Foods, (AQL 6.5) CAC/RM 42-1969.
- 3) Recommended International Code of Practice for Fresh Fish, CAC/RCP 9-1976.
- 4) Recommended International Code of Practice for Frozen Fish, CAC/RCP 16-1978.

3. NOMENCLATURE

The name of the product shall be that required in common usage in Canada and in accordance with the Fish Inspection Regulations and any requirements of the applicable Codex Alimentarius Recommended International Standard.

4. FORMS OF PRODUCT PRESENTATION

4.1 Groundfish may be presented as fillets or blocks.

4.2 Groundfish may also be presented as minced fish blocks.

4.3 Any other presentation may be permitted provided that it:

- a) is sufficiently distinctive from the forms of presentations set out in 4.1 and 4.2; and
- b) meets the requirements of the Fish Inspection Regulations; and
- c) is adequately described on the label and in accordance with all regulatory labelling requirements.

5. SAMPLING

The sampling and tolerance plans at the front of this manual shall be used to determine the acceptability of the lot. The sampling plans dictate the minimum sample size to be taken. If necessary, in the opinion of the inspector, more than the minimum sample size specified may be taken.

5.1 Sampling of lots for the sensory examination of the product shall be in accordance with the FAO/WHO Codex Alimentarius Sampling Plan for Prepackaged Foods (AQL 6.5) (CAC/RM 42-1969) except that a lower acceptance number for decomposition shall be used as indicated in the sampling tables.

The tables specify the minimum number of sample units to be used for the following types of inspections:

- a) Level I - Sensory examinations of all products subject to inspection other than lots which are subject to reinspection.
- b) Level II - Sensory examinations of all products which are under reinspection.

5.2 Size of Sample Unit

The sample unit shall consist of a container of fish and the entire contents thereof.

6. DESCRIPTION OF DEFECTS

6.1 Decomposition

A sample unit will be classified decomposed when more than 10% of the declared weight is affected by:

- a) Odours
Persistent and distinct odours in a fillet, part of a fillet or in minced fish characterized by: fruity, vegetable, musty, saltfish-like, sour, sour milk-like, faecal, ammonia, hydrogen sulphide, bilge, putrid; or
- b) Colour
Distinct green colour in a fillet or part fillet of flatfish species.

6.2 Taint

A sample unit will be classified tainted when more than 10% of the declared weight is found to be:

- a) Rancid
Odour in a fillet or part of a fillet or minced fish which is characterized by the persistent and distinct odour of oxidized oil (this may be characterized by a pungent sensation in the nasal passage); or
- b) Abnormal
Distinct and persistent odour in a fillet or part of a fillet or minced fish which is organic sulphide-like, such as dimethyl sulfide (blackberry), or iodine-like, as associated with feed.

6.3 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.

6.4 Unwholesome

- a) Critical Foreign Matter
A lot will be considered defective when any of the following conditions are found:

- 1) 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
- 2) distinct and persistent odour 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 Matter

A unit will be considered defective when the following condition is found:

the presence of any 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)
Fillet Packs or Blocks - More than 10% of the surface area of a sample unit is affected.
Filletts (IQF or Layer Pack) - More than 10% of the declared weight of the filletts in the sample unit is affected with dehydration conditions affecting more than 10% of the fillet surface area.
- 2) **Nematodes or Copepods**
Only nematodes or copepod parasites having a 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 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:

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

3) **Gelatinous Conditions**

More than 10% of the sample unit by declared weight is affected by excessive jellied conditions of the flesh.

4) **Bones** (Boneless Packs Only)

One bone \geq 1 mm in diameter or \geq 10 mm in length per kg fish.

7. EXAMINATION METHODS

7.1 Scope

The methodology described in this section outlines a procedure for the examination of groundfish fillet and block products. The examination shall be made of end-of-line final products in the fresh, frozen and defrosted state for tainted, decomposed or unwholesome conditions.

7.2 Equipment Required

- candling table
- calculator
- measuring tape or ruler
- examination tray, measuring approximately 30 x 50 cm
- knife

7.3 Examination for Frozen State Defects

The frozen package of fillet or block is examined for presence of freezer burn, i.e. dehydration which can only be removed with a knife or other sharp instrument.

