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ALINORM 66/18
Sp-10/45
Fish-first session
Aug-Sept 1966

JOINT FAO/WHO FOOD STANDARDS PROGRAM
CODEX ALIMENTARIUS COMMISSION

Fourth Session. Nov. 7-14 1966, Rome

CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

First Session, Aug. 29 - Sept 2, 1966
Bergen, Norway

Report of the First Session

1. The first session of the Codex Committee on Fish and Fishery Products met by courtesy of the Government of Norway from Aug 29 to Sept 2, 1966, delegates, advisers and observers from 15 countries and 6 international organisations participating (list of participants at Appendix I). The session was opened by Mr. Sunnanå, Director General of Fisheries, and Dr. O.R. Braekkan acted as Chairman of the meeting. The Secretariat of the Committee was assisted by the members of the Joint FAO/WHO Food Standards Branch from FAO, Rome, and in respect of technical matters WHO was represented by Dr. M. Abdussalam of the Veterinary Public Health Branch, and FAO was represented by Dr. R. Kreuzer from the Fishery Products and Marketing Branch, FAO. The Chairman reviewed the developments which lead to the establishment of the Codex Committee on Fish and Fishery Products, and indicated that the standards to be discussed by and made available to the Committee had been elaborated by various individual countries on the basis of the decision of the ad-hoc Committee of Experts on International Standards for Fish and Fishery Products which had met from 18-20 February 1964 in Rome (Document ALINORM/Fish/64 Final Report, 20 February 1964). Comments to these standards had already been received from a number of countries and had also been made available to the Committee. The Secretariat of the Joint FAO/WHO Food Standards Program broadly outlined the history and the progress to date of the Codex

Alimentarius Commission's work and stressed that decisions of the Committee would be submitted to governments for comments and that therefore opinions could be expressed by delegates freely without committing their respective authorities on the nature and form of the final standards. The Committee was also informed that the Joint ECE/Codex Alimentarius Group on Frozen Foods which would be meeting in a few days was responsible for frozen food in general and the task of the Codex Committee on Fish and Fishery Products was to consider the specific requirements in respect of frozen fish.

2. During the discussion of the provisional agenda the Committee was informed about the work being undertaken by FAO on Codes of Practice for Fish and Fishery Products which were relevant to the work of the Committee. A Code of Practice was drafted by OECD and submitted to FAO. A Code of Practice for Frozen Fish is being developed jointly by OECD and IIR. Those two Codes will be incorporated in a comprehensive Code of Practice for all types of fishery products. FAO's Department of Fisheries is drafting a Code of Practice for fresh fish and intends to convene early 1967 a meeting of a Group of Experts to consider a first draft of a Code of Practice for Fresh Fish and to survey the Codes for Canned and Frozen Fish. The Committee accepted the provisional agenda but decided to deal successively with both types of Pacific salmon, namely frozen and canned, and to consider under future work also canned tuna, mackerel and crab meat, frozen tuna and herring for further processing, and canned bonito in oil.

3. In addition to the documents which had already been available to the Committee the following further working papers were distributed as Conference Room Documents:

Codex Fish 6/3 Addendum 1. Proposed draft provisional standard on canned sardine.

Codex Fish 6/3 Addendum 2. A summary of comments on the designation of canned sardines, canned sild, canned brisling and canned herring.

Codex Fish 9/1-2. Proposed draft provisional standard on frozen shrimp.

Codex Fish 10/1-2. Proposed draft provisional standard on frozen lobsters.

Codex Fish, Memorandum 1. Comments of the Association of Fish Industries of the EEC.

Codex Fish, Memorandum 2. Comments of the French Government on the proposed draft standards.

Codex Fish General Document 1. General Principles of the Codex Alimentarius.

4. Substandard Products.

The Committee requested guidance from the Codex Alimentarius Commission on the procedure for dealing with products which failed to meet the provisions of standards but which were fit for human consumption.

5. Proposed Draft Provisional Standard on Frozen Fillets of Cod and Haddock.

a) The Committee had a detailed discussion on the Proposed Draft Provisional Standard prepared by the UK on Frozen Fillets of Atlantic Cod, Haddock and Ocean Perch (Red Fish) and commented upon by a number of governments. It was decided that the Secretariat of the Joint FAO/WHO Food Standards Program in Rome should distribute the agreed text of the standard to governments for comments under Step 3 of the Procedure for the Elaboration of World-wide Standards of the Codex Alimentarius Commission. The subjects to which the Committee paid particular attention are set out below and should be read in conjunction with the revised draft standard which is attached as Appendix II to this Report. Commenting governments should be invited to state their view specifically on these subjects.

(b) Scope. The Committee was of the opinion that it would be preferable if the draft under consideration be restricted to the family of Gadidae (cods) only and no mention would be made specifically to "Atlantic" cod. When standards for other similar species would be prepared these could follow the model of the present draft and where appropriate make references to it. In this way difficulties would be avoided which would arise if two different species having slightly different requirements would be incorporated in one single standard. Accordingly, the title of the draft was changed to read "Proposed Draft Provisional Standard on Frozen Fillets of Cod and Haddock".

