codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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ALINORM 89/18

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION
Eighteenth Session
Geneva, 3-14 July 1989

REPORT OF THE EIGHTEENTH SESSION OF THE CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

W/Z3581

Bergen, Norway, 2 - 6 May 1988

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont.d)

INTRODUCTION

1. The Codex Committee on Fish and Fishery Products held its Eighteenth Session in Bergen, Norway, from 2-6 May 1988 by courtesy of the Government of Norway. The session was chaired by Mr. John Race, of Norway.

2. The session was officially opened by Mr. T. Foss, Deputy Director General of the Ministry of Fisheries, who welcomed the participants. Mr. Foss emphasized the importance of the Codex standards for international trade, at a time where it was necessary to protect public health as well as to avoid that regulations governing international trade would constitute undue technical barriers to such trade. He expressed the hope that this Committee would continue to develop standards which could assist governments in achieving these aims.

3. The session was attended by delegations and observers from the following 29 countries: Argentina, Australia, Belgium, Canada, Cuba, Denmark, Finland, France, Federal Republic of Germany, Democratic Republic of Germany, Iceland, India, Ireland, Italy, Japan, Morocco, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom and the United States of America.

Observers from the following four International Organizations were also present: AIPCEE, EEC, IIF, MARINALG International.

A list of participants, including officers from FAO, is contained in Appendix I to this report.

ADOPTION OF THE AGENDA (Item 2)

4. The Committee had before it CX/FFP 88/1, the Provisional Agenda for the Session. The Chairman informed the Committee that several documents had not been prepared due to lack of comments (CX/FFP 88/10 and CX/FFP 88/11) and that the Delegation of the United Kingdom would present an oral report on inspection techniques for quick frozen fish blocks instead of working paper CX/FFP 88/6. The Committee also agreed to consider food additives (Item 12) in connection with the standards concerned.

5. At the proposal of the Delegation of Norway the Committee agreed to place Item 10 later on the agenda, to enable consideration of sampling provisions in the standard by a Working Group (see para 123).

Ad-hoc Working Group on Methods of Analysis and Sampling

6. The Committee decided to establish an Ad-hoc Working Group on Methods of Analysis and Sampling to consider the relevant papers (CX/FFP 88/5; CRD 1; and related comments) for these provisions and to provide advice to the Committee. In particular, the Working Group was requested to look at methods in the draft standards under consideration, to review the paper prepared by the United Kingdom on the rationalization of methods of analysis, to review matters related to sampling (klippfish) and to make recommendations on the desirability and feasibility to include provisions for added/foreign water in the quick frozen fish standards currently under consideration, including methodology.

The Delegations of Switzerland, United Kingdom, Canada, United States, Netherlands, France, Denmark, Sweden, Norway, Federal Republic of Germany and the observer of the German Democratic Republic agreed to participate at the Working Group under the Chairmanship of Mr. R. Kirk of the United Kingdom. The Committee agreed that the report of the Working Group should be appended to the report, except for matters related to other items on the agenda, which would be included in those items. It was noted that the Delegation of Portugal had submitted a paper on added water for consideration by the Working Group.

7. The Committee decided to consider under Item 23 "Other Business" Proposed Amendments to the Codex Standard for Canned Mackerel (CRD 3) and a proposal to include Tara Gum in the food additive provisions of certain standards (CRD 5).

8. The Committee adopted the provisional agenda, as amended.

APPOINTMENT OF RAPPORTEURS (Item 3)

9. The Committee decided not to appoint formal rapporteurs for the session and agreed that delegations would be available to assist the Secretariat if required.

MATTERS OF INTEREST TO THE COMMITTEE ARISING FROM THE CODEX ALIMENTARIUS COMMISSION AND OTHER CODEX COMMITTEES (Item 4)

10. The Committee had before it working papers CX/FFP 88/2 (Matters of Interest), CX/FFP 88/2-Add. 1 (Acceptances) and CRD 19, an Extract of the Report of the 33rd Joint Expert Committee on Food Additives (JECFA) on Methylmercury.

Codex Alimentarius Commission, 17th Session (ALINORM 87/37)

Developments concerning Radionuclide Contamination of Foods (Paras 34-53)

11. The Committee noted that soon after the Chernobyl accident, many governments had requested assistance from FAO in dealing with this matter and the Director-General of FAO had asked the Codex Alimentarius Commission to give consideration to radionuclide contamination of foods. FAO had convened an Expert Consultation on Recommended Limits for Radionuclide Contamination of Foods which had recommended the use of Interim International Radionuclide Action Levels for foods moving in international trade. Because radionuclide contamination of foods was of health concern, WHO had started working on the establishment of derived intervention levels for public health purposes which would represent levels of radioactivity in food below which intervention was not justified.

12. The Commission at its 17th Session, after an extensive discussion, concluded that, although not adopted by the Commission, the FAO report was available for use by countries and requested both FAO and WHO to elaborate a joint proposal for its consideration.

13. The Committee was informed that a FAO/WHO joint proposal for levels of radionuclide contamination of food in international trade had now been put forward for consideration by the 35th Session of the Executive Committee of the Commission.

Improved Working Arrangements (Paras 113-115)

14. The Committee noted that the Commission had decided for the Secretariat to prepare a Summary of the Commission's work following each of its sessions as well as a summary of all policy decisions so far made by it. The Committee noted that a Summary Status of Work of this Committee would be included in the final version of the report.

Status of Codex Methods of Analysis (Para. 139)

15. The Committee's attention was drawn to the decision by the Commission on the status of the different types of methods of analysis.

Holding of Working Group Sessions (Paras 147-148)

16. The Committee noted the request of the Commission to consider carefully the need for working groups and agreed to follow the Commission's instruction that they be in accordance with the Rules of the Commission.

Matters related to Items on the Agenda

17. The Committee noted that the Commission had advanced the standards under consideration, approved new work assignments, and provided advice on several other matters such as HACCP considerations; and agreed that these matters be taken up under the appropriate agenda items. The same decision was made concerning the reports of the Codex Committees on Food Additives and Contaminants, Food Labelling, Food Hygiene, and Methods of Analysis and Sampling respectively.

Guideline Levels for Mercury in Fish (Paras 222-224, 410)

18. The Committee recalled that the Codex Committee on Food Additives had agreed to undertake the work of establishing levels of mercury in fish since in its view, groups of populations with a high proportion of fish in their diet might be at risk. The Committee (CC/FAC) had recommended guideline levels for mercury in fish and fish products at its 19th Session (0.5 mg/kg for all fish, except for predatory fish such as shark, swordfish, tuna and pike for which the levels should be 1 mg/kg) and had agreed to submit them to governments for comments at Step 3 if the Commission so agreed. The CC/FFP at its 17th session, however, had expressed the view that establishment of guideline levels for mercury in fish did not seem to be the most appropriate way to protect the consumer (ALINORM 87/18, paras 263-270).

The Committee noted that the Commission at its 17th session agreed that a decision on this matter be postponed until the new evaluation of mercury by the 33rd Meeting of JECFA was available.

19. The Committee had before it Conference Room Document (CRD 19) containing the draft report of the 33rd JECFA on methylmercury and noted that JECFA had only assessed methylmercury as new data were only available on this compound. JECFA had confirmed the previously recommended PTWI of 200 µg (3.3 µg/kg b.w.) for methylmercury for the general population, but had noted that pregnant women and nursing mothers were likely to be at greater risk to adverse effects from methylmercury. JECFA had noted the distinction between elevated methylmercury levels found in certain fish from unpolluted waters and similar levels that could result from industrial pollution. In this regard, levels of selenium and other naturally occurring trace constituents in fish from unpolluted waters might play an important role in moderating methylmercury effects. JECFA had been aware that fish was a nutritious food and efforts were under way in many countries aimed at increasing fish consumption as an integral part of a well balanced diet. Furthermore the dietary habits of regional and etchnic groups had evolved over the centuries in response to their needs and were entrenched in their culture. Any recommendations that implied needed change to these habits should be based on compelling arguments and must not overlook possible implications. JECFA, however, had recommended that efforts should continue to minimize human exposure to methylmercury which resulted from industrial pollution.

20. The Committee noted that the 20th Session of CC/FAC had proposed that, in order to accelerate a decision on whether guideline levels for Hg in fish recommended by it be placed in the Codex Step Procedure, the matter should be referred to the 35th Session of the Executive Committee, which would have available the opinions of JECFA and the 18th Session of this Committee.

21. The Committee reaffirmed its earlier views as contained in paras 263-270 of ALINORM 87/18 that establishment of guideline levels for mercury in fish did not seem to be the most appropriate way to protect the consumer and that fisheries management and other control programmes that were currently being applied in a very effective manner in many countries were keeping the situation under control. The Committee also expressed the view that if guideline levels for Hg were to be established for fish, they should be for methylmercury and not for total mercury.

22. However, noting that guideline levels were advisory only and could prove useful to governments, the Delegations of Australia and Sweden supported the establishment of guideline levels for Hg in fish.

CODEX COMMITTEE ON FOOD ADDITIVES AND CONTAMINANTS, 20TH SESSION (ALINORM 89/12)

23. The Committee noted that the 20th Session of CC/FAC had:

- Agreed to discuss at its next session, on the basis of a paper to be prepared by a consultant, the future activities of the Committee in regard to the establishment and regular review of provisions relating to food additives in Codex standards and the possible mechanism for establishment of general provisions for the use of food additives in non-stadardized foods as a horizontal approach in the light of changing requirements in international trade;

- considered the composite sampling plan adopetd for pesticide residues (CAC/PR 5-1984) appropriate for some environmental contaminants, Hg, Pb and Cd but not for aflatoxin;

- agreed that consequent to the lowering of the ADIs allotted to canthaxanthine and erythrosine by JECFA, Codex Commodity Committees should review the maximum levels of these additives in standards elaborated by them.

24. The Committee noted that provisions have been made for use of canthaxanthin and erythrosine in canned and quick frozen shrimps or prawns at a maximum level of 30 mg/kg and agreed to undertake a review of these levels at the present session under Item 23 (Other Business).

Review of Acceptances of Codex Standards for Fish and Fishery Products (CX/FFP 88/2-Add.1)

25. The Committee noted that the following notifications had been received from member countries:

Cuba:

As of February 1987, Cuba has accepted the following standards:

CODEX STAN 95-1981 (Quick Frozen Lobsters)	With specified deviations
CODEX STAN 70-1981 (Canned Tuna and Bonito in Water or Oil)	With specified deviations
CODEX STAN 92-1981 (Quick Frozen Shrimps or Prawns)	With specified deviations
CODEX STAN 94-1981 (Canned Sardines and Sardine-Type Products)	With specified deviations
CODEX STAN 119-1981 (Canned Mackerel and Jack Mackerel)	With specified deviations

Cuba has also stated that it is in agreement with the following Codes of Practice which are considered to be very useful for international trade:

- Code of Practice for Lobsters (CAC/RCP 24-1979)
- Code of Practice for Smoked Fish (CAC/RCP 25-1979)
- Code of Practice for Salted Fish (CAC/RCP 26-1979)
- Code of Practice for Minced Fish prepared by Mechanical Separation (CAC/RCP 27-1983)
- Code of Practice for Crabs (CAC/RCP 28-1983)

Finland:

Products complying with the following Codex Standards may be freely distributed in Finland, subject to certain specified conditions:

- Quick Frozen Shrimps or Prawns (CODEX STAN 92-1981)
- Quick Frozen Lobsters (CODEX STAN 95-1981)
- Canned Shrimps or Prawns (CODEX STAN 37-1981)
- Canned Crab Meat (CODEX STAN 90-1981)
- Canned Tuna and Bonito in Water or Oil (CODEX STAN 70-1981)

United States:

The United States have notified "free distribution" for products complying with the following standards, subject to certain specified conditions:

- Quick Frozen Gutted Pacific Salmon (CODEX STAN 36-1981)
- Quick Frozen Lobsters (CODEX STAN 95-1981)
- Canned Sardines and Sardine-Type Products (CODEX STAN 94-1981)

26. The Delegation of the United States, while assuring the Committee of the continuing participation of the United States in the work of the Codex Alimentarius Commission stated that the United States had considered it necessary and beneficial to examine the work carried out so far and to assess the extent to which this Committee was meeting its objectives of developing "trade standards" which truly represented the minimum necessary

to protect consumers from the point of view of the United States. An in-depth study revealed that all standards contained sufficient safety provisions, that earlier standards needed up-dating and that the more recent standards were more complex with increasing amounts of detail, requiring instructions to assure their uniform application. The delegation expressed the hope that the Committee would be able to revert to less complex standards, covering the essential provisions necessary to achieve the aim of the Commission.

27. The Delegation of the United States informed the Committee that it had tabled an agriculture negotiating proposal in the Uruguay Round of GATT in July 1987 and a Discussion paper elaborating on that proposal in February 1988. A key element in the proposal had been recognition that health and sanitary laws and regulations were major forces in world trade. These regulations should be established based on sound scientific rationale and should not contitute arbitrary or unjustifiable restrictions on international trade. The U.S. has proposed that negotiations should seek agreement: (1) on an international approach to the harmonization of health and sanitary regulations, insofar as it does not adversely affect health and safety; and (2) to base domestic regulations on objective non-aesthetic and internationally-agreed standards. Greater harmonization of standards could be achieved by establishing formal GATT links with competent international standards organizations, including the Codex. Enhanced cooperation with international standards organization could provide the GATT with the technical and scientific expertise to improve and reinforce the GATT's ability to minimize the adverse trade effects of health and sanitary regulations to eliminate their use as disguised trade barriers, and to facilitate trade.

28. The Delegation of the United States also indicated that its formal acceptance of Codex standards was slow because of the legal implications. However, in cooperation with industry, a programme was being established of testing products covered by Codex standards to see whether they complied with these standards and to establish an extensive data base. Examination to these data would provide the basis for notifications to the Commission. The delegation invited other member countries to support the principles governing the development and acceptance of international standards.

29. The Committee noted that the 8th Session of the Codex Committee on General Principles had extensively discussed problems related to acceptances, noting that "free distribution" statements were a step forward to facilitating international trade, but that they could not replace formal acceptance. The Committee further noted that the 35th Session of the Executive Committee would review the relationship between GATT and the Codex Alimentarius Commission, based on an extensive background paper.

30. The Observer of the EEC informed the Committee that the EEC was in the process of establishing minimum public health conditions to facilitate the movement in the Community of fish, crustaceans, molluscs, harvested wild or farmed, which would cover public health and animal health aspects to avoid disease transfer.

REPORT ON FAO ACTIVITIES OF INTEREST TO THE COMMITTEE (Item 5)

31. The Representative of the FAO Fishery Industries Division informed the Committee of activities within the FAO programme which were of direct interest to it.

32. An Expert Consultation on Fish Inspection and Quality Assurance for Asia and the Pacific, held in Cochin, India, in February 1987 had provided an opportunity for the industry, exporters and importers, as well as regulatory agencies, to engage in a useful dialogue. Cooperative networks in fish technology research in Africa and Asia have continued to expand and technical meetings in both regions had just been held. In Africa the emphasis is on dried fish, including the use of pesticides. In Asia, a programme to investigate the microbiological quality of shrimp, from harvest and through processing plants using good manufacturing practice, is in progress. A comprehensive report would be presented at a future meeting of this Committee.

33. A Sub-Committee on Fish Trade of the FAO Committee on Fisheries (COFI) has been set up, at the request of the 1984 World Fisheries Conference. At the first session in October 1986 a request was made for a review of the use of health and quality regulations as non-tariff barriers to trade. A paper to be presented at the second session in

October 1988 stated that there was no evidence of deliberate attempts to restrict trade, but that misunderstandings resulted from the complexity and volume of the regulations. Training programmes in fish technology and inspection, funded by the Danish Government, have continued and a request has been made for further extension of the project.

34. The Globefish system of international fish market indicators, based in Rome, had been expanded. The databank was now used to prepare a quarterly review of international fish trade, Globefish Highlights. The system also provided backstopping for the network of regional marketing information and technical advisory services. Of these "Infofish", serving Asia and the Pacific, had now become independent as an inter-governmental organization. "Infosamak" had been started with UNDP funding in the Middle East while "Infopêche", funded by the Government of Norway, served Africa. "Infopesca", the original service in Latin America, was now supported by its members.

REVISION OF LABELLING PROVISIONS IN STANDARDS FOR FISH AND FISHERY PRODUCTS (Item 6)

35. The Committee had before it a working paper (CX/FFP 88/14) containing proposals for the revision of the labelling provisions in standards developed by the Committee as consequential amendments to the adoption of a Revised Codex General Standard for the Labelling of Prepackaged Foods.

