CHAPTER 2, STANDARD 8

CANNED SALMON STANDARD

1. INTRODUCTION

This standard for canned salmon derives its authority from the Fish Inspection Regulations and the Food and Drug Regulations. It defines minimum acceptability for taint, decomposition, 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 canned salmon in hermetically sealed containers. It is intended to be used for the inspection of canned salmon prepared from any of the following species:

1. Oncorhynchus nerka (sockeye salmon, red sockeye salmon, red salmon)
2. Oncorhynchus tschawytscha (spring salmon, king salmon, chinook salmon)
3. Oncorhynchus kisutch (coho salmon, medium red coho salmon)
4. Oncorhynchus gorbuscha (pink salmon)
5. Oncorhynchus keta (chum salmon, keta salmon)
6. Oncorhynchus mykiss (steelhead salmon, deep sea trout)
7. Salmo salar (salmon, Atlantic salmon)

Canned salmon shall be prepared from sound, wholesome raw material processed using good manufacturing practices.

Documents used to determine good manufacturing practice and compliance include:

1) Recommended International Code of Hygienic Practice for Low Acid and Acidified Low Acid Canned Food, CAC/RCP 23-1979.

2) Metal Can Defects Identification and Classification Manual, Canadian Food Inspection Agency.

3) Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) CAC/RM 42-1969.

4) Code of Practice - General Principles of Food Hygiene for use by the Food Industry in Canada, Health Canada.

5) Recommended International Code of Practice for Canned Fish, CAC/RCP

10-1976.

6) Codex Alimentarius Draft Revised Standard For Canned Salmon, Codex Standard 3-1981.

3. NOMENCLATURE

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

Descriptive terms shall be used where necessary to accurately describe the contents of the can.

4. FORMS OF PRODUCT PRESENTATION

Canned salmon may be prepared from fish which is fresh, frozen, cooked or smoked.

4.1 Styles of Pack

a) Regular-pack
Consists of sections of flesh that are cut transversely from the fish and are equal in length to the height of the can and packed so that the cut surfaces are parallel with the ends of the can.

b) Chunk
A mixture of pieces of fish most of which have dimensions of not less than 1.2 cm in each direction and in which the original muscle structure is retained.

c) Flake, flaked or flakes
A mixture of particles of fish in which the muscle structure of the flesh is retained.

d) Minced, grated or shredded
A mixture of particles of fish that have been reduced to a uniform size and in which particles are discrete and do not comprise a paste.

4.2 Spring Salmon (*Oncorhynchus tschawytscha*) Colour Designations

In addition to the appropriate common name, canned salmon of the species *Oncorhynchus tschawytscha* may be designated as "red", "pink" or "white" to indicate the colour of the flesh in accordance with standards approved by the Minister.

4.3 Packing Media

The product may be presented in one of the following packing media as appropriate to the species and style of pack, with or without permitted optional ingredients:

a) Own juice
Fish packaged without added liquid.

b) Potable water
In conformity with the requirements of the Fish Inspection Regulations for water used in registered establishments.

c) Spring water or mineral water
Potable water from an underground source but not obtained from a public community water supply and which meets the requirements of Section B.12.001 of the Food and Drug Regulations.

d) Vegetable broth
The liquid arising from the cooking of sound wholesome vegetables in water and which may be prepared from one or more types of vegetables.

e) Olive oils
In conformity with:

the relevant sections of Division 9 of the Canadian Food and Drug Regulations; or

the Recommended International Standard for Olive Oil, Virgin and Refined, and for Refined Olive-Residue Oil (Ref. CAC/RS 33-1970).

f) Other vegetable oils
Clear, refined, deodorized, edible vegetable oil in conformity with:

the relevant sections of Division 9 of the Canadian Food and Drug Regulations; or

the relevant recommended International standards adopted by the Codex Alimentarius Commission.

g) Sauces
A thickened liquid made from acceptable food grade ingredients giving a characterizing flavour and odour to the product.

h) Marinades
A thin liquid made from acceptable food grade ingredients, usually

containing a sweetener, an acid solution or an alcoholic solution, with or without spices, herbs, seasonings, vegetables and other condiments.

i) Fish oils
Clear, refined, edible fish (marine) oil. The species from which the oil is derived should be noted on the product label.