(c) Definition. The Committee thought that the qualifying word "quick" in front of frozen in the product as defined could be omitted. This information, however, could be furnished on the label of the product in those countries in which consumers were used to this term and where its omission would be misleading. The Committee at the same time concluded that specifications for freezing should be left in the draft subject to the final decision of the Committee whether these were proper for inclusion in an individual standard or whether they should be covered generally in a Code of Practice.

(d) Quality requirements. On the question of examining freshness the Committee concluded that it would be appropriate to include in addition to the test of Trimethylamine Nitrogen content in fish muscle (TMA value) also a test based on the value of the total volatile basic nitrogen (TVB). The Committee discussed limits which could be considered reasonable for frozen fish. These tests would show the freshness of fish but would not necessarily indicate the bacteriological condition of the product.

(e) Sanitary requirements of the product. The Committee noted that besides the Codex Committee on Food Hygiene there were two specialized bodies which were dealing with the microbiological standards of food in general, a Subcommittee of the International Association of Microbiological Societies under the chairmanship of Dr. F. Thatcher of Canada, and the WHO Expert Committee on Food Hygiene (Food Microbiology) due to meet in 1967. The Committee for the guidance of these committees tentatively suggested that the bacteriological count for frozen fisheries products should be

- pathogenic organisms - none
- total bacteriological count - 250.000 per g
- E.coli count - less than 250 m.p.n. per 100 g
- coagulate positive staphylococci count - less than 100 per g

Comments are particularly requested on the point of the sanitary requirements.

(f) Marking and labelling. The Committee revised the marking and labelling section of the draft standard to bring it to conformity with the general provisions for food labelling. The Committee also included in this section such labelling provisions as were considered specific to the product covered by the standard.

(g) Methods of analysis and sampling. The Committee examined in detail the methods of analysis and sampling proposed in the draft standard and amended these as contained in the agreed revised text of the draft standard and its appendices. The delegation of Canada undertook to prepare a working paper for the Codex Committee on Methods of Analysis and Sampling on the determination of trimethylamine in fish muscle. Such methods when approved by the aforementioned Committee would then be incorporated in the draft standard. Canada would also prepare a method of analysis for the measurement of total volatile basic nitrogen as contained in section 3 of the draft. Countries which had experience in this matter were requested to send information to the Department of Fisheries, Ottawa, Canada.

(h) Frozen fillets prepared from blocks of frozen fish. In connection with the problem of the preparation of packs the Committee was informed that in some countries these were being prepared from frozen blocks of fish without prior thawing and would therefore consist of pieces instead of fillets or portion of fillets. The Committee requested the delegation of Sweden to report on this development at the next meeting of the Committee.

6. Proposed Draft Provisional Standard on Frozen Guttet Pacific Salmon.

(a) The Committee discussed in detail the draft on Frozen Guttet Pacific Salmon and decided that this draft was ready for distribution to governments for comments under Step 3 of the Codex Alimentarius Procedure for the Elaboration of World-wide Standards. In considering the draft certain points which are set out below were specifically raised, and when making their observations governments are requested to reflect on those in particular. The draft is attached to this report as Appendix III.

(b) Definition and designation of the product. The Committee decided to change the original title of the draft which after replacing the word "whole" by the word "guttet" now reads: "Proposed Draft Provisional Standard on Frozen Guttet Pacific Salmon". Salmo gairdneri was deleted from the standard as it was considered a fresh water species different from the Oncorhynchus species. The Committee noted that the species of Pacific Salmon, O. masu, may be frozen for international trade by Japan. It was decided to invite comment from the Government of Japan with regard to the inclusion of this species in the designation together with a list of the common names by which it is sold. The Committee decided that a reference to any colour

classification in the species Oncorhynchus tshawytscha should be deleted.

(c) Additives. The Committee invited interested member countries to provide the Department of Fisheries, Ottawa, Canada, with a list of salts, gelling agents and anti-oxydants including a statement of recommended maximum permissible amounts to be ^{found} in the thawed fish. Some members of the Committee felt that additives present in the glaze on a fish should be declared on the container.

(d) Marking and labelling. The Committee revised the marking and labelling sections of the draft standard in accordance with the recommendations of the Codex Committee on Food Labelling.

7. Proposed Draft Provisional Standard on Canned Pacific Salmon.

The Committee revised the draft which had been prepared by Canada in the light of the changes made to the standard for frozen Pacific salmon. The revised draft is attached as Appendix IV. It was decided that the agreed text of the standard should be distributed to Governments for comments under Step 3 of the Procedure for the Elaboration of World-wide Standards of the Codex Alimentarius. The section of the standard dealing with the sterility of the product should be referred to the Codex Committee on Food Hygiene with the request that that Committee make specific recommendations as to the methods of testing the sterility of canned products.