36. The Committee recalled that the 16th Session of the Commission had adopted the above standard (Volume VI, 2nd Ed. of the Codex Alimentarius) and related Guidelines for Labelling Provisions in Codex Standards (Procedural Manual, 6th Ed.). At the request of the Commission, this Committee at its 17th Session, had requested the Secretariat to prepare a paper on consequential amendments to Codex standards as well as new standards under consideration for fish and fishery products.

37. The Committee noted that, in principle, the Codex General Standard for the Labelling of Prepackaged Foods applied to all foods. However, it was recognized in the standard (preamble to Section 4) as well as in the guidelines, that Codex Commodity Committees such as the CC/FFP, might establish different provisions in specific Codex standards, provided they complied with the general principles in Section 3 of the General Standard and that such different provisions could be properly justified.

38. The Committee also noted that the General Standard did not contain provisions for non-retail containers. The guidelines, however, defined non-retail containers (Section 5.2) and offered a format for specific labelling provisions for non-retail containers (Section 5.3) which, in essence, provided the option to declare certain information on accompanying documents instead of the label itself.

39. The Committee agreed to introduce the new preamble, referring to Sections 2, 3, 7 and 8 of the General Standard for the Labelling of Prepackaged Foods in all standards for fish and fishery products except for those standards which covered bulk products only. In the latter case, the Committee introduced the preamble for non-retail containers included in the guidelines. (Reference to Sections 2, 3 and 8.1.3).

40. The Committee agreed that the purpose of this revision was to align the labelling provisions in the standards with the General Labelling Standard and decided not to consider additional proposals for substantive changes in the labelling provisions of already adopted standards. It agreed that proposals for substantive amendments other than those above mentioned consequential amendments would be noted in the report, as appropriate.

41. The Committee decided to consider the proposals standard by standard and to include the final amended labelling sections as an Appendix to the report for endorsement by the Codex Committee on Food Labelling and adoption by the Commission. (See Appendix XII).

(a) Quick Frozen Gutted Pacific Salmon (CODEX STAN 36-1981)

42. The Committee:

- Agreed to include the preamble elaborated for non-retail containers (Section 5.3 of the Guidelines on Labelling Provisions, as amended) since the scope of the standard covered products in bulk only;

- noted a proposal made by France and supported by Switzerland to require declaration of the term "Pacific" in the name of the food (Section 5.1);

- noted that the declaration of the country of origin: (a) was mandatory in Argentina for all foods (Section 5.4) and (b) should be mandatory in this standard as it provided better information to the consumer (Portugal);

- decided to declare the net contents, country of origin, name and address, and lot identification by reference to the relevant sections of the General Standards (Sections 4.3 to 4.6), and

- decided that the above decision did apply to all standards,

- decided to introduce a specific provision for the declaration of net weight (exclusive of glaze) for glazed products,

- included the usual provision for non-retail containers giving an option on declaration either on the label or the documents.

43. The Committee discussed extensively the need to introduce date marking and appropriate storage instructions, noting the instructions included in the General Labelling Standard on the one hand and the Committee's position to date marking of quick frozen fish and fishery products on the other, which was identical to the views expressed by the Joint ECE/Codex Alimentarius Group of Experts on Quick Frozen Foods (para 40 of ALINORM 81/25).

The Delegation of the United States referred to recent work undertaken by the International Institute for Refrigeration which had confirmed that the quality of quick frozen foods depended more on the initial product quality, processing, packaging and the temperature of storage and that date marking might therefore be misleading.

The Delegations of France, Spain, Portugal and the United Kingdom were in favour of date marking, referring to relevant EEC regulations which were being established. The Delegation of Switzerland was of the same opinion.

The Committee decided for all quick frozen products not to introduce date marking requirements, but to include in the standard the same storage instruction provisions as in the draft standard for fish blocks.

44. The Committee considered the need for an introduction of provisions for irradiated foods and was informed that the Committee on Food Labelling had not yet clarified its position with regard to such declaration for foods in non-retail containers. The Committee noted that reference to Sections 6.1 and 6.3 of the General Standard for Irradiated Foods were relevant, but decided not to take action, pending advice from CCFL.

(b) Canned Shrimps or Prawns (CODEX STAN 37-1981)

45. In addition to the generally applicate decisions in para. 42, the Committee:

- Decided to take over the preamble elaborated for prepackaged foods (Section 4.1.1 of the Guidelines on Labelling Provisions) for all standards except those for Quick Frozen Gutted Pacific Salmon and for quick frozen blocks;

- agreed that the list of ingredients be declared by reference to Section 4.2 of the General Standard in all standards, where applicable;

- agreed to a mandatory declaration of drained weight in accordance with Section 4.3.3 of the General Standard;

- decided that the reasons given in Appendix XII to ALINORM 87/18 for not introducing date marking in the Standard for Canned Pacific Salmon, applied to all other canned fish standards. It was noted that the Committee on Processed Fruits and Vegetables had introduced the date of minimum durability in its standards. It further noted the position of the EEC which required in its labelling directive date marking of products destined to the ultimate consumer. This position was supported by Thailand;

- considered the need to introduce provisions for irradiated foods, instructions for use, quantitative labelling of ingredients and exemptions for small units, which, according to the guidelines, should be given by reference to the relevant sections of the General Labelling Standard. The Committee noted that in other Committees proposals had been made to simplify labelling provisions and agreed to propose to the Labelling Committee that the above sections should be referred to in the standard by including in the preamble reference to the relevant sections of the General Labelling Standard;

- agreed to include specific provisions for non-retail containers (Section 5.3 of the guidelines).

(c) Canned Tuna and Bonito in Water or Oil (CODEX STAN 70-1981)

46. In addition to the generally applicable decisions in paras 39, 42 and 45, the Committee:

- Decided to introduce a footnote in Section 6.1.1 that governments should indicate the provisions in force in their country when notifying acceptance;

- decided to retain the optional character of the use of a descriptive term in Section 6.1.2 since this reflected usual marketing practice, qualifications of specific terms were retained as mandatory provisions;

- agreed not to introduce a requirement for drained weight in this particular standard, recalling extensive technological considerations at an earlier session which had concluded that the specific processing techniques of the products made it difficult to determine their drained weight. The Delegations of the Federal Republic of Germany, Switzerland and France informed the Committee that these countries required drained weight declaration for canned tuna as an important matter of consumer information. The Delegations of the United States and of Australia were opposed to introducing a provision for drained weight.

(d) Canned Crab Meat (CODEX STAN 90-1981)

47. In addition to the generally applicable decisions in paras 39, 42 and 45, the Committee:

- Agreed to include in Section 6.1.1 a footnote requiring accepting countries to state their specific position.

(e) Quick Frozen Shrimps or Prawns (CODEX STAN 92-1981)

48. In addition to the generally applicable decisions in paras 39, 42 and 45, the Committee:

- Agreed that the specific provision on food additives in cooking or glazing water were covered by the reference to Section 4.2 - List of Ingredients and therefore deleted Sub-Section 6.3.2.

(f) Canned Sardines and Sardine-Type Products (CODEX STAN 94-1981)

49. The Committee agreed that the decisions taken in paras 39, 42 and 45 should apply as appropriate and decided to include the footnote in Section 6.1.1 requiring governments to state their position when accepting the standard.

(g) Quick Frozen Lobsters (CODEX STAN 95-1981)
Canned Mackerel and Jack Mackerel (CODEX STAN 119-1981)
Canned Pacific Salmon (CODEX STAN 3-1985)

50. Besides the generally applicable decisions in paras 39, 42 and 45 the Committee did not make any further amendments to the above standards. The Committee confirmed that, since there were no provisions for packing media in the Canned Salmon Standard, there was no need to introduce drained weight provisions in that standard.

CONSIDERATION OF DRAFT STANDARD FOR QUICK FROZEN BLOCKS OF FISH FILLET, MINCED FISH FLESH AND MIXTURES OF FILLETS AND MINCED FISH FLESH AT STEP 7 (Item 7)

51. The Committee had before it the above standard as contained in ALINORM 87/18, Appendix III, the Government comments (CX/FFP 88/4 and 88/4-Add.1), technological justification for food additives in fish standards (CX/FFP 88/13) and comments on the document CX/FFP 88/13 (CX/FFP 88/13-Add.1). The Committee had also before it a sampling plan for fish blocks (Conference Room Document 4) which had already been endorsed by CC/MAS and the relevant sections of the report of the Working Group on Methods of Analysis (See para. 6).

Scope

52. The Delegation of the Federal Republic of Germany brought the attention of the Committee to the fact that the scope as written was intended to apply to fish blocks prepared from all types of fish including fish with brown flesh while the defects tables contained in Annex B referred only to blocks prepared from white fish, and proposed that a foot-note be included to the scope section of the standard to this effect.

The Committee agreed to the proposal of the Federal Republic of Germany but expressed the view that the inclusion of the footnote to the defects tables as such appeared to be more appropriate.

The following footnote was included in Annex B:

"The standard applies to fish blocks prepared from all types of fish, but the defects table refers to fish blocks prepared from only certain types of fish (Gadidae, Merluccidae, Scorpaenidae and the order Pleuronectiformes). "

Section 2.1 - Product Definition

53. The Delegation of the Federal Republic of Germany informed the Committee that, in its view, common production practices restricted the use of mixtures of species to minced fish flesh products and proposed that Section 2.1 (a) (ii) should be amended to read as: "A mixture of species with similar organoleptic characteristics (for minced fish flesh only). "

The Committee acknowledged that blocks of fish fillet were presently made only from single species of fish but noted that there was no technological justification to continue this practice in the future and that mixtures of fish species could be used. The Committee proposed that the use of mixed species of fish should not be restricted to only blocks of minced fish flesh. The fish species, when used as mixtures, should, however, have similar organoleptic properties.

The Committee agreed that Section 2.1 (a) (ii) should be amended to read as: "A mixture of species of similar organoleptic characteristics".

Section 2.3 - Presentation

54. The Delegation of the Federal Republic of Germany proposed amendments to Sections 2.3 (a) and 2.3 (b) to harmonize the presentation in all standards for quick frozen fish.

The Committee expressed the view that the amendments proposed by the Federal Republic of Germany would lead to extensive labelling in the standards that the trade would not be happy with, and agreed only with the amendment proposed by Japan, which made the section on "presentation" quite clear and concise.

Accordingly Section 2.3 (a) (i) would read as: "skin on, unscaled, pin bones present or removed".

Section 3.1 - Raw Materials

55. The Committee noted that the comments made by the Federal Republic of Germany with regard to glazing was covered by Section 6.3.2. It agreed to refer the question about

provision for foreign/added water in the standard to the Working Group on Methods of Analysis.

56. The Chairman of the Working Group on Methods of Analysis informed the Committee that the Working Group had discussed at length working papers CX/FFP 88/5 (U.K.), CRD No. 23 (FRG) and CRD No. 24 (Canada) and had noted a working paper on water in fatty fish, prepared by Portugal. All members of the Working Group had been of the opinion that it was desirable to monitor and control added water in fish products; the Working Group had, however, agreed that at present there was no procedure available to determine with any confidence the presence and extent of added water. The Working Group had therefore recommended not to include in this standard, as well as in the two other standards at Step 7, any requirements to control added water at the present time. The Committee agreed with the recommendation of the Working Group and did not introduce a section on added/foreign water in this and the other two standards under consideration.

Section 4 - Food Additives

Section 4.1 - Phosphates and Alginates

57. The Committee noted that there was a need to provide a functional class name to the food additive provisions since the Codex General Standard for prepackaged foods prescribed the declaration of a food additive either by a specific name or, if the additive falls within a specific functional class, by the class name with the specific name of the additive or the relevant international number.

The Committee also noted that "Phosphates and Alginates" was not considered to be a suitable class name for all the food additive contained in Section 4.1 since it did not provide any useful information to the consumer about their function.

The Committee agreed that for the class name "Moisture/Water Retention Agent" as proposed by CC/FAC should be suggested to CCFL. Accordingly Section 4.1 would read as: "Moisture/Water Retention Agents".

Sections 4.1.1 - 4.1.5

58. The Committee noted that these food additive provisions had not been endorsed by CC/FAC which sought from this Committee information on technological justification, chemical formulae and correct synonyms. The Committee noted that the above information sought by CCFAC was provided in document CX/FFP 88/13 prepared by Norway.

59. The Committee agreed to make the following corrections:

Section 4.1.1 should read as: "Monophosphate, monosodium or monopotassium (Monosodium or monopotassium orthophosphate)".

60. The Committee expressed the view that the level of 5 g/kg expressed as P_2O_5 singly or in combination, was the added level of phosphates and agreed to seek the opinion of CC/FAC on how the maximum level in the final product should be expressed. The Committee noted that the phosphates naturally present in the product ranged from 4 up to 5 g/kg expressed as P_2O_5.

61. The Delegations of Switzerland, Poland, Federal Republic of Germany and France expressed reservation on the use of polyphosphates.

62. The Committee noted that sodium alginate was needed in addition to phosphates. Phosphates fixed the free calcium present in fish flesh and allowed the alginate to solubilize and secure its thickening properties.

Section 4.3 - Thickening Agents

63. The Committee agreed to correct the class name to read as "Thickeners" and noted that the use of all thickeners had been technologically justified (see CX/FFP 88/13) and that all of them had been toxicologically cleared for use by JECFA.

64. The Committee concluded that the document CX/FFP 88/13 on technological justification for food additives in certain fish standards be reviewed and corrected by the Codex Secretariat and submitted as a working document to the 21st Session of CC/FAC, which would be considering endorsement of the food additive provisions in the fish standards.

Section 5 - Hygiene and Handling

65. The Committee was informed that the 19th Session of the Codex Committee on Food Hygiene had recommended to include in Section 5.3 reference to the Code of Practice for Minced Fish (CAC/RCP 27-1983) and that CCFH had endorsed Section 5 of the standard as amended. It was noted that reference to the most recent revision of the General Principles on Food Hygiene had been included in this section.

Section 6 - Labelling

66. The Committee considered an amended version of this section as contained in CX/FFP 88/14 and confirmed its decisions taken in connection with the revision of the labelling section of the Codex Standard for Quick Frozen Gutted Pacific Salmon (see para. 39) on the format of labelling sections applying to non-retail containers only.

67. The Committee decided to introduce in Section 6.3 - Net Contents, a specific provision for glazed products, requiring that the declaration of net contents of these products be exclusive of glaze.

Section 7 - Methods of Analysis and Sampling

68. The Committee noted that the Codex Methods of Analysis had now been classified into Types I-IV methods and agreed to delete the preamble.

Section 7.1 - Sampling Procedure for Fish Blocks

69. The Committee noted that the Sampling Plans for Fish Blocks which it had elaborated, had been endorsed by CC/MAS and agreed to include, as Section 7.1, the sampling plan contained in CX/MAS 86/6-Add.1 with the deletion of the Example Interpretation.

Section 7.4 - Determination of Net Content of Products covered by Glaze

70. Some delegations informed the Committee that fish blocks covered by glaze did not move in international trade and proposed that Section 7.4 be deleted. The Committee, however, noted that the scope of the standard applied also to blocks made from fish with brown flesh, and that blocks of fish from herring and mackerel were indeed glazed. The Committee expressed the view that the method CAC/RM 41-1971 (AOAC method 18.002, 14th Edition) used for the determination of glaze in the fish fillet standard would not be suitable for the determination of glaze in blocks. The Committee agreed to send out a Circular Letter inviting governments to propose methodology for determination of glaze in fish blocks, particularly those not intended for processing into fish sticks and fish portions, that could be considered at the next session of the Committee.

Section 7.5 - Determination of Proportions of Fillet and Minced Fish in Quick Frozen Blocks prepared from Mixtures of Fillet and Minced Fish

71. The Committee agreed that the method as contained in "Changes in Methods" JAOAC 1988, 71.206 should be used for the determination of proportions of fillet and minced fish. The Committee, however, noted that this method had been evaluated for cod only and was accurate for determination of levels of mince greater than 10 per cent. The Committee noted that a WEFTA method was available. (See para. 104 and Appendix III to ALINORM 87/18).

Section 7.6 - Candling Procedure for the Detection of Parasites

72. The Committee agreed that the procedure used for candling should be non-destructive of the sample. This requirement ruled out reference to the method published in "Changes in Methods" JAOAC 1985, 66.549. The Committee recommended acceptance of the general

candling procedure described in the draft standard for quick frozen fish sticks (ALINORM 87/18, Appendix IV, Section 7.5) except that the words "or by any other suitable method" should be deleted since the procedure was a Type I Defining Method.

The Committee noted that the candling procedure should be applied to fish blocks after they were thawed and that for blocks containing fish with skin on, there was no requirement to remove the skin before examination. The Committee recalled that the different codes of practice for different fish elaborated by it at its earlier sessions, contained provisions which recommended examination of sample material before processing to avoid significant parasitic infection of the product.