- 7.3.1 The area affected by dehydration is measured and the total surface of the fillets or blocks is determined. Inspectors shall then determine the percent of area affected by the following calculation:

$$\% \text{ of dehydration} = \frac{\text{Area Affected}}{\text{Total Surface Area}} \times 100$$

7.4 Examination of Fresh or Defrosted Fillet or Block Packs Excluding Minced Fish

The fresh or defrosted sample unit is examined in its entirety. Each fillet is examined individually. Care should be exercised in separating the fillets to prevent tearing or mutilation.

7.4.1 Candling Procedures

Each fillet is individually examined on the illuminated candling table for presence of parasites, i.e. nematodes or copepods. Each parasite whether whole or in part or encapsulated is considered a parasite incidence. The examination is to be non-destructive in nature, that is, no slicing is permitted nor is the skin to be removed from skin-on fillets. The parasites are removed and the total number of incidents counted to determine the sample unit or entire sample compliance as per requirements in section 6.4 c) 2).

7.4.2 Determining the Cause for Rejection of a Fillet

Fillets within the sample units shall be classified according to whether they are acceptable or not acceptable. If not acceptable, the inspector will classify the fillet as decomposed, tainted or unwholesome. Should a fillet be both tainted and decomposed, for the purpose of the application of this standard and the interpretation of the sampling plan, the fillet is deemed to be decomposed. In the case of tainted or decomposed fillets, the inspector shall weigh the affected fillets, as necessary, to determine the percent of the sample unit which is affected by each category. The calculation is performed as follows:

$$\% \text{ Decomposed fillets} = \frac{\text{Weight of fillets affected}}{\text{Declared weight of pack}} \times 100$$

$$\% \text{ Tainted fillets} = \frac{\text{Weight of fillets affected}}{\text{Declared weight of pack}} \times 100$$

A similar calculation is made when jellied flesh (unwholesome) is encountered.

7.5 Examination of Minced Fish

Similar to the examination of fillet packs the entire sample unit of minced fish is examined. The following procedure should be used in the assessment of this product.

7.5.1 A sub-sample of 1 kg is extracted from the container and evenly spread on

an examination tray to a depth of 1 cm. An assessment is then made under normal overhead lighting conditions for the presence of whole parasites which may be visible on the surface of the minced fish. The parasites are removed and the number of incidents counted and recorded. Following this, the minced fish is examined for tainted or decomposed conditions or other evidence of unwholesome conditions other than parasites.

The process of spreading a 1 kg sub-sample on the tray is repeated and examination made as described above until the entire sample unit is inspected. The decision on classifying minced fish is the same as outlined in section 7.4.2.

8. CLASSIFICATION OF "DEFECTIVES"

A sample unit of fillets or blocks including minced fish is classified defective when one or more of the following conditions are encountered:

- a) **Decomposed**, when more than 10% of the declared weight of the fish is found to be decomposed as described in section 6, the sample unit is considered decomposed and the lower acceptance number in parentheses is used to determine lot acceptance; or
- b) **Tainted**, when more than 10% of the declared weight of the fish is found to be tainted as described in section 6, the sample unit is considered tainted and the regular acceptance number is used to determine lot acceptance; or
- c) **Tainted/Decomposed**, when assessed individually the amounts of tainted or decomposed fish are each less than 10%, but when combined, the amount of tainted and decomposed fish exceeds more than 10% of the declared weight, the sample unit is rejected as tainted/decomposed and the regular acceptance number is used to determine lot acceptance.
- d) **Unwholesome**, when:
 - 1) the number of incidents of parasites exceed the tolerance as described in section 6.4 c) 2); or
 - 2) the sample unit is affected by foreign matter; or
 - 3) the sample unit is affected by dehydration on more than 10% of the total surface area; or
 - 4) the presence of excessive jellied flesh exceeds 10% of the declared weight of the pack; or
 - 5) the incidence of bones exceeds the tolerance prescribed in section 6.4 c) 4) in packs designated as boneless.

9. LOT ACCEPTANCE

A lot will fail the requirements of this standard when:

- a) any single instance of critical foreign matter is encountered; or
- b) the total number of sample units found defective for tainted, decomposed or unwholesome conditions, individually or in combination, exceeds the acceptance number for the sample size described in the sampling plans; or
- c) the total number of sample units found defective for decomposition exceeds the acceptance number shown in parentheses for the sample size described in the sampling plans.