8. Salted Herring.

(a) The Committee set up a small ad-hoc working group under the chairmanship of Dr. van Mameren of the Delegation of the Netherlands to examine the proposed draft provisional standard for salted herring which had been submitted as working paper Document Codex Fish 3/2 to the Committee. The Committee accepted the view of the working group that it would be necessary to prepare two separate standards, one for salted herring and one for sugar-cured and spiced herring. The Committee invited the delegation of the Netherlands to continue to assume the authorship in respect of a standard for salted herring and to submit a new draft to the Chairman of the Committee for circulation to the participants of the meeting well in advance of the next meeting. The Dutch delegation would, after consulting its national authorities, inform the Chairman of the Committee whether this was possible, and in the affirmative would send the new draft to the Chairman of the Committee possibly by the end of 1966.

(b) The Chairman of the working group informed the Committee that the tentative conclusions reached by the working group would be reflected in the new draft which would cover salted herring comprehensively regardless of the possible differences in the nature and quality of the fish and the diversity in processing techniques. With regard to the important question of the use of additives in salted herring the Committee noted that the working group was of the opinion that the proposed standard should not be too restrictive since it may be possible or desirable to use in the future, for instance, anti-oxydants, enzymes, flavourings, etc.

(c) The members of the Committee were requested to send to the Institute of Fisheries, Ijmuiden, Netherlands, as much information as possible, and in particular on the degrees of salting, on the form of packs, on labelling, on the methods of the chemical determination of the salt content of the brine, and on methods of determination of fat content of the herring.

9. Salted Cod.

(a) The Committee set up a small ad-hoc working group under the chairmanship of Mr. Hennessey of the Canadian delegation to examine the proposed draft provisional standard on salted cod which had been distributed to members of the Committee as a working paper, document Codex Fish 4/2. The Committee accepted with appreciation an offer by the Delegation of Canada to revise the draft for submission to the Committee at its next session. The Canadian delegation was requested to send the revised draft to the Chairman of the Committee before the end of 1966. Members of the Committee interested in the salted cod standard should send to the Department of Fisheries, Ottawa, Canada, as soon and as much information as possible.

(b) The Committee took note that the working party had concluded that the primary need for a standard was in respect of wet salted cod. This was the product of which dry salted cod was made but these two products were different and required separate standards. If it appeared later that a standard for dried salted cod was also needed such a standard could be prepared at a later stage. The author country undertook to prepare the draft standard on wet salted cod in the light of the conclusions reached at this meeting and taking into consideration the views of the working group.

10. Proposed Draft Provisional Standards for Canned Sardines, Canned Sild, Canned Brisling and Canned Herring.

The Committee discussed in general four draft standards which had been prepared by OECD, and in particular examined two problems concerning the designation by common name of the species Clupea sprattus (L), Clupea harengus (L), Clupea sardina Pilchardus (Walbaum). It was agreed that members of the Commission should be invited to send their detailed comments on the four draft standards prepared by the OECD (Codex Fish 6(a)/2, 6(b)/2, 6(c)/2, 6(d)/2) to the Bureau Commercial Fisheries, Washington, D.C., U.S.A., with copies to the Chairman of the Committee. The comments on the draft standards for sardines, sild and brisling should include:

A a statement of present procedures including i) the scientific name of the fish or fishes that might be marketed under the general description of sardines, sild or brisling, ii) the common name(s) under which the canned product is sold, iii) the volume of trade or manufacture including export and import and destinations.

B views as to whether the various products are different and if so to what extent and whether this depends on:

- a) the raw fish
- b) processing materials or methods
- c) size of products

C. views as to whether any tests should be included in the standard (e.g. an organoleptic test) and if so what these should be

D. views as to how any differences should be provided for, e.g. by names or by styles

E. views as to whether there should be a single standard or more than one and detailed proposals, if possible. The U.S. was requested to draft in the light of the information received one single standard or separate standards for sardines, sild and brisling for consideration by the Committee at its next meeting together with a compilation of data received and a documentation as to the **comments on** the standard on canned herring.

11. Canned Bonito in Brine or Oil.

The Committee was informed by the Delegate of Peru that his Government had withdrawn the draft which had been circulated to the members of the Committee as working paper Codex Fish document 7/2. A new draft had been prepared but had been received too late by the Chairman of the Committee for circulation to members. The Committee noted that there was a difference of opinion regarding the common name of the species Sarda chilensis. After a full discussion of this problem, the Committee concluded that a draft provisional standard should be prepared by the U.S. with the collaboration of Peru and Spain covering the family thunidae. These countries were requested to find a solution to the difficulties concerning the common name to be used in the standard for the species Sarda chilensis. The revised standard should be drafted under the new title: "Canned Tuna, Albacore and Bonito in Brine or Oil" and, if found necessary, should be divided into distinct sections according to the different species. The author country was requested to communicate also with Japan in the elaboration of the revised standard.