Section 8 - Classification of Defectives

73. The Committee noted that a reference should also be made to Annex C and agreed to modify this section to read as "A block which exceeds the tolerances for defects provided for in Annex B and Annex C shall be considered a "defective sample unit" ".

Annex A

74. The Committee agreed to await discussions of the draft proposal of a General Standard for Quick Frozen Fish Fillets before taking a decision to include a thawing method in the standard (see para. 120).

Cooking Methods

75. The Delegation of the Federal Republic of Germany proposed that the temperature of the sample before cooking should be brought to -18°C in order to achieve standard cooking conditions. The Committee agreed to leave the text unchanged.

Annex B

Defects Table for Quick Frozen Blocks of Fish Fillets and Blocks of Mixtures of Fillets and Minced Fish Flesh

76. The Delegation of the Federal Republic of Germany proposed for consideration by the Committee a sub-sampling scheme that would reduce considerably the sample size for testing. The Committee expressed the view that the sub-sampling scheme proposed by the Federal Republic of Germany would prove useful in factory quality control and should be appended to the report.

77. The Delegation of the Federal Republic of Germany also put forward a new proposal for providing a uniform number of maximum 20 total allowable demerit points in all standards and explained to the Committee the merit of accepting such a proposal (see CX/FFP 88/4 for details).

Though there was merit in the above proposal, the Committee realized that there would be difficulties if this new approach was adopted and did not agree with the proposal of the Federal Republic of Germany.

Block Irregularity

78. The Committee noted that block dimensions were normally decided by buyer and seller and any irregularities in dimensions or deviations from the agreed dimensions were settled between them. The Committee also noted that the end use of blocks was not known at the time of export or import and debated whether to delete block irregularity from the defect table.

The Committee, however, left it in, noting that demerit points for block irregularity would only be taken into consideration when the blocks were intended for cutting into cores for fish sticks or fish portions.

The definition of the defect was corrected to read as "Block irregularity (applies only to blocks intended for cutting into cores for fish sticks or fish portions)".

The Committee noted that demerit points due to block irregularity would not apply if there was no declaration about the dimensions.

Dehydration (Freezerburn)

79. The Committee noted that clauses "a" and "b" contained in the defect description were not applicable to blocks but took no action so as to harmonize the existing defect descriptions contained in standards for fish products.

Blood Clots

80. The Delegation of France proposed that clots up to 5 mm should be given 2 demerit points and clots greater than 5 mm should be given 4 demerit points.

The Committee noted that this might have significant consequences and, therefore, took no action on the proposal of France.

Bones

81. The Delegation of the Federal Republic of Germany proposed that in the case of blocks containing fillets with pin bone removed, the presence of more than 3 defect bones/kg should make the block defective. The Committee realizing that acceptance of such a proposal would lead to other problems, took no action.

Parasites

82. The Committee noted that the present allotment of demerit points for parasites might result in increased penalization for presence of parasites because of the possibility of double assessing of this defect due to the interpretation of the defect description, but took no action since the text was already adopted in the fillet standard.

Viscera

83. The Committee noted that roe which could sometimes be present, was not objectionable and agreed to change the definition of defects to read as "Any portion of the viscera".

Foreign Material

84. The Committee noted that presence of packaging material in blocks, unlike in fish portions, was not a serious defect and did not agree to the proposal of the Delegation of the United Kingdom to increase the demerit points from 2 to 4 for presence of packaging materials.

Odour

85. The Committee considered a proposal by the Delegation of France to change the present defect description to read as "Any objectionable odour or which differs from the characteristics of the species" but took no action since in its view the proposed change was a matter for interpretation.

Annex C

Bone

86. The Committee noted that if the demerit points for the presence of fine bone material was retained, a method based on the digestion of fish material to achieve separation of the bone material would need to be developed. Enzymic digestion with papain or alkali digestion similar to an AOAC method for determination of shell in crab meat might be possible. The Committee was hesitant in accepting the unclear and unsubstantiated draft specified maximum of 0.2 percent of bone material calculated as calcium.

The Delegation of the United States drew the attention of the Committee to the fact that the bone material in minced fish could vary significantly, depending on the species of fish used and also on the equipment. Higher recovery of mince would lead to higher content of bone material.

The Committee noted that the figure of 0.2% for bone material in minced fish would not be acceptable and deleted the provision. The Committee, however, attached the highest importance to the subject of determining bone material in minced fish and encouraged countries to continue work to elaborate reliable methodology.

87. The Delegation of the Federal Republic of Germany made a general reservation on all quick frozen fish standards about the different maximum allowances of demerit points for Gadidae/Merluccidae and Scorpaenidae/Pleurinectiformes, respectively, because this would lead to unequal evaluation of single defects, which was not acceptable.

Annex D

Inspection Technique for Quick Frozen Fish Blocks

88. The Committee noted that the inspection techniques in Annex D were guidelines only and should not be a part of the standard. Some governments agreed, in principle, with the technique presented. It was, however, felt that in the calculation of total demerit points for the block more weight was given to demerit points in the frozen state than in the thawed state, possibly because the blocks were meant only for use as fish sticks and portions. The Committee, however, recognized the importance of guidelines for inspection techniques for quick frozen fish blocks and agreed on the development of more detailed guidelines. It agreed to seek the views of governments by means of a Circular Letter on how best this could be achieved and to work towards such a goal.

The Committee also noted that elaboration of a set of instructions on the application of the Codex Standards for Fish and Fishery Products would be extremely useful to member governments and agreed to address the problem at a future session.

Status of the Standard

89. The Committee advanced the Draft Standard for Quick Frozen Blocks of Fish Fillets, Mixed Fish Flesh and Mixtures of Fillets and Minced Fish Flesh to Step 8 of the Procedure. The draft standard which is attached as Appendix II to the report, will be considered for adoption by the 18th Session of the Commission.

CONSIDERATION AT STEP 7 OF THE DRAFT STANDARD FOR QUICK FROZEN FISH STICKS (FISH FINGERS) AND FISH PORTIONS - BREADED OR IN BATTER - (Item 8)

90. The Committee had before it the above standard as contained in Appendix IV to ALINORM 87/18 and comments thereon in CX/FFP 88/7 (France, Federal Republic of Germany, Japan and Thailand), CX/FFP 88/7-Add.1 (Portugal) and CRD No. 10 (Denmark). The Committee noted that certain sections of the following papers also applied: CX/FFP 88/13 (Food Additives), CX/FFP 88/14 (Labelling) and CRD No. 29 (Methods of Analysis).

91. The Committee agreed that the decisions taken on the draft standard for quick frozen fish blocks applied also to the sections on fish core in this standard, as appropriate; and requested the Secretariat to make the necessary amendments. It was also agreed that the term used for the fish content of the product should be "fish core".

Section 3.2.1 - Minimum Requirements for Fish Core

92. The Committee considered proposals to either increase the minimum requirements for fish core to 60% from the currently included 50%; to include two limits: 50% or 60% according to the weight of the fish core for fish portions; or to have more detailed requirements according to weight, processing and coating. The Committee decided to include a minimum requirement of 50% for all products in order to keep the standard simple and agreed that, as this was a minimum value, member countries could set different specifications for specified products. The Delegation of France, supported by the Delegation of the Federal Republic of Germany and the United Kingdom, proposed that the

minimum fish core requirement should apply to fish flesh and not include added water. Since the methods of analysis applied to the fish core as such, no change was made. Concerning the provisions for added/foreign water, see para. 56.

Section 4 - Food Additives

93. The Committee noted that the food additive provisions as contained in Sections 4.1 and 4.2 for fish fillet and minced fish flesh only, were exactly the same as in the Draft Standard for Quick Frozen Blocks of Fish Fillets, Minced Fish Flesh and Mixtures of Fillets and Minced Fish Flesh and agreed that all the earlier conclusions of the Committee apply to these provisions.

94. In addition, the following editorial corrections were agreed to:

- Section 4.1.2 should read as "Antioxidants";
- Section 4.1.2.1 should read as "Ascorbic acid or its sodium or potassium salts";
- Section 4.2.1.1, amended to read as "Citric acid or its sodium or potassium salts", the maximum level in the final product should be corrected to read as "1 g/kg singly or in combination";
- Section 4.2.2 should read as "Thickeners".

Section 4.3.1 - Leavening Agents

95. The CC/FAC had not endorsed the phosphates covered by provisions 4.3.1.1 - 4.3.1.4 and had asked this Committee to set maximum levels since numerical ADI existed for all these food additives. The Committee proposed a maximum level of 1 g/kg for the phosphates, singly or in combination.

The Committee noted that Section 4.3.1.7 - Sodium, Potassium and Ammonium Carbamates - had not been toxicologically cleared for food use by JECFA and deleted it from this section.

Section 4.3.4 - Colours

96. The Committee supported the use of colours for bread coating or batter and agreed for the inclusion of the following:

Food Colour	Maximum Level
Annatto	20 mg/kg as Bixin
Caramel (Plain)	Limited by GMP
β-Carotene)	100 mg/kg singly or in combination
β-apo-carotenal)	
Paprika Oleoresin	Limited by GMP

97. The Delegation of United States informed the Committee that in addition to the above colours, Beet Red, Carotenes (Natural), Riboflavin, Titanium Dioxide and Turmeric were used in its country for the purpose of marketing breaded fish products that would aesthetically meet the consumer demand.

98. The Committee agreed to the following amendments to the remaining provisions of Section 4:

- 4.3.6 Emulsifying agents should read as "Emulsifiers";
- 4.3.6.2 should read as "Lecithins";
- There should be a new provision 4.3.6.3 that should read as "Mono- and Diglycerides";
- 4.3.7 Chemically Modified Starches should read as "Modified Starches";
- The Committee agreed to delete provisions 4.3.7.5 Distarch Glycerol, 4.3.7.6 Distarch Glycerol Acetylates and 4.3.7.7 Distarch Glycerol Hydroxypropyl, since the JECFA had not allotted ADI to these modified starches.

Section 6 - Labelling

99. The Committee considered a revised version of this section as contained in working paper CX/FFP 88/14 and decided:

- that the generally applicable decisions taken in paras 39, 42 and 45 would also apply to this standard;

- to introduce in Section 6.1.1 a footnote requiring governments, when accepting the standard, to notify the provision in force in their country;

- to retain the advisory nature of Section 6.1.2 (reference to species or mixture of species). Several delegations had proposed that this declaration should be mandatory. The Committee agreed, however, that Section 6.1.1, as currently drafted, ensured appropriate consumer information and that a more flexible interpretation of Section 6.1.2 was appropriate;

- to retain the advisory nature of Section 6.1.5 for the same reasons given in the paragraph above;

- to retain the Section 6.8 - Storage Instructions;

- to introduce a section on non-retail containers (see also para. 42).

100. The Secretariat was requested to revise Section 6 of the standard accordingly. The Delegation of the Federal Republic of Germany reserved its position on the wording of Section 6.1.6 because, in accordance with German legislation, the presence of bones must be labelled in fish sticks only.

Section 7 - Methods of Analysis and Sampling

101. The Committee agreed to delete the preamble to this section which was considered to be inappropriate; decided to retain Sections 7.1, 7.2 and 7.3 unchanged; and agreed with the recommendations of the Working Group on Methods of Analysis (CRD No. 29A).

Section 7.4 - Estimation of Fish Core

102. The Committee amended the reference to the AOAC method and deleted reference to alternative methods.

Section 7.5 - Candling Procedure

103. The Committee deleted reference to "or an alternative method under development".

Section 7.6 - Fish/Mince Proportions (New)

104. The Committee noted the recommendation of the Working Group to include the same method as prescribed in the standard for quick frozen blocks. The Committee noted also that that method had not been tested for mince determination of mixed blocks in the end-product. Several delegations referred to the WEFTA method which had been extensively tested and found to be appropriate. The Committee was informed that the method had been published and that the relevant data were contained in CX/FFP 88/7. The Committee decided that this method should be circulated for comments for consideration at the next session and that the Circular Letter should also contain any available information on the performance of the method. The Delegation of the Federal Republic of Germany offered to provide that information. The Committee also decided to introduce a new Section 7.6 with the above heading and the note "to be developed".

New Section - Added/Foreign Water

105. The Committee decided not to include this section for the reasons given in para. 56.

Annex A

106. The Committee decided to retain both methods for cooking; to introduce the method for deep fat frying from the comments in CX/FFP 88/7; and to delete the examples, presently included in the Annex, concerning the introduction of a thawing method (See para. 120).

Annex B

Section 1

107. The Committee amended the title to read "Presence of surplus loose coating".

Section 3

108. The Committee did not agree with the Federal Republic of Germany to base such a section on count rather than on percentage and left this section unchanged.

Sections 7 and 8

109. The Delegation of Japan proposed to amend the percentage to ± 15%. The Committee agreed with the Delegation of Canada that Sections 7 and 8 would lead to a double counting of defects. It decided to retain Section 7 - deleting the square brackets; and to delete reference to "decoated core as measured by weight" and the relevant provision from Section 8. The remainder of Section 8 was re-numbered.

Section 14

110. Consequential to its decision in the quick frozen blocks standard the Committee deleted "bone material" from the defect table.

111. The Committee agreed that in Sections 15 and 16 the same amendments be made as agreed for the quick frozen blocks standard, and to correct Section 19 - Texture (thawed state) by introducing the same wording as in the quick frozen blocks standard (see also para. 91).

Maximum Allowable Tolerance for Defects

112. The Committee noted that the figures in square brackets reflected the tolerances given in the Harmonized Defect Tables for Quick Frozen Fish Fillets. It also noted a proposal by the Federal Republic of Germany which apportioned allowable demerit points to core and coating and provided for a total maximum for the product. While several delegations felt that this was a reasonable way to deal with the problem, the Committee agreed to retain the simpler formula presently included in the standard and deleted the square brackets.

113. The Delegation of the Federal Republic of Germany, supported by the United Kingdom, expressed its reservation on this decision since the unconditional maximum levels were detrimental to the applicability of these defect tables. The Delegation of France expressed its reservation concerning the application of two different tolerance limits for Gadidae and Merluccidae on the one hand and other species on the other, when Sections 6.1.2 and 6.2 did not require a mandatory declaration of the fish species used.

Status of the Standard

114. The Committee decided to advance the Draft Standard for Quick Frozen Fish Sticks (Fish Fingers) and Fish Portions - Breaded or Battered, as amended, to Step 8 of the Procedure. The text of the standard, as contained in Appendix III, will be submitted to the 18th Session of the Commission for adoption.

PROPOSAL TO HARMONIZE THE CODEX STANDARDS FOR QUICK FROZEN FILLETS OF COD AND HADDOCK, OCEAN PERCH, FLATFISH AND HAKE (Item 9)

115. Subsequent to the adoption by the Commission at its 17th Session of Harmonized Defects Tables in the above standards (ALINORM 87/18, Appendix II), the possibility of

combining the four standards concerned into one single standard was examined by the Delegation of Norway which prepared document CX/FFP 88/8 on this matter for consideration by the Committee. Government comments on this document were contained in CX/FFP 88/8-Add.1, CX/FFP 88/8-Add.2 and Conference Room Documents Nos. 6, 14 and 17. The Committee had also before it a Conference Room Document 2, prepared by Norway, which contained a comparison of the texts of the four standards. The text of the Hake Standard (CODEX STAN 93-1981), which was the most developed, had been taken as the standard for comparison.

116. The Committee noted that there was a large degree of agreement between the text of the four standards. A review of the government comments brought out two conspicuous points:

i) Need for broadening the scope of the standard to include other species on the precondition that the defects tables were not affected;

ii) Changes in the labelling section consequent to the broadening of the scope.

The Committee noted that, while there was an intent to broaden the scope of the standard, it should be noted that it was not open to all species without boundaries, such as fillets of darker flesh and higher fat content. There was a consensus in the Committee to include the fish from the families: i) Gadidae, ii) Merluccidae, iii) Scorpanidae and iv) the order Pleuronectiformes.

117. The Committee noted that the consequential changes to the labelling section would be as proposed by Norway and contained in CX/FFP 88/8-Add.1, amended in conformity with the decisions taken under Item 6, as appropriate.

118. The possibility for inclusion of other fish in the future was discussed. The Committee noted that the harmonized standard would be promoted through the Codex Step Procedure and governments would have enough opportunities for proposing for inclusion of other species of fish in the standard. The Delegation of Argentina proposed that ophidiedae and bothidae and pleurumectidae, two species of fish common in Argentina, should be considered for inclusion in the standard. The Delegation of Thailand supported by Australia, proposed to consider extending the standard to other species of importance to other countries.