4.4 Optional Ingredients

a) Salt.

b) Other optional ingredients provided that all ingredients are food grade and meet the requirements of the Food and Drug Regulations.

4.5 Other Presentations

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

a) is sufficiently distinctive from the forms of presentation set out above; and

b) meets all other Canadian regulatory requirements; 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.

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/RM42-1969) except that a lower acceptance number for decomposition shall be used as indicated in the sampling tables.

The sampling 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 examination of all products which are under reinspection.

5.2 Size of Sample Unit

The sample unit shall consist of a can or pouch of fish and the entire contents thereof.

6. DESCRIPTION OF DEFECTS

6.1. Taint

A unit will be considered tainted when any of the following conditions are found:

a) Rancid
Odour characterized by the distinct and persistent and objectionable odour of oxidized oil; or

Flavour characterized by that of oxidized oil which leaves a distinct bitter and objectionable aftertaste.

Discolouration indicative of rancidity.

b) Abnormal
Distinct and persistent and objectionable uncharacteristic odours or flavours such as metallic and not defined as rancid or decomposed; or

Flavour or odour resulting from the improper addition and/or mixing of ingredients.

c) Excessive levels of sexual maturity.
Distinct and persistent and objectionable odours or flavours indicative of advanced sexual maturity (late-run fish).

6.2 Decomposition

A unit will be considered decomposed when any of the following conditions are found:

a) Odours and flavours
Persistent, distinct, uncharacteristic and objectionable odour or flavour such as:

fruity, vegetable, stale, musty, yeasty, sour, faecal, ammonia, hydrogen sulphide, bilge-like, putrid.

b) Discolouration
Discolouration indicative of decomposition.

c) Texture
Breakdown of muscle structure due to decomposition characterized by:

1) excessively mushy flesh uncharacteristic of the species in the presentation; or

2) excessively tough flesh uncharacteristic of the species in the presentation.

6.3 Unwholesome

a) Critical Foreign Material

A lot will be considered defective when the following conditions are found:

the presence of any material which has not been derived from fish (or packing media) 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 (or packing media) 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 any material which has not been derived from fish (or packing media) 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) **Struvite Crystals** (magnesium ammonium phosphate crystals)
Any struvite crystal greater than 5 mm in length.

2) **Sulphide Blackening** (smut)
Staining affecting greater than 5% of the net contents.

3) **Undesirable Parts**
Any combination of head parts, heads, tails and viscera exceeding 2% of the net weight of the intended pack.

7. EXAMINATION METHODS

7.1 Complete external can examination. Open container and complete net weight determination, according to the defined policies and procedures for these examinations.

7.2 Examine appearance of product in container. Carefully remove fish from container to examination tray. Compare product form with standard product form. Inspect container contents for presence of foreign material or other undesirable parts, carefully separating fish as necessary.

7.3 Examine container interior for presence of foreign material, smut, struvite, and corrosion or other can interior defects.

7.4 Evaluate the colour to determine if there is discoloration indicative of rancidity and decomposition. Assess the odour, flavour and texture as required.

7.5 Record any defect for that unit on the appropriate worksheet.

8.0 CLASSIFICATION OF "DEFECTIVES"

A sample unit which contains defects as described in section 6 is classified as a "defective".

9.0 LOT ACCEPTANCE

A lot will be considered unacceptable when:

a) any single instance of critical foreign matter occurs; or

b) the total number of sample units found defective for taint, decomposition or unwholesomeness, individually or in combination, exceeds the acceptance number for the sample size designated 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 designated in the sampling plans.