12. Canned Shrimp and Prawns.

The Committee had before it document Codex Fish 8/2 and Conference Room Documents 9/1-2 and 10/1-2 on frozen shrimp and frozen lobsters respectively. The Committee was also informed by the Chairman that he had received from the delegation of the F.R. of Germany a further draft on a European species of shrimp. The Chairman further advised that there was overlap regarding the species "pandalid" in the draft standard prepared by the U.S. as author country and the draft prepared by the F.R. of Germany. The Committee requested the U.S. to revise the draft on canned shrimp and prawns in collaboration with the F.R. of Germany and to include all species of shrimp and prawns. Members of the Committee were requested to supply to the Bureau of Commercial Fisheries, Washington, D.C., U.S.A., information concerning types of shrimp and prawns which they considered should be covered by the revised standard.

13. Frozen shrimp and frozen lobsters.

The Committee had received as Conference Documents 9/1-2 and 10/1-2 two drafts prepared by France on the above products. Members of the Committee were requested to send their observations to the Institut scientifique et technique des pêches maritimes,
59 A^{ne} Raymond Pourcare,

Paris 16^E, France, so that any revision to the text which might be necessary could be made for incorporation into revised drafts.

14. Other matters.

(a) Food Additives.

Following the discussion of the proposed draft provisional standards for fish products the Committee concluded that it would facilitate and expedite its future work, if members of the Committee were to supply information on the technological need to use food additives in fish products and the level of use of the additives concerned to the Chairman of the Committee with copies of this information to the Secretariat of the Joint FAO/WHO Food Standard Program in Rome. This information would enable the Codex Committee on Food Additives to examine these matters and approve their use if found to be free from any hazard to health of consumer.

(b) Other matters.

The Chairman invited the members of the Committee to study Conference Room Document Memorandum I containing the comments of the Association of Fish Industries of the E.E.C. (A.I.P.C.E.E.) on the establishment of standards for fish and fishery products. Appendix I to the document contained a general standard for all fish and fishery products. Members of the Committee were requested to send their observations on the general standard to the Chairman of the Committee so that it could be considered at the next meeting of the Committee.

(c) The Committee considered what further work should be undertaken for its next session. After discussion the following work assignments were made:

1. Frozen fillets of ocean perch:
Canada, assisted by F.R. of Germany and Norway
2. Frozen blocks of cod, haddock and ocean perch for further processing:
Canada, assisted by Norway
3. Frozen fillets of plaice:
U.K., assisted by Denmark
4. Frozen tuna as raw material for further processing:
U.S., assisted by Peru and Spain
5. Frozen herring:
Norway
6. Salted anchovies and anchovy fillets in oil packed in containers:
Spain
7. Canned mackerel in brine or oil:
Portugal (subject to confirmation)

Author countries were requested to submit to the Chairman of the Committee with copies to the Secretariat of the Joint FAO/WHO Food Standards Program in Rome, the drafts of the above proposed standards and other work assignments contained in this report by the end of 1966 for circulation to members of the Committee well ahead of the next session of the Committee.

8. The need for a new assignment on a standard for canned crab meat was referred for discussion at the next meeting.

CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

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First meeting, Bergen, 29 August - 2 September 1966.

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PROPOSED DRAFT PROVISIONAL STANDARD ON FROZEN FILLETS OF
COD AND HADDOCK

(Submitted to Governments for comments under step 3 of Codex
Alimentarius Procedure for Elaboration of Standards)

I STANDARD OF COMPOSITION

Definition

1. Frozen fillets of cod and haddock are uncooked, unsmoked fish of the species of the family Gadidae which;
 - (a) are slices of fish of irregular size and shape, cut parallel to the back bone or such pieces cut into sections and which have not been prepared by any other means than filleting, boning, skinning or cutting;
 - (b) have been frozen at such a rate that the centre of the product shall reach -18°C (0°F) not more than $2\frac{1}{2}$ hours after any part of the product has been at -1°C ($+30^{\circ}\text{F}$); and
 - (c) from which all internal organs, head, fins, bones (except intramuscular or lateral bones) and all discoloured flesh have been removed as provided for in Appendix B.

Designation

1. Frozen Cod Fillets
2. Frozen Haddock Fillets

Quality Requirements

2. Raw Material Frozen fillets of cod and haddock must be prepared from sound fresh fish of the respective designated species and which is of a quality such that it may be sold fresh for human consumption.

3. Final Product

- (i) The trimethylamine content of the fish muscle shall be not more than 10 mg of trimethylamine nitrogen per 100 g of fish muscle or 25 mg of total volatile basic nitrogen (T. V. B.) per 100 g.
- (ii) After cooking by steaming, the product shall have a flavour characteristic of the species and shall be free from any foreign objectionable flavours and odours.
- (iii) The texture shall be reasonable firm and not excessively tough, dry, soft, wet or gelatinous.
- (iv) The final product shall conform with the test for physical defects as set out under Point 14 of this standard.