119. The Committee adopted the following recommendations of the Working Group on Methods of Analysis concerning Section 7 of the standard:

- Insertion of Codex method CAC/RM 41-1971 (AOAC method 18.002, 14th Ed.) for the determination of glaze;

- inclusion of a non-destructive procedure for candling, for skin-less fillets only. It was agreed that the method should be the same as the one included in the draft standard for fish sticks;

- comments were needed on whether the requirement for salt as an optional ingredient (Section 3.2) was necessary. If retained, the method should be the same as in the draft standard for fish blocks. Clarification was necessary on whether the maximum limit of 1% applied to the products including or excluding glaze. The two provisions were placed in square brackets;

- for added/foreign water, see para. 56.

120. The Committee noted that the thawing procedure proposed in the standard would be suitable for quick frozen fish sticks but not for blocks. The Delegations of the United States and Canada jointly proposed the following procedure that could be used for thawing of blocks:

"The frozen block is placed on a tray or pan and left to thaw under controlled time and temperature conditions so that the internal product temperature does not exceed 5°C. After the block has been completely thawed, the thaw drip is drained and the product is held not more than 2 hours at a temperature which does not exceed 5°C prior to examination. "

The Committee decided that comments should be requested on this matter.

Status of the Standard

121. The Committee agreed to amend the draft to reflect the above decisions and decided to advance the Proposed Draft General Standard for Quick Frozen Fish Fillets, as contained in Appendix VI, to Step 5 of the Procedure.

CONSIDERATION AT STEP 7 OF THE DRAFT STANDARD FOR DRIED SALTED FISH (KLIPPFISH) OF THE GADIDAE FAMILY (Item 10)

122. The Committee had before it the above standard as contained in Appendix VI to ALINORM 87/18 and comments thereon in CX/FFP 88/9 (France, Japan and Thailand).

123. The Committee noted that the draft standard had been adopted at Step 5 by the 17th Session of the Commission, and that revised provisions for labelling were included in CX/FFP 88/14. It agreed that a small Working Group should consider specific sections of the draft standard. The Committee expressed its appreciation to the Working Group chaired by Norway and consisting of the Delegations of Norway, Iceland, Denmark, Canada, Italy, Thailand and Portugal and noted that it had recommended several amendments to the standard (CRD No. 32). The Committee also noted that the Working Group on Methods of Analysis and Sampling had reviewed Section 8 of the standard (CRD No. 29). The Committee agreed to consider these reports in connection with the relevant sections of the standard.

Section 2.2.2 (b) - Artificial Drying

124. The Chairman of the Working Group on Dried Salted Fish informed the Committee that the group had considered a request to delete this section but had recommended to retain this section unchanged. The Committee agreed with this recommendation.

Section 3.2 - Salt

125. The Committee agreed to delete "and not previously used" since the remaining wording of this section was sufficient to safeguard hygienic quality of the salt. The Committee decided not to include reference to food-grade salt.

Section 3.3 - Final Product

126. The Committee decided to replace the present text by the following wording: "Dried Salted Fish Products shall contain no more defects than permitted by Annex A".

Section 4.1 - Preservatives

127. The Committee decided to accept the recommendation of the Working Group that the provision for a maximum level for sorbic acid and its salts should read: "200 mg/kg in the final product, singly or in combination, (calculated as sorbic acid)" and that the technological justification for the food additives had been provided in document CX/FFP 88/13.

Section 7 - Labelling

128. The Committee confirmed that the scope of the standard covered prepackaged products and products in non-retail containers. It also decided that the decisions outlined in paragraphs 39, 42 and 45, as appropriate, should be applied. The Committee also agreed to include the usual footnote in Section 7.1.1 - The Name of the Food (see para. 46).

129. Concerning date marking, the Committee decided that the date of minimum durability was appropriate for prepackaged products. It noted that other Committees had encountered difficulties with date marking of non-retail containers and decided not to introduce such provisions in this standard. This product, in particular, was often collected from small producers and it was therefore impossible to establish a date for larger consignments.

Section 8 - Methods of Sampling, Examination and Analysis

130. The Committee noted and agreed with the recommendation of the Working Group that no methods of analysis were necessary for the standard and amended the title of this section accordingly.

Section 8.1 - Sampling

The Committee decided that this section should read as follows:

"8.1 Sampling

8.1.1 Sampling for Sensoric Examination

For those provisions detailed in Sub-Section 2.3 and the Defects Table in Annex A, sampling shall be carried out as follows:

A consignment of non-retail containers is defined as one inspection lot, and sampling shall be carried out in accordance with the Sampling Plan for Prepackaged Foods (AQL 6.5 CAC/RM 42-1969, as amended), provided the sample units withdrawn are representative of the consignment."

Annex A - Defect Tables

131. The Committee noted that the Working Group on Dried Salted Fish had revised the defect tables (CRD 4) and expressed its appreciation to the delegations which had participated in this work.

The Delegation of Norway, having chaired the Working Group, proposed to delete Section 11 on parasites since it had not been possible to agree on the text. The Committee agreed that parasites were appropriately covered by the hygiene provisions in the standard and decided to delete Section 11 from Annex A.

Concerning the maximum allowance of demerit points of 60 in this standard, the Delegation of the Federal Republic of Germany proposed to lower the limit to 20 by dividing all points by three which would be in accordance with the intention to establish unified tables in the future. The Committee decided not to change the wording in Annex A at the present time.

Status of the Standard

132. The Committee decided to advance the Draft Standard for Dried Salted Fish (Klippfish) of the Gadidae Family, as amended, to Step 8 of the Step Procedure. The text of the standard as contained in Appendix IV to this report will be submitted for adoption to the 18th Session of the Commission.

AMENDMENTS AT STEP 4 TO THE CODEX CODE OF PRACTICE FOR SALTED FISH (CAC/RCP 26-1979) TRANSFER OF ANNEX A TO APPENDIX V OF ALINORM 85/18 FROM THE DRIED SALTED FISH STANDARD TO THE ABOVE CODE (Item 11 (a))

133. The Committee agreed that the advice on the quality of salt used for the production of salted fish that is given in the Code of Practice for Salted Fish should be revised to be made consistent with the specification for salt given in Annex A to the Draft Standard for Dried Salted Fish as contained in Appendix V to ALINORM 85/18 to that Code. It was considered that it was more relevant to include this information in a code (Section 5.4.2) than in a standard and the Annex was therefore deleted from the standard (See Appendix VII).

OBJECTIVE METHOD OF DETERMINING THE FINAL QUALITY OF SALTED HERRING (Item 11 (b))

134. The Committee had before it the above method as contained in Appendix IX to ALINORM 87/18. It noted that CX/FFP 88/10 had not been prepared as no written comments had been received. Iceland submitted comments in CRD 27. The question was raised whether or not objective methods as described in the above proposal were appropriate in a Code of

Practice. During the discussion it was suggested that the maximum level of histamine should be reduced to 100 mg/kg but it was decided to await the decision of the Committee on Food Hygiene before making a recommendation on this matter. It was pointed out that levan and dextran forming bacteria should be treated in the same way as halophiles rather than pathogens.

135. The Committee recommended to return the method to Step 3 and to send a Circular Letter to member governments requesting detailed comments on the proposal by Finland and seeking advice on enlarging the scope of the code to include lightly and heavily salted herring products.

TECHNOLOGICAL JUSTIFICATION FOR FOOD ADDITIVES (Item 12)

136. This item was considered in connection with the draft standards under consideration.

INCLUSION OF HACCP CONCEPT IN CODES OF PRACTICE FOR FISH AND FISHERY PRODUCTS (Item 13)

137. The Committee had before it Proposals for a Revised Version of the Code of Practice for Shrimps or Prawns to include HACCP Notes as contained in Appendix XI to ALINORM 87/18 which had been proposed by the United States to the 17th Session of this Committee, and comments thereon in CX/FFP 88/15 (Thailand) and CX/FFP 88/15-Add.1 (Portugal).

138. The Committee noted that the 22nd Session of the Codex Committee on Hygiene had again considered the feasibility of including such notes in codes, and that CCFH has concluded that it was more appropriate to prepare a general statement for inclusion in the Procedural Manual (Appendix VI and paras 91-95 to ALINORM 87/13A). The 17th Session of the Commission had not taken a decision on this matter and had requested Codex Committees to comment on Appendix VI.

139. The Committee noted that the 23rd Session of CCFH also had considered the usefulness of HACCP but had not thought it suitable to include CCP notes in codes, since individual establishments had to assess their specific processing conditions. CCFH had considered the establishment of General Principles on HACCP and had decided to return to this matter at its next session based on a background paper.

140. The Committee noted that the Codex Codes of Practice for Fish and Fishery Products contained already extensive explanatory notes and decided, in view of the ongoing work in the CCFH, to postpone further discussion of this matter. The Committee also decided to take up the matter of whether HACCP was appropriate when developing new codes of practice.

CONSIDERATION OF A WORKING PAPER ON AQUACULTURE (Item 14)

141. The Committee considered the background paper to the proposed Code of Practice for Aquaculture (CX/FFP 88/20) and complimented the FAO Fisheries Department on the quality of the paper. In view of the rapidly growing economic and social importance of aquaculture, and the dramatic increase in the quantity of the products of aquaculture entering international trade, the Committee recommended that efforts to elaborate a code of practice should be continued. Bearing in mind that this activity was not presently included in FAO's 1988-89 Programme of Work and Budget, the Committee urged that it should be given a high priority. In the interim, the Committee proposed that information on the content and scope of a code should be sought from member governments. It was suggested that this could be done by a comprehensive questionnaire. The Committee requested the FAO Fisheries Department to circulate such a questionnaire and evaluate the replies for presentation to the Committee. Many delegations from countries where aquaculture is traditionally practiced, promised their full support.

CONSIDERATION AT STEP 7 OF THE DRAFT CODE OF PRACTICE FOR CEPHALOPODS (Item 15)

142. The Committee had before it the above code as contained in Appendix VII to ALINORM 87/18 and comments thereon in CX/FFP 88/16 (Ireland and Thailand) and CRD 15 (France). The Committee noted that the 17th Session of the Commission had adopted the above code at Step 5 of the Procedure and agreed to concentrate its discussions on the provisions in square brackets.

Section 1 - Scope

143. The Committee agreed to include the Ilex species in this section.

Sections 4.3.2 - 4.5.7

144. The Delegation of Thailand expressed the view that unused ice carried on board fishing vessels should not have to be discarded after returning from the fishing trips. As the same provision was included in the Code of Practice for Fresh Fish and the other fishery product codes, this would mean a general amendment which, while discouraging the re-use of ice that had been in contact with the product, would not insist that clean (unused) ice be discarded after a fishing trip. It was decided to obtain further comments on this matter and to introduce such a general amendment at a later time, if appropriate.

Sections 4.6.3.4 and 4.6.3.5

145. The Committee considered these sections and agreed to include a provision that absorption of water during treatment to firm the flesh should be prevented and to delete the square brackets.

Section 5.4.4 - Dry-Salting

146. The Committee decided to remove the square brackets from this section.

Section 5.4.5 - Smoking

147. In referring to its written comments, the Delegation of France proposed inclusion of limits for benzopyrenes and appropriate methodology for reasons of consumer protection. The Committee agreed that this matter should be treated like other contaminants and decided not to amend the code in this specific case.

Status of the Code

148. The Committee decided to advance the Draft Code of Practice for Cephalopods, as contained in Appendix V, to Step 8 of the Procedure.

MICROBIOLOGICAL SPECIFICATION FOR QUICK FROZEN COOKED CRAB MEAT (Item 16)

149. The Committee had before it documents CX/FFP 88/3, CX/FFP 88/3-Add.1 and Conference Room Document No. 9 containing government comments. The Delegation of Norway summarized the governments comments in a tabular form which was made available to the Committee as CRD 12. The Committee had also available to it some background papers on the subject provided by the United States (CRD 11).

150. The Committee noted that the present exercise for establishing microbiological specification for quick frozen cooked crab meat was undertaken by the Committee since the Codex Committee on Food Hygiene expressed the view that the microbiological specifications for precooked shrimps or prawns would not be applicable to crab meat since processing conditions for the two types of products could vary in some countries and restrictive values could have a negative effect on the production of crab meat in those countries.

151. The Committee also noted that the CL 1986/62 sought, in addition to information on microbiological specifications for frozen cooked crab meat, views of governments on whether the sampling plan for Salmonella was statistically significant and whether provision for E. Coli should be added to the criteria.

152. The Committee noted that of the different countries that responded to the circular letter, only Norway and the United States had provided microbiological data on crab meat developed at processing plants. Therefore, it was hesitant to propose microbiological specifications for frozen cooked crab meat on such limited data, especially in view of its repercussions on international trade in crab meat.

153. The Committee agreed not to take action at this session but to send out another circular letter asking governments to provide an actual data base for the microbiological specifications for crab meat emphasizing that data should be gathered on crab meat at the place of production and not at the point of entry. In all cases details of the method of manufacture should be known.

COMPARATIVE ANALYSIS TO DETERMINE INCLUSION OF OPISTHONEMA OGLINUM IN THE CODEX ALIMENTARIUS STANDARD FOR SARDINES AND SARDINE-TYPE PRODUCTS (Item 17)

154. The Committee had before it document CX/FFP 88/17 containing a summary of studies carried out on sensoric characteristics of Opisthonema Oglinum by the Federal Research Centre for Fisheries (Federal Republic of Germany), the Finnish Customs Laboratory and the Torry Research Station, U.K. The Committee had also available to it the complete reports of the studies from the above laboratories (CRD 7) and comments from Brazil (CRD 22).

155. The Committee noted that the studies as above were carried out to fulfil the fourth condition of the procedure for the incorporation of additional species of fish in a Codex Standard, i.e. reports from at least 3 laboratories from those to be nominated by the Committee, stating that the organoleptic properties of the new species after processing confirm with those of processed species currently included in the pertinent standard. The species of fish proposed for inclusion in the Codex Standard fulfilled the three other conditions, namely: (i) Toxicological Examination, (ii) Potential Resources, and (iii) Processing Technology.

156. The Committee noted that though the presentation of processed Opisthonema Oglinum (commercial sample from Cuba) was not acceptable, the sensoric characteristics of the processed fish per se conformed with those of species currently included in the Codex Standards for Sardines and Sardine-type Products. The Committee agreed that Opisthonema Oglinum should be included in Section 2.1 (a) of the Codex Standard for Sardines and Sardine-Type Products since it fulfilled all four conditions needed for inclusion of a new species of fish in the standard.

Status of the Amendment

157. The Committee decided that the amendment procedure be initiated and requested the Secretariat to take appropriate action at the 18th Session of the Commission. The Committee further decided to place the amendment, as contained in Appendix XIV, to the report at Step 3 of the Procedure and to invite comments for consideration by the next session of the Committee.

158. The Delegations of Portugal, France, Spain and Morocco informed the Committee that, in their view, the conditions needed were not fulfilled satisfactorily since the presentation of the fish was not acceptable as a sardine-type product and expressed reservation about the Committee's decision.

CONSIDERATION OF THE PROPOSED DRAFT STANDARD FOR DRIED SHARK FINS AT STEP 3 OF THE PROCEDURE (Item 18)

159. The Committee had before it working paper CX/FFP 88/18 containing the above standard and comments thereon in CRD 21 (Japan, Mexico, Panama and Portugal), CRD 16 (Thailand), CRD 26 (Nicaragua) and CRD 28 (additional comments from Japan).

160. The Committee noted that the standard had originally been drafted as a regional standard by the Coordinating Committee for Latin America and the Caribbean. In view of the world-wide trade and production in several regions, the 17th Session of the Commission had decided, at the proposal of this Committee, that the standard be elaborated by this Committee as a world-wide standard (para. 407 of ALINORM 87/18).

161. The Delegation of Cuba had agreed to request comments for the purpose of converting the regional standard into a world-wide standard and had prepared that standard included in CX/FFP 88/18 which subsequently was distributed for comments at Step 3. The Committee noted that the comments received applied partly to the regional version and partly to the world-wide version.

Status of the Standard

162. In view of this confusing situation, the Committee agreed to retain the standard at Step 3 of the Procedure and appended it to this report (Appendix X) for a further round of comments at Step 3 and further consideration at the next session.

163. The Committee expressed its thanks to the Delegation of Cuba for the excellent work done on drafting the world-wide standard.

CONSIDERATION OF A FIRST DRAFT OF A STANDARD FOR QUICK FROZEN SQUID (Item 19)

164. The Committee had before it document CX/FFP 88/19 which contained the above draft as prepared by the United States. The Committee noted that the 17th Session of the Commission had approved the development of the standard and thanked the United States for the preparation of the first draft. Comments from Thailand had been submitted in CRD 30.

165. The Delegation of the United States introduced the paper and pointed out that it had received data from other interested countries and that the standard, as presently drafted, reflected processing practices from factory vessels as well as shore-based facilities.