4. Form of Pack The styles of frozen cod and haddock fillets shall be as follows: -

- (i) Fillets or Portions of Fillets - Skin on These shall be sound fillets in whole or part, cut neatly and cleanly, being clear of scales and excessive flap;
- (ii) Skinless Fillets or Portions These shall be sound fillets in whole or part, with the skin removed;
- (iii) Skinless and Boned Fillets or Portions These shall be sound fillets in whole or part, with the skin and bones also removed.

A small piece of fish may be included in the pack to bring the weight up to the required level. This make-weight piece of fish shall not be less than 1 oz. (30 g) in weight.

Marking and Labelling

- 5. Products to which the standard applies shall be subject to the general provisions laid down by the Codex Committee on Food Labelling and subsequently approved by the Commission.
- 6. The name of the product is cod or haddock as appropriate.
- 7. The word "frozen" shall appear as part of the name and the description of the product shall include fillets-skin on, skinless, skinless and boned, as appropriate.
- 8. If imported, the country of origin shall be stated in the words "Produce of X".
- 9. The net weight shall be the net weight of the frozen product.
- 10. The year and month of final processing shall also be shown, in clear or in code.

II METHODS OF SAMPLING, ANALYSIS AND EXAMINATION NEEDED FOR
CONTROL OF THIS STANDARD

11. This section is subject to the general provisions laid down by the Codex Committee on Methods of Analysis and Sampling.

12. Method of Sampling and Preparation of Sample A sample taken for testing shall

- (a) contain not less than 100 oz (2,8 kg);
- (b) consist of packs of the same brand and size;
- (c) include not less than 5 packs, and
- (d) be taken from the same cabinet.

13. The sample shall be defrosted and divided into units in accordance with the method specified in Appendix A.

Examination for Physical Defects

14. The sample shall be examined for physical defect in accordance with defect count specified in Appendix B. Any single unit shall be regarded as defective if the minor defect count exceeds 2 and in accordance with rules by the Codex Committee on Methods of Sampling and Analysis, the whole sample shall be classified as defective if the number of defective units exceeds 3. One major defect shall count as three minor defects.

Chemical Examination

15. The trimethylamine content and the total volatile bases of the fish muscle shall be determined using the methods specified by the Codex Committee of Sampling and Analysis.

Organoleptic Examination

16. Organoleptic assessment shall take place after reasonable quantities of the sample (remaining after chemical analysis and examination for physical defects) have been cooked by the approved method set out in Appendix C.

APPENDIX A

SAMPLING FOR DEFECTS - METHOD OF PREPARING SAMPLE

1. Defrosting

(Details of method recommended for defrosting to be submitted later.)

2. Division of the Sample into Units

The sample shall be divided into ten units as follows: -

either (a) where the packs are of 10 oz (284g) net weight, the contents of each pack shall be taken as one unit;

or (b) where the packs are of net weight other than 10 oz (284 g) they shall be placed in a random order and opened in sequence.

In the case of packs of more than 10 oz (284 g) a unit of 10 oz (284 g) shall be weighed from the first pack, the residual contents of the first pack shall then be made up to 10 oz (284 g) by the random selection of a portion from the contents of the second pack and so on until ten units of 10 oz (284 g) each are weighed out, provided that no more than 2 units are taken from any one pack. Any residual shall be discarded.

In the case of packs of less than 10 oz (284 g), the contents of the first pack shall be made up to 10 oz (284 g) by adding the required weight by the random selection of a portion from the second pack, the remainder of the second pack shall then be made up to 10 oz (284 g) by adding from the third pack and so on until ten units of 10 oz (284 g) each are weighed out. Any residual shall be discarded.

3. Defects and Appearance

The units shall then be examined for defects and appearance.

4. Chemical Analysis

Any portions of units required for chemical analysis shall then be removed.

5. Organoleptic Assessment

Reasonable quantities of the remainder shall be cooked by the approved method and assessed organoleptically.

APPENDIX B

EXAMINATION FOR PHYSICAL DEFECTS
SPECIFICATION OF MAJOR AND MINOR DEFECTS

Term	Nature	Size	
		Major	Minor
Bone	x) Any calcareous or cartilaginous material but excluding lateral bones	1 in.(25 mm) or more in any dimension	More than ½ in. (12,5mm)but less than 1 in.(25mm) in any dimension
	xx) Any calcareous or cartilaginous material	2 or more bones of ½ in.(12,5mm) or more in any dimension	1 bone of ½ in. (12,5mm) or more in any dimension
Discolouration	Any significant discolouration on the flesh	1 sq. in. (6,5 cm ²) or more in aggregate area	More than ½sq.in. (3,25cm ²)but less than 1 sq. in (6,5cm ²) in aggregate area
Damaged	Cut or tear into or across (appart from the cut necessary to remove lateral bones)	1 in.(25mm) or more in any dimension	More than ½ in. (12,5mm) but less than 1 in.(25mm) in any dimension
Bloodclot	Any lump of clotted blood	1/4 in.(6mm) or more in diameter	More than 1/8 in. (3mm) but less than 1/4 in.(5mm) in diameter
Parasitic Animals	Parasitic animals (e.g. threadworms found in cod) which occur naturally as a parasite in the particular species of fish and known not to be pathogenic to man	2 or more worms	1 worm
Membrane	The lining of the belly wall	1 sq.in.(6,5 cm ²) or more in aggregate area	More than ½sq.in. (3,25cm ²)but less than 1 sq.in.(6,5 cm ²) in aggregate area
Fin	Fin or part of fin	½sq. in. (3,25 cm ²) or more in aggregate area	Less than ½ sq. in.(3,25cm ²) in aggregate area
Skin (skinless fillets or portions)	Skin	½ sq.in.(3,25 cm ²) or more in aggregate area	Less than ½ sq. in. (3,25cm ²) in aggregate area