166. The Committee was informed by the Delegation of Sweden that the reference to the WHO drinking water documents should refer to the WHO Guidelines for Drinking Water Quality instead of the earlier standard. The Committee decided to amend this reference in its documents.

Status of the Standard

167. The Delegations of the United Kingdom, France, Thailand and Japan offered technical comments, mainly on presentation (Section 2). The Committee agreed to place the standard at Step 3 of the Step Procedure and requested also the above delegations to re-submit their comments in writing. The Proposed Draft Standard for Quick Frozen Squid is contained in Appendix IX to this report.

CONSIDERATION OF PROPOSALS FOR THE REVISION OF THE CODEX STANDARD FOR CANNED SHRIMPS OR PRAWNS (CODEX STAN 37-1981) (Item 20)

168. The Committee had before it a working paper prepared by the United States (CX/FFP 88/12) containing proposals to amend Sections 2.3.3.1, 3.3.6.1 and 7.2.3 to align them with current trade practices. The Committee noted that the 17th Session of the Commission had approved initiation of the amendment procedure.

169. The Delegation of the United States explained that in view of present harvesting and processing procedures smaller sized shrimps were increasingly utilized and, therefore, the category "tiny" was insufficient. The Committee noted that the proposed amendment introduced a third column in the tabulation related to cans of 4.25 ounces, customarily used in the United States, and questioned whether this type of data should be included in an international standard.

170. The Committee thanked the United States for preparing the paper and decided to place the proposed amendments (as contained in Appendix VIII) at Step 3 of the Step Procedure and to request comments on the text for consideration at its next session.

CONSIDERATION OF INFORMATION PAPER ON SURIMI (Item 21)

171. The Committee had before it a working paper entitled "Background Document on Surimi" (CX/FFP 88/21) which had been prepared by the United States as agreed by the 17th Session of this Committee (paras 284-285 of ALINORM 87/18).

172. The Delegation of the United States introduced the paper and indicated that it reflected the data from two conferences on surimi, recently held in the United States. Information was provided on: (a) international trade in surimi and analogue products, (b) resource availability for surimi and world production, (c) technological development and processing research, and (d) product quality and safety.

173. The Delegation of Japan informed the Committee that surimi was an intermediate product used in many traditional Japanese foods and that its composition and functional Gel-Forming Activity (GFA) varied depending on the foods concerned.

174. The Delegations of Morocco and the United Kingdom expressed their interest in the product. The Observer bf MARINALG stated that the production of surimi could increase utilization of under-utilized fish species and informed the Committee that species with low GFA were also suitable if the GFA could be improved by simultaneous use of suitable sea-weed extracts by using appropriate technology.

175. The Committee thanked the United States for the excellent paper and, noting the increased interest of countries in this product, decided to request the Delegation of the United States to provide a Progress Report on Surimi for the next session of the Committee. The Delegation of the United States agreed to provide such a report and invited other delegations to supply any information that might be relevant.

AD-HOC WORKING GROUP ON METHODS OF ANALYSIS AND SAMPLING

176. As indicated in para. 6 the Committee had established an Ad-Hoc Working Group for Methods of Analysis and Sampling. Under its terms of reference the Working Group reviewed working papers concerning methods of analysis and sampling in standards under elaboration as well as in already adopted Codex Standards for Fish and Fishery Products and presented its recommendations to the plenary (CRD Nos 29A and 29B). The countries participating at the Working Group are listed in para. 6 above.

The Chairman of the Working Group, Mr. R.S. Kirk of the United Kingdom, introduced, and the Committee dealt with, methods of analysis in standards under elaboration in connection with the relevant agenda items.

With regard to the revision of methods of analysis in existing Codex Standards (CRD No. 1), Mr. Kirk informed the Committee that the Working Group had reviewed the methods and made recommendations concerning their applicability in the individual standards (CRD No. 29B).

The Committee thanked the Chairman and the members of the Working Group for the thorough and constructive work.

REVIEW OF METHODS OF ANALYSIS AND SAMPLING (Item 22)

177. The Committee had before it the Report of the Working Group on its review of Conference Room Document No. 1. The report, as introduced by the Chairman of the Working Group, was adopted by the Committee (see also para. 176).

178. The Chairman of the Working Group brought the attention of the Committee to the need for elaboration of a method for determining drained weight for gelled packs and proposed that the methodology proposed by the United Kingdom for determination of added water, as contained in document CX/FFP 88/5, should be tested by other countries and their experience with the method considered at the next session of the Committee.

179. The Committee agreed to seek comments from governments on the Report of the Working Group on Methods of Analysis and Sampling, as contained in Appendix XV to this report, for review at its next session.

OTHER BUSINESS (Item 23)

Proposed Amendments to the Codex Standard for Canned Mackerel and Jack Mackerel (CODEX STAN 119-1981)

180. The Committee had before it CRD 3 containing a proposal from the Federal Republic of Germany on the subject as above.

Introducing the document, the Delegation of the Federal Republic of Germany was of the opinion that there were no significant differences in the presentation between canned mackerel and canned herring type products. Hence the proposal to amend the Codex Standards for Canned Mackerel and Jack Mackerel to include canned herring and herring type products was put forward for consideration by the Committee.

181. The Committee did not express an opinion on the above proposal at this session since the document could not be studied in depth. The Committee agreed to consider the proposal at its next session on the basis of government comments and to deliberate on the issue from a technical perspective before referring it to the Commission.

The proposed amendment of the Codex Standard for Canned Mackerel and Jack Mackerel is attached as Appendix XIII to this report.

Review of Food Additive Provisions in Codex Standards - Addition of Tara Gum to the List of Additives

182. The Committee had before it CRD 5 containing a proposal from the Tara Development Group to consider the inclusion of tara gum in the food additive provisions of the Codex Standard for Canned Sardines and Sardine-Type products (CODEX STAN 94-1981) and in the Codex Standard for Canned Mackerel and Jack Mackerel (CODEX STAN 119-1981).

183. The Secretariat informed the Committee that tara gum had been cleared toxicologically for food use by JECFA and, if in its view the use of the gum in canned sardines and canned mackerel was technologically justified, it could propose inclusion of tara gum in the food additive provisions of the standards concerned as a Step 8 amendment.

184. The Committee noted that the proposal did not come from a member government and took no action.

Need for a Review of the Maximum Levels of Canthaxanthine and Erythrosine in Certain Codex Standards for Fish and Fishery Products

185. The Committee had before it CRD 25 which provided the background for the need for a review of the maximal levels of canthaxanthine and erythrosine in the Codex Standards for Canned Shrimps or Prawns (CODEX STAN 37-1981), and Quick Frozen Shrimps or Prawns (CODEX STAN 92-1981).

186. The Delegation of Switzerland proposed that the level of canthaxanthine be lowered in both the standards from 30 mg/kg to 10 mg/kg. The Delegation of the United States brought the attention of the Committee to the revision of the Codex Standard for Canned Shrimps or Prawns (see paras 168-170) and proposed that the consideration of the levels of canthaxanthine and erythrosine be merged with that activity. The Delegation of the United Kingdom informed the Committee that canthaxanthine was naturally present in shrimps and was being reviewed by the EEC, and proposed that the subject be considered at the next session of the Committee.

The Committee agreed with the latter proposal.

Vacuum Packed Fish and Fishery Products

187. The Delegation of the United States brought the attention of the Committee to the growing commerce in vacuum packed fishery products that are distributed frozen or at refrigerated temperatures and enquired whether this type of packing had been looked into carefully from the point of view of public health.

188. The Delegation of Norway informed the Committee that the sale of vacuum packed salted and smoked fish products and pasteurized products in its country was on the increase and that the products, provided they were produced, stored and transported under adequate conditions, did not give rise to problems of public health concern. The Delegation of Norway undertook to prepare a background paper on the subject for the consideration of the Committee at its next session.

FUTURE WORK (Item 24)

189. The Committee noted that the following standards and codes of practice were being submitted to the Commission for adoption at Step 8 of the Procedure:

- Draft Standard for Quick Frozen Blocks of Fish Fillet, Minced Fish Flesh and Mixtures of Fillet and Minced Fish Flesh.
- Draft Standard for Quick Frozen Fish Sticks (Fish Fingers) and Fish Portions - Breaded or Battered.
- Draft Standard for Dried Salted Fish (Klippfish) of the Gadidae Family.
- Draft Code of Practice for Cephalopods.

190. The Committee agreed that its agenda for the Nineteenth Session should include the following items:

- Draft General Standard for Quick Frozen Fish Fillets at Step 7.
- Amendments at Step 4 to:
  (a) the Code of Practice for Salted Fish (Salt Requirements and Objective Method of Determining the Final Quality of Salted Herring);
  (b) the Codex Standard for Sardines and Sardine-Type Products (inclusion of Opisthonema Oglinum);
  (c) the Codex Standard for Canned Shrimps or Prawns (classification and related provisions).
- Proposed Draft Standard for Quick Frozen Squid at Step 4.
- Proposed Draft Standard for Dried Shark Fins at Step 4.
- Microbiological Specifications for Canned Cooked Crabmeat at Step 4.
- Draft Code for Aquaculture.
- Draft Guidelines on Inspection Techniques.
- Further work on:
  (a) added water in quick frozen fish blocks and related standards;
  (b) bone material in defect tables.
- Information on Surimi.
- Revision of Methods of Analysis.
- Proposal to amend the Codex Standard for Canned Mackerel and Jack Mackerel.
- Proposal to amend maximum levels for Canthaxanthine and Erythrosine in shrimp or prawn standards.
- Information on vacuum-packaged refrigerated products.

DATE AND PLACE OF NEXT SESSION (Item 25)

191. The Committee was informed that the next session would be held in about 2 years time in Norway subject to approval by the 18th Session of the Codex Alimentarius Commission. The exact date and place would be communicated after arrangements had been finalized by the Norwegian Government and the Codex Secretariat.

SUMMARY STATUS OF WORK

Standard/Code/Document	Step	For consideration by	ALINORM/Document
Standard for Canned Pacific Salmon	9	Governments	CODEX-STAN 3-1981 CAC/Vol. V - Ed.1
Revised Version Salmon	9	Governments	CODEX-STAN 3-1985 Supplement 2 to CAC/Vol. V - Ed.1
Standard for Quick Frozen Gutted Pacific Salmon	9	Governments	CODEX-STAN 36-1981 CAC/Vol. V - Ed. 1
Standard for Canned Shrimps or Prawns	9	Governments	CODEX-STAN 37-1981 CAC/Vol. V - Ed. 1
Amendments to CODEX-STAN 37-1981	3	19th CCFFP	
Standard for Quick Frozen Fillets of Cod and Haddock	9	Governments	CODEX-STAN 50-1981 CAC/Vol. V - Ed. 1
Standard for Quick Frozen Fillets of Ocean Perch	9	Governments	CODEX-STAN 51-1981 CAC/Vol. V - Ed. 1
Standard for Quick Frozen Fillets of Flat Fish	9	Governments	CODEX-STAN 91-1981 CAC/Vol. V - Ed. 1
Standard for Quick Frozen Fillets of Hake	9	Governments	CODEX-STAN 93-1981 CAC/Vol. V - Ed. 1
Harmonized Defect Table for Quick Frozen Fish Fillets	9	Governments	Supplement 2 to CAC/Vol. V - Ed. 1
Proposed Draft General Standard for Quick Frozen Fish Fillets	5	18th CAC	ALINORM 89/18 Appendix VI
Standard for Canned Tuna and Bonito in Water or Oil	9	Governments	CODEX-STAN 70-1981 CAC/Vol. V - Ed. 1
Standard for Canned Crab Meat	9	Governments	CODEX-STAN 90-1981 CAC/Vol. V - Ed. 1
Standard for Quick Frozen Shrimps or Prawns	9	Governments	CODEX-STAN 92-1981 CAC/Vol. V - Ed. 1
Standard for Sardines and Sardine-Type Products	9	Governments	CODEX-STAN 94-1981 CAC/Vol. V - Ed. 1
- Amendments to CODEX-STAN 93-1981	9	Governments	Supplement 1 to CAC/Vol. V - Ed. 1
- Amendments to CODEX-STAN 93-1981	3	19th CCFFP	ALINORM 89/18 Appendix XIV

SUMMARY STATUS OF WORK (Cont.d)

Standard/Code/Document	Step	For consideration by	ALINORM/Document
Standard for Quick Frozen Lobsters	9	Governments	CODEX-STAN 95-1981 CAC/Vol. V - Ed. 1
Standard for Canned Mackerel and Jack Mackerel	9	Governments	CODEX-STAN 119-1981 CAC/Vol. V - Ed. 1
- Proposal for Amendment of CODEX-STAN 119-1981	-	19th CCFFP	ALINORM 89/18 APPENDIX XIII
Code of Practice for Fresh Fish	-	Governments	CAC/RCP 9-1976 (Vol. B)
Code of Practice for Canned Fish	-	Governments	CAC/RCP 10-1976 (Vol. B)
Code of Practice for Frozen Fish	-	Governments	CAC/RCP 16-1978 (Vol. B)
Code of Practice for Shrimps or Prawns	-	Governments	CAC/RCP 17-1978 (Vol. B)
- Amendments (Microbiological Specifications)	-	Governments	Supplement to CAC/RCP 17-1978 (Vol. B)
Code of Practice for Molluscan Shellfish	-	Governments	CAC/RCP 18-1978 (Vol. B)
Code of Practice for Lobsters	-	Governments	CAC/RCP 24-1979 (Vol. B)
Code of Practice for Smoked Fish	-	Governments	CAC/RCP 25-1979 (Vol. B)
Code of Practice for Salted Fish	-	Governments	CAC/RCP 26-1979 (Vol. B)
- Amendment	Edit	18th CAC	ALINORM 89/18 Appendix VII
Code of Practice for Minced Fish prepared by Mechanical Separation	-	Governments	CAC/RCP 27-1983 (Vol. B)
Code of Practice for Crabs	-	Governments	CAC/RCP 28-1983 (Vol. B)
Draft Standard for Quick Frozen Blocks of Fish Fillets, Minced Fish Flesh and Mixtures of Fillets and Minced Fish Flesh	8	18th CAC	ALINORM 89/18 Appendix II
Draft Standard for Quick Frozen Fish Sticks (Fish Fingers) and Fish Portions	8	18th CAC	ALINORM 89/18 Appendix III
Draft Standard for Dried Salted Fish (Klippfish) of the Gadidae Family	8	18th CAC	ALINORM 89/18 Appendix IV
Draft Code of Practice for Cephalopods	8	18th CAC	ALINORM 89/18 Appendix V

SUMMARY STATUS OF WORK (Cont.d)

Standard/Code/Document	Step	For consideration by	ALINORM/Document
Proposed Draft Standard for Quick Frozen Squid	3	19th CCFFP	ALINORM 89/18 Appendix IX
Proposed Draft Standard for Dried Shark Fins	3	19th CCFFP	ALINORM 89/18 Appendix X
Proposed Amendments to Labelling Provisions	-	18th CAC	ALINORM 89/18 Appendix XII
Draft Guidelines for Inspection Techniques	-	19th CCFFP	ALINORM 89/18 Appendix XI
First Draft of a Code for Aquaculture (FAO Fisheries Division)	-	19th CCFFP	ALINORM 89/18 Para 141 CX/FFP 90/...
Paper on Vacuum-packed Fish and Fishery Products (Norway)	-	19th CCFFP	ALINORM 89/18 Paras 187-188 CX/FFP 90/...
Progress Report on Surimi (USA)	-	19th CCFFP	ALINORM 89/18 Paras 171-175 CX/FFP 90/...
Review of Methods of Analysis	-	19th CCFFP	ALINORM 89/18 Appendix XV
Other Matters related to Methods of Analysis		19th CCFFP	See CL 1988/19

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ALINORM 89/18
APPENDIX II

DRAFT STANDARD FOR QUICK FROZEN BLOCKS OF FISH FILLET, MINCED FISH FLESH AND MIXTURES OF FILLETS AND MINCED FISH FLESH
(At Step 8)

1. SCOPE

This Standard applies to quick frozen blocks of cohering fish flesh, prepared from fillets or minced fish flesh or a mixture of fillets and minced fish flesh, which are intended for further processing.

2. DESCRIPTION

2.1 Product Definition

(a) Quick frozen blocks are rectangular or other uniformly shaped masses of cohering fish fillets, pieces of such fillets, minced fish or a mixture thereof comprising:

(i) a single species; or
(ii) a mixture of species with similar sensoric characteristics.

(b) Fillets are slices of fish of irregular size and shape which are removed from the carcass by cuts made parallel to the back bone and pieces of such fillets.

(c) Minced fish flesh used in the manufacture of blocks are particles of skeletal muscle which have been separated from and are essentially free from bones and skin.