- x) Skin on and skinless
 xx) Skinless and boned

APPENDIX C

COOKING METHODS

STEAMING

Steam in a closed Pyrex type dish of 7 in. (17,8 cm) diameter over boiling water for 35 minutes or for 18 minutes after thawing the product.

The dish should be covered and should be kept in a water bath at +60°C (+140°F) during testing.

PROPOSED DRAFT PROVISIONAL STANDARD
ON FROZEN GUTTED PACIFIC SALMON.

(Submitted to Governments for comments under Step 3 of Codex Alimentarius Commission Procedure for Elaboration of Standards)

I STANDARD OF COMPOSITION

Definition

Frozen gutted Pacific salmon is the eviscerated carcass of any of the species of fish listed below, which has been frozen and glazed with ice or tightly wrapped in a membrane which will protect the flesh from oxidation and dehydration:

Oncorhynchus nerka
Oncorhynchus kisutch
Oncorhynchus tshawytscha
Oncorhynchus gorbuscha
Oncorhynchus keta

Designation

1. Frozen gutted Pacific salmon shall be designated as follows according to the species of fish packed:
 - (a) O. nerka as Sockeye or Red Salmon
 - (b) O. kisutch as Coho or Silver Salmon
 - (c) O. tshawytscha as Spring King or Chinook Salmon
 - (d) O. gorbuscha as Pink Salmon
 - (e) O. keta as Chum, Qualla or Fall Salmon or Keta

2. Frozen gutted Pacific salmon shall be designated as Dressed Headless or Dressed Head On, in accordance with whether or not the head has been removed.

3. Frozen gutted Pacific salmon which has been taken by hook and line may be designated as troll-caught.
4. Frozen gutted Pacific salmon may also be designated with a weight range to indicate, in pounds or kilograms, the maximum and minimum sizes of fish in the shipment.

Quality Requirements

1. Minimum Requirements concerning the Fish:

- (i) Raw Material Frozen gutted Pacific salmon shall be prepared from wholesome salmon which have been eviscerated as soon as possible after being taken from the water.
- (ii) Processing The fish shall have gills and gill rakers removed. Removal of the head is optional. The body cavity shall be opened by cutting through the body wall along the ventral line from the anus to the throat. This cut should not extend into the gill cavity, nor should it join the cut which severed the head from the body of the fish. The viscera and the blood along the back bone of the fish shall be removed. The body cavity shall be thoroughly cleaned but the membrane lining should not be excessively cut or punctured. The whole carcass shall be well washed.

Immediately after freezing, the individual fish shall be glazed or otherwise suitably protected against oxydation and dehydration.

During storage and in transport the fish shall be handled and stored in such a manner that they are not subjected to excessive pressures or physical shocks which would damage the carcass or remove the glaze.

- (iii) Frozen Product The frozen fish shall have a natural symmetrical shape with a straight longitudinal axis. If the fish have been glazed the glaze shall cover the surfaces completely and evenly and shall be reasonably free from cracks. There may be some skin discoloration or darkening but no body deformation suggestive of approaching sexual maturity. There may be some line or net marks which do not cut completely through the skin but there shall be no extensive "net burns", bruises, wounds or cuts on the carcass and scales shall not be missing from any extensive areas. The frozen fish shall be clean and virtually free of "belly burn" (visible enzymatic damage), dehydration, oxidation rancidity and shall show no evidence of bacterial spoilage.

2. Additives

Salts, Gelling Agents and Anti-oxidants which have been approved by the Codex Alimentarius Commission may be added to the water used in glazing frozen gutted Pacific salmon.

3. Marking and Labelling

Containers of frozen gutted Pacific salmon shall be marked or labelled to show the following information:

- (a) The name of the product which shall include the word "frozen", and the appropriate designation for the species as listed under Designation, para. 1.
- (b) The appropriate form of pack as stated under Designation, para. 2.
- (c) The net weight of contents;
- (d) The name and address of the packer or the distributor; and
- (e) The name of the country of origin.

II METHODS OF SAMPLING, ANALYSIS AND EXAMINATION NEEDED FOR CONTROL OF THIS STANDARD.

Sampling and Testing

A Visual Assessment

A random sample of frozen salmon shall be examined visually for compliance with the provisions of Quality Requirements of the Frozen Product.