2.2 Process Definition

The product after any suitable preparation shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete until the product temperature has reached a level which will ensure that the temperature at the thermal centre will not be higher than -18°C after thermal stabilization. The product shall be maintained under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. The recognized practice of further processing of intermediate quick frozen material under controlled conditions followed by the reapplication of the quick freezing process is permitted.

2.3 Presentation

(a) Fillets:

(i) skin on, unscaled, pin bone present or removed
(ii) skin on, scaled, pin bones present or removed
(iii) skinless, pin bones present or removed.

(b) Fillets skinless, pin bones removed and minced fish flesh.

(c) Minced fish flesh.

(d) Other presentations: Any other presentation of the product shall be permitted provided that it:

(i) is sufficiently distinctive from other forms of presentation laid down in this Standard;

(ii) meets all other requirements of this Standard; and

(iii) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

Quick frozen blocks shall be prepared from well drained fillets or minced flesh of sound fish which are of a quality fit to be sold fresh for human consumption.

3.2 Optional Ingredients

Food grade salt may be added provided that the total sodium chloride content does not exceed 1,0% by weight.

3.3 Final Product

3.3.1 Blocks shall contain no more defects than are permitted in Annexes B and C.

3.3.2 Cooking, steaming, baking or boiling to determine any defects should be undertaken as set out in Annex A.

4. FOOD ADDITIVES

		Maximum level in the final product
4.1	Moisture/Water Retention Agents	
4.1.1	Monosphosphate, monosodium or monopotassium (Monosodium or Monopotassium Orthophosphate)	5 g/kg expressed as P_2O_5, singly or combination.
4.1.2	Diphosphate, tetrasodium or tetrapotassium (Na or K pyrophosphate)	
4.1.3	Triphosphate, pentasodium or pentapotassium or calcium (Na, K or Ca tripolyphosphate)	
4.1.4	Polyphosphate, sodium (Na hexametaphosphate)	
4.1.5	Sodium alginate	5 g/kg
4.2	Antioxidants	
4.2.1	Ascorbic acid or its sodium or potassim salts	1 g/kg, expressed ascorbic acid, singly or in combination
4.2.2	Ascorbyl palmitate	
	In addition, for Minced Fish Flesh only:	
4.2.3	Citric acid or its sodium or potassium salts	1 g/kg, expressed as citric acid, singly or in combination.
4.3	Thickeners	
4.3.1	Guar gum	5 g/kg singly or in combination
4.3.2	Carob bean (locust bean) gum	
4.3.3	Pectins	

4.3.4 Carboxymethyl cellulose, sodium salt)
)
4.3.5 Xanthan gum)
)
4.3.6 Carageenan)
)
4.3.7 Methyl Cellulose)
)

5. **HYGIENE AND HANDLING**

5.1 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.2 When tested by appropriate methods of sampling and examination, the product:

(a) shall be free from micro-organisms in amounts which may represent a hazard to health;

(b) shall be free from parasites which may represent a hazard to health; and

(c) shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

5.3 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1985 Rev. 2), the Recommended Code of Practice for Frozen Fish (CAC/RCP 16-1978) and the Recommended Code of Practice for Minced Fish (CAC/RCP 27-1983).

6. **LABELLING**

In addition to Sections 2, 3, and 8.1.3 of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) 1/ the following specific provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food shall be declared as "x y blocks" in accordance with the law, custom or practice of the country in which the product is distributed, "y" shall represent the common name of the species or species packed and "x" shall represent the form of presentation of the block (see Section 2.3).

6.1.2 Blocks prepared from fillets may be designated in accordance with the presentations set forth in Section 2.3(a)(i) - (iii) as applicable.

6.1.3 In addition, the labelling shall show the term "frozen", or "quick frozen" whichever is customarily used in the country in which the product is distributed, to describe a product subjected to the freezing process described in sub-section 2.2

6.1.4 The proportion of mince in percentage of net fish content shall be declared by stating the percentage ranges: less than 25, 25-35, etc. Blocks with more than 90% mince are regarded as mince blocks.

6.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

1/ Thereafter referred to as "General Standard".

6.3 Net Contents

6.3.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

6.3.2 Where the food has been glazed the declaration of net contents of the food shall be exclusive of the glaze.

6.4 Name and Address
The name and address shall be declared in accordance with Section 4.4 of the General Standard.

6.5 Country of Origin
The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

6.6 Lot Identification
The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

6.7 Storage Instructions
Clear directions for storage shall be given.

6.8 Irradiated Foods(*)
Information on Sections 6.1 to 6.8 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address shall always appear on the container.

However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

7. METHODS OF SAMPLING, EXAMINATION AND ANALYSIS

7.1 Sampling Plan for Fish Blocks

SAMPLING SCHEDULE FOR FISH BLOCKS:

Lot Size (Number of blocks)	Sample Size (Number of blocks to be tested) (n)	Acceptance [1] Number (c)	Percent Defective which may be accepted 95%[2]	50% of the time	10%[3]
< 15	2	0	2.5	29.0	68.0
16 - 50	3	0	1.7	21.0	54.0
51 - 150	5	1	7.6	31.0	53.0
151 - 500	8	1	4.6	20.0	41.0
501 - 3200	13	2	6.6	20.0	36.0
3201 - 35000	20	3	7.1	18.0	30.0
> 35000	32	5	8.5	18.0	27.0

1) If the number of defective blocks in the sample is less than or equal to c, accept the lot; otherwise, reject the lot.
2) For those accustomed to working with a Producer's Risk of 5%, the percent defective in this column represents the corresponding AQLs.
3) For those accustomed to working with a Consumer's Risk of 10%, the percent defective in this column represents the corresponding RQLs.
(*) The CCFL had not given specific advice in its Guidelines on Labelling Provisions in Codex Standards on the subject of irradiated foods in non retail containers

7.2 Organoleptic Examination

Samples taken for organoleptic and physical examination shall be assessed by persons trained in such examination.

7.3 Quantities for Physical and Organoleptic Examination

The detection of net weight and weight exclusive of glaze shall be determined on a whole block in the frozen state.

7.4 Determination of Net Content of Products Covered by Glaze

(Method to be developed).

7.5 Determination of Proportions of Fillet and Minced Fish in Quick Frozen Blocks prepared from Mixtures of Fillets and Minced Fish 1/ 2/

According to the Method - Physical Separation of the AOAC; "Changes in Methods" AOAC 1988, 71, 206 (Type II).

7.6 Candling Procedure for the Detection of Parasites (Type I)

Parasites are detected by placing a sample on a 5 mm thick acryl sheet with 45% translucency and candled with a light source giving 1500 lux 30 cm above the sheet.

Parasitic infestation may be detected by this candling procedure, by visual examination.

7.7 Determination of Sodium Chloride (Type II)

According to the Codex General Method for the Determination of Chlorides in Foods. (ALINORM 76/23, Appendix IV).

8. **CLASSIFICATION OF DEFECTIVES**

A block which exceeds the tolerances for defects provided in Annexes B and/or C shall be considered a "defective sample unit."

9. **LOT ACCEPTANCE**

(i) Quality

A lot will be considered as meeting the Final Product requirements of this Standard when the total number of "defective sample units" in a sample does not exceed the acceptance number specified in the sampling plans specified in Section 7.1.

1/ This method has been evaluated for cod only but, in principle, should be appropriate to other fish species [or mixed species].

2/ This method is accurate for levels of mince greater than 10%.

(ii) Net Contents

A lot will be considered as meeting the weight requirement when the average net content of all containers examined is not less than the declared weight provided there is no unreasonable shortage in individual containers.

ANNEX 'A'

COOKING METHODS

Following procedures are based on heating product to internal temperature ≥ 70°C (160°F). Cooking times vary according to size of product and equipment used. If determining cooking time, cook extra sample using temperature measuring device to determine internal temperature. An extra sample of 200.0 grammes is used.

(a) Thawing Procedure (to be developed)

(b) Baking Procedure: Wrap product in aluminium foil and distribute evenly on flat cookie sheet or shallow flat pan. Heat in ventilated oven, preheated to 204°C (400°F), until temperature of product reaches ≥ 70°C (160°F).

(c) Steaming Procedure: Wrap product in aluminium foil and place on wire rack suspended over boiling water in covered container. Heat until internal temperature of product reaches ≥ 70°C (160°F).

(d) Boiling in Bag: Place the product into a boilable film-type pouch and seal. Immerse the pouch and its contents into boiling water and cook until the internal temperature of the product reaches ≥ 70°C (160°F).

ANNEX 'B'

DEFECTS TABLE FOR QUICK FROZEN BLOCKS OF FISH FILLETS AND BLOCKS OF MIXTURES OF FILLETS AND MINCED FISH FLESH 1/

Note: The total number of demerit points is to be calculated on a 1 kg basis and recorded to the nearest whole number, except where the points are derived from examination of the frozen block. Such points shall be added to the total derived from examination of the thawed and cooked state calculated to a 1 kg basis.

1/ The Standard applies to fish blocks prepared from all types of fish, but the defect table refers to fish blocks prepared from certain types of fish only (Gadidae, Merluccidae, Scorpaenidae and the order Pleuronectiformes)

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
A. FROZEN STATE		
1. Block Irregularity (applies only to blocks intended for cutting into cores for fish slices or fish portions) Deviations from declared dimensions (e.g. length, width and thickness of a block), non-uniformity of shape, poor angles, ragged edges, ice pockets, air pockets or other damage which would result in product loss.	a) Deviation from declared (nominal) dimensions:	
	Length, width and thickness. i) Over 5 mm in any dimension	8
	ii) Over 3 mm and up to and including 5 mm in any dimension	4
	Edges (formed by two surfaces) i) A gap greater than 10 mm between the actual and true edge	4
	ii) A gap greater than 5 mm and up to and including 10 mm between the actual and the true edge	2
	Angles (formed by three surfaces) i) A gap greater than 10 mm between the actual and true corner.	4
	ii) A gap greater than 5 mm and up to and including 10 mm between the actual and true corner measured at the apex of the corner.	2
	b) Ice Pockets	
	i) Each pocket with a surface area greater than 10 cm^2 and up to and including 20 cm^2.	4
	ii) Each additional complete area of 10 cm^2 or part thereof	2
	c) Air Pockets (including troughs)	
	i) Each pocket with surface area greater than 2 cm^2 up to and including 5 cm^2 and with a depth greater than 3 mm	4
	ii) Each additional complete area of 5 cm^2 or part thereof or if the depth is greater than 10 mm	2

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
2. Dehydration (freezerburn) i) Deep dehydration - An excessive loss of moisture from the surface of the sample unit which shows clearly on the the surface, penetrates below the surface, and cannot be easily removed by scraping.	Over 10% of total surface area or a) ≤ 200g units ≥ 25 cm² b) 201- 500g units ≥ 50 cm² c) 501-5000g units ≥ 150 cm² d) 5001-8000g units ≥ 300 cm² e) >8000g units ≥ 500 cm²	Defective
	Over 1% up to and including 10% of total surface area or a) ≤ 200g units 2.5- 25 cm² b) 201- 500g units 5.0- 50 cm² c) 501-5000g units 15.0-150 cm² d) 5001-8000g units 30.0-300 cm² e) >8000g units ≥ 500 cm²	4
ii) Moderate dehydration - A loss of moisture from the surface of the sample unit which is colour masking, but does not penetrate the surface and can be easily removed by scraping.	Over 10% of total surface area or a) ≤ 200g units ≥ 25 cm² b) 201- 500g units ≥ 50 cm² c) 501-5000g units ≥ 150 cm² d) 5001-8000g units ≥ 300 cm² e) >8000g units ≥ 500 cm²	2
B. THAWED STATE		
3. Skin and Black Membrane Skin Does not include sub-cutaneous layer (silver lining). In flat fish white skin is not regarded as a defect. 1/	a) Skinless fillet block i) Each piece greater than 3 cm² up to and including 10 cm²	4
	ii) Over 10 cm² each additional complete area of 5 cm² or part thereof.	2
Black Membrane or belly lining. Does not include white membrane.	b) Skin-on fillet blocks i) Each instance greater than 3 cm² up to and including 10 cm²	4
	ii) Over 10 cm² each additional area of 5 cm² or part thereof	
4. Scales - attached to skin	a) Skin-on fillet blocks - scaled i) Each area of scale greater than 3 cm² up to and including 10 cm²	2*
	ii) Each additional scale complete 5 cm² or part thereof.	2*

1/ In Skinless Flat Fish, small pieces of white skin are not regarded as defects, provided that the skin does not exceed more than 10% of the surface area of the fillets in the sample unit.

* For ocean perch fillets only, 1 demerit point.

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
- readily noticeable loose scales.	b) Skinless fillet blocks i) First 5 to 10 (in the case of hake fillets 10 to 20).	2
	ii) If more than 10 (for hake 20) loose scales each additional complete unit of 5 (for hake 10)	2
5. Colour Defects		
Blood Clots (Spots) Any mass of lump of clotted blood.	a) Each clot greater than 5 mm in diameter.	2
Bruises Diffused blood causing distinct reddish, brownish or other off-colouration.	b) i) Any aggregate area of discolouration or bruising exceeding 3 cm^2 up to and including 5 cm^2	2
	ii) Each additional area of 5 cm^2 or part thereof.	2
Discolouration Appears as significantly intense discolouration due to melanin deposits, bile stains, liver stains or other causes.		
Minced part of mixed blocks:	c) Minced part of mixed blocks:	
Objectionable discolouration, spots or particles derived from skin, black membrane, blood clots, blood spots, spinal cord or viscera.	i) Distinctly discoloured, spotted or otherwise heavily deviating from the colour of the species.	Defective
	ii) Objectionable deviation from the colour of the fillet	2
6. Fins or parts of fins Two or more bones connected by membrane, including internal or external bones, or both, in a cluster.	Any instance where a bone in the fin exceeds 40 mm in length.	Defective
	Each separate instance up to and including 3 cm^2	4
	Each additional 3 cm^2 or part thereof in the same cluster.	2

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
7. Bones Defect Bone A bone is regarded as a defect if its length is ≥ 10 mm or its diameter is ≥ 1 mm; a bone < 5 mm in length is not to be considered as a defect if its diameter is not > 2 mm. The foot of a bone (where it has been attached to the vertebra) shall be disregarded if its width is < 2 mm or if can be easily stripped off by a finger nail.	a) Blocks containing fillets with pin bone removed. i) Each defect bone. ii) Each critical bone. b) Blocks containing fillets with pin bone in. i) Each defect bone excluding pin bones. ii) Each critical bone excluding pin bones.	 2 Defective 2 8
Critical degree of bone defect Each defect bone whose maximum profile cannot be fitted into a rectangle, drawn on a flat solid surface, which has a length of 40.0 mm and a width of 10.0 mm.		
8. Viscera Any portion of viscera	Each instance	8
9. Parasites Parasites or parasitic infestation detected by the candling procedure. Each parasitic infestation may be recognised by its colour, its effect on softening the fish flesh or by other physical indications.	Each parasite with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 10 mm in length. Each parasite with a capsular diameter smaller than 3 mm or a parasite not encapsulated and smaller than 10 mm in length. Each fillet affected by any significant parasitic infestation.	4 2 8
10. Foreign Matter i) Any material not derived from fish or not permitted by the standard other than packaging.	Each instance	Defective
ii) Packaging material	Each instance	2
11. Odour and Flavour Objectionable odour in thawed state.	Any odour which is distinctly objectionable.	Defective

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
12. Texture (thawed state)	Any texture which is significantly different to the characteristics of the species.	Defective
C. COOKED STATE (Extra sample unit 200 grammes)		
13. Odour and Flavour Objectionable odour or flavour.	Any odour or flavour which after cooking is distinctly objectionable.	Defective
14. Texture Any texture which is significantly different to the characteristics of the species.	Distinctly objectionable, e.g. the flesh is definitely spongy, rubbery, mushy, soft, gelatinous, tough or gritty.	Defective

A sample unit is considered defective if the demerit points total more than 20 for species of the families Gadidae (cod, haddock) and Merluccidae (hake) and 32 for species of the family Scorpaenidae (red fish) or the order Pleuronectiformes.

ANNEX 'C'

DEFECT TABLE FOR QUICK FROZEN BLOCKS OF MINCED FISH FLESH

Defect Description (for defect definitions, see Annex B)		Demerit Points
FROZEN STATE (sample unit = entire block)		
1. Block Irregularity	As per Annex B	
2. Dehydration	As per Annex B	
THAWED STATE (sample unit = entire block)		
3. Discolouration, blood clots, skin, black and/or white membrane, scale, viscera, spinal cord		
a) 10-25 instances		2
b) Over 25 each additional 15 instances or part thereof		2
4. Overall discolouration		
i) Distinctly discolourerd or otherwise heavily deviating from the colour of the species		Defective
ii) Readily noticeable deviation from the colour of the species		2

5. Bone

a) Each defect bone	2
Each critical bone	Defective

6. The demerit points for parasites, foreign matter and, whether tested in the thawed or cooked state, odour, texture and flavour are as listed in Annex B.

Maximum Allowable Tolerance for Defects

The total number of demerit points is to be calculated on a 1 kg basis recorded to the nearest whole number.

A block is considered defective if the demerit points per 1 kg as calculated total more than 20.

DRAFT STANDARD FOR QUICK FROZEN FISH STICKS (FISH FINGERS) AND FISH PORTIONS - BREADED OR IN BATTER

(Step 8)

1. SCOPE

This standard applies to quick frozen fish sticks (fish fingers) and fish portions cut from quick frozen fish flesh blocks or formed from fish flesh with breaded or batter coatings, singly or in combination, raw or partially cooked and offered for direct human consumption without further processing. This standard does not apply to natural fish fillets with breaded or batter coatings.

2. DESCRIPTION

2.1 Product Definition

2.1.1 A fish stick (fish finger) is the product including the coating weighing not less than 20 g (0.7 oz.) and not more than 50 g (1.8 oz.) shaped so that the length is not less than three times the greatest width. Each stick shall be not less than 10 mm thick.

2.1.2 A fish portion including the coating, other than products under 2.1.1, may be of any shape and size excluding fish sticks (fish fingers).

2.2 Process Definition

The product after any suitable preparation shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete until the product temperature has reached a level which will ensure that the temperature at the thermal center will not be higher than -18°C after thermal stabilization. The product shall be maintained under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. (See Code of Practice for Frozen Battered and/or Breaded Fishery Products - CAC/RCP 35 - 1985). The recognized practice of further processing of intermediate quick frozen material under controlled conditions followed by the re-application of the quick freezing process is permitted.

2.3 Presentation

(i) Raw breaded fish sticks (fingers)
(ii) Raw breaded fish portions
(iii) Partially cooked breaded fish sticks (fingers)
(iv) Partially cooked breaded fish portions
(v) Battered partially cooked fish sticks (fingers)
(vi) Battered partially cooked fish portions
(vii) Other presentations

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

(a) is sufficiently distinctive from other presentations laid down in this standard;
(b) meets all the other requirements of the standard; and
(c) is adequately described on the label to avoid confusing or misleading the consumer.

2.4 The ingredients shall, when appropriate, be in agreement with the relevant Codex standard.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

3.1.1 Fish

Quick frozen breaded or battered fish sticks (fish fingers) and breaded or battered fish portions shall be prepared from fish fillets or minced fish flesh or mixtures thereof, of edible species which are of a quality such as to be sold fresh for human consumption. The raw materials may be in the form of quick frozen blocks.

3.1.2 Coating

The coating used shall consist of ingredients fit for human consumption (see also Section 4).

3.1.3 Frying fat (oil)

A fat (oil) used in the cooking operation shall be suitable for human consumption and for the desired final product characteristics (see also Section 4).

3.2 Final Product

3.2.1 Minimum Requirements for Proportions of Fish Core: 50% of declared weight of final product.

3.2.2 The products in the various forms of presentation shall comply with the definitions and essential quality factors as set forth in this standard and should not exceed the tolerance allowances as set forth in Annex B.

3.2.3 The product shall be free from objectionable odour, flavour and texture. If the product is presented under a species name, the odour, flavour and texture and the colour of the flesh shall be characteristic of the species or mixture of species used.

3.3 Optional Ingredients

Other ingredients may be used. They shall be suitable for human consumption and shall be free from abnormal taste, flavour or odour. Examples of such ingredients include: spices such as turmeric and paprika, herbs, vegetable seasonings, cereal flours, potato flour, sodium chloride, spice oils, glucose, lactose, dextrose, malt extract, skim milk powder, egg and corn syrup.

4. FOOD ADDITIVES

The maximum level in the final product is in proportion to the requirements given in 3.2.1.

	Food Additives (for Fish Fillets and Minced Fish Flesh only)	Maximum level in the final product
4.1		
4.1.1	Moisture/Water Retention Agents	
4.1.1.1	Monophosphate, monosodium or monopotassium (Monosodium or monopotassium orthophosphates)	5 g/kg expressed as P_2O_5, singly or in combination

4.1.1.2	Diphosphate, tetrasodium or tetrapotassium (Na or K pyrophosphate)	)
4.1.1.3	Triphosphate, pentasodium or pentapotassium or calcium (Na, K or Ca tripolyphosphate)	)
4.1.1.4	Polyphosphate, sodium (Na hexametaphosphate)	)
4.1.1.5	Sodium alginate	5 g/kg
4.1.2	Antioxidants	
4.1.2.1	Ascorbic acid or its sodium or potassium salts	) 1 g/kg expressed as ascorbic acid, singly or in combination
4.1.2.2	Ascorbyl palmitate	)
4.2	In addition, for Minced Fish Flesh only:	
4.2.1	Antioxidants	
4.2.1.1	Citric acid or its sodium or potassium salts	1 g/kg singly or in combination
4.2.2	Thickeners	
4.2.2.1	Guar gum	)
4.2.2.2	Carob bean (locust bean) gum	)
4.2.2.3	Pectins	)
4.2.2.4	Carboxymethyl cellulose, sodium salt	) 5 g/kg singly or
4.2.2.5	Xanthan gum	) in combination
4.2.2.6	Carrageenan	)
4.2.2.7	Methyl cellulose	)
4.3	Food Additives for Breaded or Batter Coatings	Maximum level in breaded or batter coatings
4.3.1	Leavening Agents	
4.3.1.1	Monocalcium phosphate	)
4.3.1.2	Dicalcium phosphate	)
4.3.1.3	Sodium aluminium phosphate	) 1 g/kg singly or in
4.3.1.4	Sodium acid pyrophosphate	) combination, expressed as P_2O_5
4.3.1.5	Sodium, potassium and ammonium carbonates	)
4.3.1.6	Sodium, potassium and ammonium bicarbonates	) Limited by GMP
4.3.2	Flavour Enhancers	
4.3.2.1	Monosodium glutamate	) Limited by GMP
4.3.2.2	Monopotassium glutamate	)
4.3.3	Acidifying agents	
4.3.3.1	Lactic acid	)
4.3.3.2	Citric acid or its sodium or potassium salts	) 1 g/kg of the final) product expressed as) lactic or citric acid,) as appropriate

4.3.4	Colours	
4.3.4.1	Annatto	20 mg/kg expressed as bixin
4.3.4.2	Caramel (plain)	Limited by GMP
4.3.4.3	β-carotene	100 mg/kg singly or in combination
4.3.4.4	β-apo-carotenal	
4.3.4.5	Paprika oleoresin	Limited by GMP
4.3.5	Thickeners	
4.3.5.1	Guar gum	5 g/kg singly or in combination
4.3.5.2	Carob bean (Locust bean) gum	
4.3.5.3	Carrageenan	
4.3.5.4	Xanthan gum	
4.3.5.5	Pectins	
4.3.5.6	Sodium alginate	
4.3.5.7	Hydroxypropyl cellulose	
4.3.5.8	Hydroxypropyl methyl cellulose	
4.3.5.9	Methylethylcellulose	
4.3.5.10	Sodium carboxymethylcellulose	
4.3.5.11	Methyl cellulose	
4.3.6	Emulsifiers	
4.3.6.1	Monoglycerides of fatty acids	5 g/kg of the final product singly or in combination
4.3.6.2	Lecithins	
4.3.6.3	Mono and Diglycerides	
4.3.7	Modified Starches	
4.3.7.1	- Acid treated starches (including white and yellow dextrins)	Limited by GMP
4.3.7.2	- Alkali treated starches	
4.3.7.3	- Bleached or oxidized starches	
4.3.7.4	- Distarch adipate, acetylated	
4.3.7.5	- Distarch phosphate	
4.3.7.6	- Distarch phosphate, acetylated	
4.3.7.7	- Distarch phosphate, hydroxypropyl	
4.3.7.8	- Distarch phosphate, phosphated	
4.3.7.9	- Monostarch phosphate	
4.3.7.10	- Starch acetate	
4.3.7.11	- Starch, hydroxypropyl	

5. HYGIENE AND HANDLING

5.1 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.2 When tested by appropriate methods of sampling and examination, the product:

(a) shall be free from microorganisms in amounts which may represent a hazard to health;
(b) shall be free from parasites which may represent a hazard to health; and
(c) shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

5.3 It is recommended that the product covered by the provisions of this standard by prepared and handled in accordance with the following codes:

(i) the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1985 Rev. 2);

(ii) the Recommended International Code of Practice for Frozen Fish (CAC/RCP 16-1978, Vol. B);

(iii) the Recommended International Code of Practice for Minced Fish (CAC/RCP 27-1983, Vol. B);

(iv) the Recommended International Code of Practice for Frozen Battered and/or Breaded Fishery Products (CAC/RCP 35-1985).

6. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ the following specific provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food to be declared on the label shall be "breaded fish sticks" (fish fingers), "breaded fish portions", "battered fish sticks", (fish fingers) or "battered fish portions" as appropriate or other specific name used in accordance with the law and custom of the country in which the food is sold and in a manner so as not to mislead the consumer. 2/

6.1.2 The label may, in addition, include reference to the species or mixture of species.

6.1.3 In addition there shall appear on the label either the term "quick frozen" or the term "frozen" whichever is customarily used in the country in which the food is sold, to describe a product subjected to the freezing processes as defined in sub-section 2.2.

6.1.4 Where the pack contains products which are not reasonably uniform in size, this shall be shown clearly on the label.

6.1.5 The label may show whether the products are prepared from minced fish flesh, fish fillets or a mixture of both.

6.1.6 Products prepared from raw material from which the pin bones are not removed shall be labelled accordingly in close proximity to the name of the food.

6.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

6.3 Net Contents

The net contents shall be declared by weight in accordance with Section 4.3.1 and 4.3.2 of the General Standard.

1/ Thereafter referred to as "General Standard"
2/ When accepting the Standard, governments are requested to indicate the requirements in force in their country

6.4 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

6.5 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

6.6 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

6.7 Storage Instructions

The label shall include information on proper storage conditions.

6.8 Instructions for Use)

6.9 Irradiated Foods) See paras. 40 and 45 of this Report (ALINORM 89/18)

6.10 Quantitative Labelling of Ingredients)

6.11 Exemptions)

6.12 Labelling of Non-retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provision applies to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

Information on Sections 6.1 to 6.7 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address shall always appear on the container.

However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

7. **METHODS OF SAMPLING AND ANALYSIS**

7.1 Sampling for Destructive Examination

Sampling of lots for examination of the product shall be in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5)(CAC/RM 42-1969).

7.2 Organoleptic Examination

Organoleptic assessment of the product shall be made only by persons trained in such assessment.

7.3 Determination of Net Weight

The net weight (exclusive of packaging material) of each sample representing a lot shall be determined in the frozen state.

7.4 Determination of Net Contents of Products covered by Glaze

According to Codex Method CAC/RM 41-1971(AOAC Method 18.002, 14th Edition).

7.5 Estimation of Fish Core

The fish core is estimated according to A.O.A.C. Method 18.003 (14th Edition 1980).

7.6 Candling Procedure for the Detection of Parasites

Parasites are detected by placing a sample on a 5 mm thick acryl sheet with 45% translucency and candled with a light source giving 1500 lux 30 cm above the sheet.

Parasitic infestation may be detected by this candling procedure, by visual examination.

7.7 Fish/Mince Proportions

(to be developed)

7.8 Determination of Sodium Chloride

According to the Codex General Method for the Determination of Chlorides in Foods (ALINORM 76/23 App. IV).

8. CLASSIFICATION OF DEFECTIVES

8.1 A sample unit of the product which fails to meet the requirements of Section 3.2 and Annex B shall be considered "defective".

9. LOT ACCEPTANCE

A lot will be considered as meeting the final product and weight requirements of this standard when the total number of "defectives" as classified according to Annex B does not exceed the acceptance number (c) of the appropriate sampling plan in the Sampling Plans for Prepackaged Foods (AQL-6.5)(CAC/RM 42-1969) and when the average net contents of all containers examined is not less than the declared weight provided there is no unreasonable shortage in individual containers.

ANNEX "A"

METHODS OF COOKING QUICK FROZEN FISH STICKS (FISH FINGERS) AND FISH PORTIONS - BREADED OR IN BATTER

Thawing (CAC/RM 40-1971)

The sample is thawed by enclosing it in a film type bag and immersing in an agitated water bath held at approximately 20°C (68°F). The complete thawing of the product is determined by gently squeezing the bag occasionally so as not to damage the texture of the fish, until no hard core or ice crystals are felt.

Cooking

The frozen sample shall be cooked prior to organoleptic assessment according to the cooking instructions on the package. When such instructions are not given, or equipment to cook the sample according to the instructions is not obtainable, the frozen sample shall be cooked according to the applicable method(s) given below:

The following procedures are based on procedure 18.003 of the A.O.A.C. (13th Edition 1980). It is based on heating product to an internal temperature ≥70° (160°F). Cooking times vary according to size of product and equipment used. If determining cooking time, cook extra sample, using temperature measuring device to determine internal temperature.

In the procedures given below, conversions between metric units and Fahrenheit, inches or ounces have been rounded for ease of measurement. Slight variations in these units are acceptable as long as the product is heated to an internal temperature ≥70°C (160°F).

PARTIALLY COOKED FISH STICKS (FISH FINGERS) OR FISH PORTIONS (OF ANY SIZE OR SHAPE)

Baking Procedure

Distribute product evently on a flat cookie sheet or shallow flat pan. heat in ventilated oven, preheated to 200°C (400°F) until internal temperature of product reaches 70°C (160°F).

RAW BREADED FISH STICKS (FISH FINGERS) (Weight of each stick (finger) as defined in Sub-Section 2.1.1)

Shallow Frying

Place liquid or hydrogenated cooking oil to a depth of 3 mm (1/8") in a frying pan. The oil should be hot before adding the product. Cook for 8 minutes turning the product once.

Deep Fat Frying

Use a deep fat fryer with 5 cm (1 7/8") of oil preheated to 180°C (360°F) and cook the product for 4 minutes.

Grilling

Space the product evenly on base of grill pan. Grill the product for 10 minutes turning once during this time and adjusting the heat if necessary.

RAW BREADED FISH PORTIONS (Weight of each portion not less than 50g (1.8 oz) and not more than 70 g (2.5 oz)

Shallow Frying

Place liquid or hydrogenated cooking oil in a frying pan to give approximately 6 mm (1/4") depth. With medium heat of 175°C (350°F), cook the product for 10 minutes turning once.

Deep Fat Frying

Use a deep fat fryer with 5 cm (1 7/8") of oil. Pre-heat the fat to 175°C (350°F) and cook the product for 5 minutes.

An Alternative Method of Cooking

Cooking times vary according to size of the product and equipment used; for battered/breaded products a uniform colour and crispness of the coating have to be obtained as well. Cooking time is based on heating the product to an internal temperature +70°C (according to A.O.A.C. Method 18.003)(14th Edition-1984). Turning shall be carried out twice at -5°C and +50°C respectively. If determining cooking and turning times, cook extra sample, using temperature measuring device to determine internal temperature. The product shall, before cooking, be adjusted to ca. -18°C to achieve standard cooking conditions.

Shallow frying

Place liquid or hydrogenated cooking oil/fat of neutral taste into a frying pan, preferably with thermostatically adjustable temperature. The melted fat of approximately 3 mm depth shall be preheated to 170°C before adding the product (e.g. the control lamp switches off, when the adjusted temperature is reached, but the samples should not be added before the control lamp switches on again, to come into the heating phase of the pan).

Deep Fat Frying

Use a suitable deep fat fryer with sufficient volume to cover the product completely. Liquid or hydrogenated cooking oil/fat of neutral taste of minimum 5 cm depth shall be preheated to 175°C before adding the sample. Cook the sample until the required internal temperature of 70°C is reached.

ANNEX B

DEFECT TABLES IN STANDARD FOR QUICK FROZEN FISH STICKS (FISH FINGERS) AND FISH PORTIONS - BREADED OR IN BATTER

Note: Sample unit 1 kg of packed whole product. The total number of demerit points to be calculated on a 1 kg basis and recorded to the nearest whole number.