B Destructive Examination

A random sample shall be examined for decomposition and odour by using the method specified in Appendix A.

APPENDIX A

EXAMINATION FOR DECOMPOSITION AND FOREIGN ODOURS

Equipment: - A power drill (approximately 1 000 RPM) equipped with twist bit (approximately 9 mm diam.)

Procedure: - A drilling is made into the body of the frozen fish at a point half-way between the gill cavity and the anus and midway between the gut cavity and the backbone.

Organoleptic evaluation: The thawed drill shavings shall be immediately examined organoleptically. The odour shall be characteristic of wholesome fish.

PROPOSED DRAFT PROVISIONAL STANDARD
ON CANNED PACIFIC SALMON

(Submitted to Governments for comments under Step 3 of Codex Alimentarius Commission Procedure for Elaboration of Standards)

I STANDARD OF COMPOSITION

Definition

Canned Pacific salmon is the processed flesh of any of the species of fish listed below, packed in hermetically-sealed containers and so processed with heat to prevent spoilage and to destroy all pathogenic organisms:

Oncorhynchus nerka
Oncorhynchus kisutch
Oncorhynchus tshawytscha
Oncorhynchus gorbuscha
Oncorhynchus keta

Designation

1. Canned Pacific salmon shall be designated as follows, according to the species of fish packed:
 - (a) O. nerka as Sockeye Salmon or Red Salmon
 - (b) O. kisutch as Coho Salmon or Silver Salmon
 - (c) O. tshawytscha as Spring Salmon, King Salmon or Chinook Salmon
 - (d) O. gorbuscha as Pink Salmon
 - (e) O. keta as Chum Salmon or Keta Salmon

2. Except in the case of Regular Pack and Regular Style canned salmon, the form and style of pack as listed below shall be included in the designation.

(a) Form of Pack:

- (i) Regular Pack - shall consist of sections which are cut transversely from the fish and which are nearly equal in length to the height of the can. The sections shall be packed so that the cut surfaces are parallel with the ends of the container.
- (ii) Skinless and Boneless Canned Salmon - shall consist of regular-pack canned salmon from which the skin and vertebrae have been removed.
- (iii) Minced Canned Salmon - shall consist of salmon which has been cut into small pieces which would pass through a 3/8" mesh screen.
- (iv) Canned Salmon Tips - shall consist of small pieces of salmon such as trimmings from the tail and nape sections of the fish.

(b) Styles:

- (i) Regular Style - consists of canned salmon to which salt has been added.
- (ii) No Added Salt - consists of canned salmon which has a sodium content of not more than 60 mgs. per 100 g of drained flesh.
- (iii) Smoked Salmon - consists of canned salmon which has been prepared from smoked fish.
- (iv) Spiced Pack - shall consist of canned salmon to which spices and flavourings that have been approved by the Codex Alimentarius Commission have been added.

Quality Requirements

1. Minimum Requirements for Contents

(a) Requirements concerning the Fish:

- (i) Raw Material Canned Pacific salmon shall be prepared from clean, wholesome salmon.
- (ii) Processing The fish shall have heads (including gills), tails, fins, loose scales, viscera and blood removed; damaged or discoloured flesh associated with bruises or small wounds shall be cut away; the fish shall be well washed; the body cavity thoroughly cleaned to remove blood and viscera; the fish shall be well packed, in accordance with the form of pack desired, in clean cans which are free from dents, rust or defective seams. The can ends shall remain flat or slightly concave under any condition of temperature and atmospheric pressure to which the product is likely to be subjected in normal trade.
- (iii) Canned Product On opening the cans shall appear well filled. The colour, texture, odour and flavour shall

be characteristic of good quality canned salmon of the particular species. The bones shall be soft and the flesh shall be practically free from bruises, blood spots, honeycombing or abnormal colours. There shall be no objectionable odours or flavours associated with decomposition. The can contents shall be free from foreign matter and viscera and reasonably free from pieces of loose skin. In the case of regular pack, the sections of fish shall be arranged so that the cut surfaces are parallel to the opened end and the skin side parallel to the walls of the can.

2. Ingredients

- (a) Salt shall be refined, white, edible grade sodium chloride.
- (b) Oil - edible salmon oil comparable in colour, viscosity and flavour to the oil which would naturally occur in the product, may be added.
- (c) Sugar, vinegar and spices may be added.

3. Additives.

Additives - none.

4. Marking and Labelling.

Products to which the standard applies shall be subject to the general provisions laid down by the Codex Committee on Food Labelling and subsequently approved by the Commission.

- (a) Coding - each can shall be embossed or otherwise permanently marked with a code marking from which the identity of the lot can be determined.
- (b) Labelling - the cans shall be labelled to clearly state: -
 - (i) The common name which shall include the appropriate designation for the species as listed under Designation, para. 1;
 - (ii) The form and style of pack as specified under Designation, para. 2;
 - (iii) The net weight of contents;
 - (iv) The name and address of the packer or the distributor;
 - (v) The name of the country of origin;
 - (vi) A list of ingredients.

II METHODS OF SAMPLING, ANALYSIS AND EXAMINATION NEEDED FOR CONTROL OF THE STANDARD.

This section is subject to the general provisions laid down by the Codex Committee on Methods of Analysis and Sampling.

A. External Condition of the Cans

Cans shall be examined visually for external condition in accordance with the following scale: -

Size of Lot	Up to 35,000 cans	Over 35,000 cans
No. of samples.	50	200

The use of U.S.D.A. visual aids to identify the degree of defect is recommended: -

1. No can out of a 50-can sample or not more than 1 can out of a 200-can sample, according to sample size, shall show the following defects: -

leaker, flipper, springer, swell (at 68° to 80° F) of improper closure

2. Not more than 1 can out of 50 or 5 cans out of 200 shall show the following defects: ,

severe dents, ridges, severe panelling, buckling, collapse or pitted rust.

3. Not more than 5 cans out of 50 or 14 out of 200 shall show the following defects: -

dirty finish, moderate dents; blistered, defaced, illegible or missing labels.

B. Bacteriological Examination.

Where there is any reason to question the sterility of a lot of canned salmon, 100 samples shall be tested by the Method for Testing Sterility, Appendix 1.

C. Destructive Examination

All lots shall be sampled for examination of net weight, vacuum, and product quality in accordance with the Sampling Scale for Destructive Examination, Appendix 2.

D. Vacuum

Vacuum shall ordinarily be tested with the Bourdon tube gauge. Where there is any doubt that the vacuum is sufficient for shipment to hot climates or high altitudes, samples shall be tested by the Supplementary Vacuum Test, Appendix 3.

E. Product Quality

1. After examination for vacuum and net weight, the sample taken for destructive examination, in accordance with the sampling scale set forth in Appendix 2, shall be examined organoleptically by persons trained in such examination.
2. (a) No samples shall have any of the following defects: -
 - (i) hard bones
 - (ii) foreign material or foreign odours or flavours.
- (b) The sample shall be reasonably free of minor bruises, blood clots and other such blemishes and pieces of detached or loose skin or scales. Regular pack canned salmon shall be reasonably free from cross packs and pieces of skin or sections of vertebrae across the top of the can.

APPENDIX 1

EXAMINATION OF THE CANNED PRODUCT TEST FOR STERILITY

Incubate the sample cans for 30 days at 35°C to 37°C. Cans showing definite evidence of spoilage (i.e. hard swell or when opened, emission of strong spoilage odour) obviously are not sterile, and need not be further tested for sterility.

After the incubation period, scrub each can with soap and water and rinse thoroughly. Before opening wipe the top end of each can with alcohol and flame.

To open a can containing fish loosely packed in liquid, punch a hole in the flamed end with a sterile 7-inch spike and the hammer. The head of the hammer should be flamed before it is used.

To open a can containing solidly packed fish, use a sterile can opener to cut a hole in the flamed end large enough to permit use of the sampling instrument selected.

To obtain material for testing from a can containing fish loosely packed in liquid, use a sterile pipette. Insert the pipette through the punched hole and aseptically transfer approximately 1-ml of material from the center of the can to a sterile tube of Fluid Thioglycollate medium. Disturb the Thioglycollate medium as little as possible during transfer. Tighten tube cap. Repeat inoculation procedure with a second tube of medium.

To obtain material for testing from a can of solidly packed fish, use a sterile cork-borer, small spoon, spatula or other suitable instrument. Insert the instrument through the hole cut in the flamed end of the can. Aseptically transfer approximately 1 c.c. of material to a sterile tube of Fluid Thioglycollate medium. If a cork-borer is the sampler selected, use a sterile glass rod to push the plug of sample material from the borer into the tube. Tighten tube can. After re-sterilizing the sampling instrument or obtaining another one which has been sterilized, repeat the inoculating procedure using another tube of the test medium.

Incubate inoculated tubes at 35°C to 37°C. Examine tubes for evidence of growth (cloudiness) after 7 days.

Prepare slides of the apparent growth for examination with a phase contrast microscope or for simple staining and examination with a regular bright field microscope. If the two tubes inoculated from the same can are found to contain bacteria, consider the can to be non-sterile and the lot represented to be unsafe for human consumption.

APPENDIX 2.

EXAMINATION OF THE CANNED PRODUCT SAMPLING SCALE FOR DESTRUCTIVE SAMPLING FOR ORGANOLEPTIC EXAMINATION.

No. of cans in lot	151	301	4.801	24.001	48.001	
	150	300	4.800	24.000	48.000	and over
No. of samples	3	6	12	18	24	36

APPENDIX 3

EXAMINATION OF THE CANNED PRODUCT SUPPLEMENTARY VACUUM TEST.

24 cans are incubated for 24 hours at 40°C. Vacuum is considered satisfactory if no cans become springers or swells and not more than one can becomes a flipper.