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
A. FROZEN STATE		
DEFECTS OF FINAL PACK		
1. Presence of surplus loose coating		
Any excessive amount of loose material in the package	Over 1% of declared net content - each instance of 1% in each pack	1
2. Excessive Fat (oil)		
Perceptible amounts of oil which have stained the inside of and soaked through the packaging	Each pack affected with staining or oil soaked through the packaging	1

	DEFECTS OF WHOLE PRODUCT	FROZEN STATE (sample unit 1 kg of whole product)	
3.	Ease of separation Upon removal from the pack in the frozen state, units should separate easily by slight force exerted by hand without damage and without packing material sticking to the surface	More than 40% of the sticks (fingers) or portions in a unit that cannot be separated by hand without damage	Defective
		20-40% of the sticks (fingers) or portions in a unit that cannot be separated by hand without damage	8
		10-20% of the sticks (fingers) or portions in a unit that cannot be separated by hand without damage	4
4.	Broken and Damaged Products Broken products which have been separated into two or more pieces	a) Separated into two or more pieces (i) Sticks/portions ≤ 50g, each instance	4
		(ii) Portions > 50g, each instance	8
	Damaged products which have squashed, mashed or otherwise multilated to an extent that appearance is materially affected	b) Squashed or mashed (i) Sticks/portions ≤ 50g, each instance	4
		(ii) Portions > 50g, each instance	8
	A crack is a break in the coating greater than 10 mm in length which extends into the flesh	c) Cracked, each instance	1
5.	Coating Defects (Not arising as a result of the assessment of separation). Surface areas devoid of coating.	Devoid of coating: a) Sticks/portions ≤ 50 g i) Areas > 1 cm^2 up to and including 3 cm^2	4
		ii) Each additional complete area of 3 cm^2	4
		b) Portions > 50 g i) Areas > 2 cm^2 up to and including 5 cm^2	4
		ii) Each additional complete area of 5 cm^2	4
	Non-uniformity of coating (surface defects), including surplus coating or pre-cooking defect	Non-uniformity of coating: each instance	1
6.	Discolouration of Coating a) Colour of individual fish sticks (fingers) or portions	a) Black or very dark brown - first instance	8

which are black or very dark brown	More than 2 sticks, or more than 1 portion, > 50g	Defective
b) Colour significantly different from other units in the sample	b) Colour significantly different from other sticks/ portions in the sample - each instance	4
c) Discolouration of the total sample which is not typical for the product	c) Colour not typical	Defective
d) Widespread black spots derived from burnt bread crumbs	d) Black spots - each stick/ portion affected	8
7. Size uniformity of the coated product as measured by weight	± 20% of the nominal weight of the coated stick/portion	2
DEFECTS OF THE FISH CODE (sample unit - stripped core from 1 kg of whole product)		
8. Ice and Air Pockets		
Ice pockets and air pockets which result in damage during cooking	a) Ice pockets i) Sticks/portions ≤ 50g - each pocket with a surface area > 1 cm² up to and including 3 cm²	2
	Each additional complete area of 3 cm²	2
	ii) Portions > 50g - each pocket with a surface area > 2 cm² up to and including 5 cm²	2
	Each additional complete area of 5 cm²	2
	b) Air pockets Each pocket with a surface area > 1 cm² up to and including 3 cm² and with a depth > 3 mm	1
	Each additional complete area of 3 cm²	1
9. Dehydration		
Deep dehydration is an excessive loss of moisture from the surface of the sample unit which shows clearly on the surface and cannot be easily removed by scraping	Each instance > 5 cm² up to and including 10 cm²	2
	Each additional complete area of 10 cm²	4

B. THAWED STATE

DEFECTS OF THE FISH CORE

(Sample unit = stripped core from 1 kg of whole product)

10	Skin and black membrane Skin Does not include sub-cutaneous layer (silver lining). In flat fish white skin is not regarded as defect. 1/	a) Skinless fillet (i) Each piece greater than 3 cm² up to and including 10 cm² (ii) Over 10 cm² each additional complete area of 5 cm² or part thereof	4 2
	Black membrane or belly-lining Does not include white membrane	b) Skin on fillet (i) Each instance greater than 3 cm² up to and including 10 cm² (ii) Over 10 cm² each additional area of 5 cm² or part thereof	4 2
11.	Scales - attached to skin	a) Skin-on fillet - scaled (i) Each area of scale greater than 3 cm² up to and including 10 cm² (ii) Each additional complete 5 cm² or part thereof	2* 2*
	- readily noticeable loose scales	b) Skinless fillet (i) First 5 to 10 (in the case of hake fillets 10 to 20) (ii) If more than 10 (for hake 20) loose scales each additional complete unit of 5 (for hake 10)	2 2
12.	Colour Defects Blood clots (spots) Any mass or lump of clotted Blood	a) Each clot greater than 5 mm in diameter	2
	Bruises Diffused blood causing distinct reddish, brownish or other off-colouration	b) (i) Any aggregate area of discolouration or bruising exceeding 3 cm² up to and including 5 cm²	2

1/ In Skinless Flat Fish, small pieces of white skin are not regarded as defects provided that the skin does not exceed more than 10% of the surface area of the fillets in the sample area.

* For ocean pearch fillets only - 1 demerit point only

Discolouration Appears as significantly intense discolouration due to melanin deposits, bile stains, liver stains or other causes	(ii) Each additional area of 5 cm² or part thereof	2
Minced part of cores from mixed blocks of fillets and mince: objectionable discolouration, spots or particles derived from skin, black and white membrane, blood clots, blood spots, spinal cord or viscera	c) Minced part: (i) Distinctly discoloured, spotted or otherwise heavily deviating from the colour of the species	Defective
	(ii) Objectionable deviation from the colour of the fillet	2
Core from minced blocks: Discolouration, blood clots, skin, membrane, scale, viscera, spinal cord	d) Minced core: (i) 10–25 instances	2
	(ii) over 25, each additional 15 instances or part thereof	2
Overall discolouration:	e) (i) Distinctly discoloured or otherwise deviating from the colour of the species	Defective
	(ii) Readily noticeable deviation from the colour of the species	2
13. Fins or part of fins Two or more bones connected by membrane, including internal or external bones, or both in a cluster	Any instance where a bone in the fin exceeds 40 mm in length	Defective
	Each separate instance up to and including 3 cm²	4
	Each additional 3 cm² or part in in the same cluster	2
14. Bones Defect bones A bone is regarded as a defect if its length is ≥ 10 mm or its diameter is ≥ 1 mm; a bone ≤ 5 mm in length is not to be considered as a defect if its diameter is not > 2 mm. The foot of a bone (where it has been attached to the vertebra) shall be disregarded if its width is < 2 mm or if it can be easily stripped off by a finger nail	a) Fillet with pin bone removed (i) Each defect bone	2
	(ii) Each critical bone	Defective
	b) Fillet with pin bone in (i) Each defect bone excluding pin bones	2
	(ii) Each critical bone excluding pin bones	8
Critical degree of bone defect Each defect bone whose maximum profile cannot be fitted into a rectangle, drawn on a flat		

solid surface, which has a length of 40.0 mm and a width of 10.0 mm		
Core from minced blocks	a) Each bone defect Each critical bone	2 Defective
15. Viscera Any portion of the viscera	Each instance	8
16. Parasites Parasites or parasitic infestation detected by the candling procedure. Each parasite infestation may be recognized by its colour, its effect on softening the fish flesh or other other physical indication	Each parasite with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 10 mm in length Each parasite with a capsular diameter smaller than 3 mm or a parasite not encapsulated and smaller than 10 mm in length Each fillet affected by any significant parasitic infestation	4 2 8
17. Foreign Matter (i) Any material not derived from fish or not permitted by the standard other than packaging	Each instance	Defective
(ii) Packaging material	Each instance	4
18. Odour Objectionable odour in thawed state	Any odour which is distinctly objectionable	Defective
19. Texture (thawed state)	Any texture which is significantly different to the characteristics of the species	Defective

C. COOKED STATE

WHOLE PRODUCT

(Extra sample unit 200g of whole product)

20. Appearance and coating defects Discolouration: black or dark brown or other abnormal colours which were not	Significantly abnormal colour deviations of units in the sample	

apparent in the frozen state	(i) each stick/portion (ii) whole sample	4 Defective
Damage: blistering, cracking or detachments of coating	Coating distinctly blistered, cracked, or detached - each stick or portion	4
21. Odour and Flavour Any odour and flavour which is distinctly objectionable	Each instance	Defective
22. Texture Any texture which is significantly different to the characteristic of the species or the type of product	Definitely not characteristic of the species or type of product e.g. mushy, soft, gelatinous, spongy, rubbery, tough, crumbly, gritty or slimy Each instance	Defective

MAXIMUM ALLOWABLE TOLERANCE FOR DEFECTS: The sample will be considered to be defective if the total number of all demerit points from the examination of the whole product, the core and the cooked sample exceeds 40 for all members of the families Gadidae and Merluccidae or 50 for member of other species.

DRAFT STANDARD FOR DRIED SALTED FISH (KLIPPFISH) OF THE GADIDAE FISH FAMILY
(at Step 8)

1. SCOPE

This standard applies to dried salted fish of the species as defined below and offered for consumption without further processing.

2. DESCRIPTION

2.1 Product Definition

Dried salted fish is the product obtained from fish:

(a) of the species belonging to the family Gadidae; and

(b) which has been bled, gutted, beheaded, split or filleted, washed, salted and dried. All parts of the fish shall have reached salt/water equilibrium prior to drying.

2.2 Process Definition

The product shall be prepared by one of the salting processes defined in 2.2.1 and one or both of the drying processes defined in 2.2.2 and according to the different types of presentation as defined in 2.3.

2.2.1 Salting

(a) Dry Salting (kench curing) is the process of mixing fish with suitable food grade salt and stacking the fish in such a manner that the excess of the resulting brine drains away; and

(b) Wet Salting (pickling) is the process whereby fish is mixed with suitable food grade salt and stored in watertight containers under the resultant brine (pickle) which forms by solution of salt in the water extracted from the fish tissue. The fish is subsequently removed from the container and stacked so that the brine drains away.

2.2.2 Drying

(a) Natural Drying - the fish is dried by exposure to sun and wind; and

(b) Artificial Drying - the fish is dried in mechanically circulated air, the temperature and humidity of which may be controlled.

2.3 Presentation

Dried salted fish shall be presented, with or without the black membrane (belly lining), scaled or unscaled, in one of the following ways:

2.3.1 Split fish - split and with approximately the anterior two thirds of the backbone removed.

2.3.2 Split fish with entire backbone - split with the whole of the backbone not removed.

2.3.3 Other presentation: any other presentation of the product shall be permitted provided that it:

(i) is sufficiently distinctive from the other forms of presentation laid down in this Standard;

(ii) meets all other requirements of this Standard; and

(iii) is adequately described on the label to avoid confusing or misleading the consumer.

2.3.4 Individual containers shall contain only one form of presentation from only one species of fish.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

The raw material shall be salted fish prepared from sound fresh fish of the designated species which are of a quality such as to be fit to be sold for human consumption, and shall be fully salted.

3.2 Salt

Salt used to produce dried salted fish shall be clean, free from foreign matter and foreign crystals, show no visible signs of contamination with dirt, oil, bilge or other extraneous materials and comply with the requirements laid down in the Code of Practice for Salted Fish.

3.3 Final Product

Dried Salted Fish products shall contain no more defects than permitted by Annex A.

4. FOOD ADDITIVES

(Subject to endorsement by the Codex Committee on Food Additives).

4.1 Preservatives	Maximum Level
Sorbic acid or its calcium, sodium or potassium salts	200 mg/kg of the final product, singly or in combination, expressed as sorbic acid

5. HYGIENE AND HANDLING

5.1. To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.2 When tested by appropriate methods of sampling and examination, the product:

(a) shall be free from micro-organism in amounts which may represent a hazard to health;

(b) shall be free from parasites which may represent a hazard to health; and

(c) shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

5.3 It is recommended that the product covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the following codes:

(i) Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1985, Rev. 2).

(ii) Recommended International Code of Practice for Fresh Fish (CAC/RCP 9-1976).

(iii) Recommended International Code of Practice for Salted Fish (CAC/RCP 26-1979).

6. PACKAGING

Any container for dried salted fish shall be clean and dry and shall protect the organoleptic and other quality characteristics of the product during storage and transport. It shall not pass on to the product any foreign odour, flavour, colour or other foreign characteristics.

7. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. Nº CODEX STAN 1-1985) 1/, the following specific provisions apply:

7.1 The Name of the Food

7.1.1 The name of the food to be declared on the label shall be "dried salted fish", or "klippfish" or other designations according to the law, custom or practice in the country in which the product is to be distributed 2/. In addition, there shall appear on the label in conjunction with the name of the product, the name of the species of fish from which the product is derived.

7.1.2 For forms of presentation other than described in 2.3.1 "split fish", the form of presentation shall be declared in conjunction with the name of the product in accordance with sub-section 2.3.2 as appropriate. If the product is produced in accordance with sub-section 2.3.3, the label shall contain in close proximity to the name of the food, such additional words or phrases that will avoid misleading or confusing the consumer.

7.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

7.3 Net Contents

The net contents shall be declared by weight in accordance with sub-sections 4.3.1 and 4.3.2 of the General Standard.

7.4 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

7.5 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

7.6 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

7.7 Date Marking and Storage Instructions

Date marking and storage instructions shall be in accordance with Sections 4.7.1 and 4.7.2 of the General Standard.

7.8	Instructions for Use	)
7.9	Irradiated Foods	) See paras 40 and 45 of this
7.10	Quantitative Labelling of Ingredients	) Report (ALINORM 89/18)
7.11	Exemptions	)

1/ Thereafter referred to as "General Standard".
2/ When accepting the Standard, governments are requested to indicate the requirements in force in their country.

7.12 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Food (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition).

Information on Sections 7.1 to 7.6 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address shall always appear on the container.

However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF SAMPLING AND EXAMINATION

8.1 Sampling

8.1.1 Sampling for sensoric examination

For those provisions detailed in sub-section 2.3 and the Defects Table in Annex A, sampling shall be carried out as follows:

A consignment of non-retail containers is defined as one inspection lot, and sampling shall be carried out in accordance with the Sampling Plan for Prepackaged Foods (AQL 6,5 CAC/RM 42-1969 as amended), provided the sample units withdrawn are representative of the consignment.

8.1.2 Sampling for Net Weight shall be carried out in accordance with the FAO/WHO Sampling Plans for the Determination of Net Weight (under elaboration).

8.2 Examination of Physical Defects and Organoleptic Assessment

Organoleptic and physical assessment of the product shall be made only by persons trained in such assessment.

9. CLASSIFICATION OF DEFECTIVES

A sample unit of the product which fails to meet the requirements of Sections 2.3 and 3.3 and Annexe A shall be considered "defective".

10. LOT ACCEPTANCE

A lot will be considered as meeting the final product requirements of this Standard when:

(a) the total number of "defectives" as defined in Section 9 of this Standard does not exceed the acceptance number (c) of the appropriate sampling plans in the Sampling Plans for Prepackaged Foods (AQL 6.5 CAC/RM 42-1969).

(b) and when the average net contents of all containers examined is not less than the declared weight provided that there is no unreasonable shortage in individual containers.

DEFECT TABLE FOR DRIED SALTED FISH (KLIPPFISH)

A sample unit consists of 10 fish withdrawn at random from the non-retail primary packing unit.

Demerit points are assigned for each defect instance as defined below.

A. **GENERAL DEFECTS** (Section 3.3)

DEFECT		INSTANCE	DEMERIT POINTS
1.	EXTENSIVELY CRACKED AND BROKEN A fish with cracks extended into the fish which affects more than 2/3 of the total surface area of the fish or which has been mutilated, torn or broken through to the extent that the split-fish is divided into two or more pieces but still held together by skin.	Each instance	12
2.	BELLY BURN A textural breakdown of the belly wall often accompanied by discoloration resulting from the action of liver, bile or gut content remaining in the fish too long before splitting or on the fish during curing.	More than 3/4 of belly wall Each instance 1/2 up to 3/4 of one belly wall instance	 24 12
3.	LIVER STAINS A pronounced yellow or yellowish orange discoloration caused by the presence of liver and affecting more than 1/4 of the total surface area of the face of the fish.	Each instance	24
4.	SEVERE BURNING A fish with more than 1/2 of the back (skin-side) tacky or sticky due to overheating during drying.	Each instance	24
5.	HALOPHILIC MOULD (DUN) A fish showing an aggregate area of pronounced halophilic mould clusters on more than 1/3 of the total surface area of the face side.	Each instance	24
6.	RED HALOPHILIC BACTERIA (PINK) Any visible evidence of red halophilic bacteria.	Each instance	Defective
7.	ODOUR A fish which has a distinctly objectionable odour not characteristic for the species or type of cure.	Each instance	Defective

DEFECT		INSTANCE	DEMERIT POINTS
8.	EXTRANEOUS MATTER	Each instance	12
	(i) Any fish affected by foreign matter which is not a hazard to human health eg. seaweed, easily visible sand particles, etc.		
	(ii) Any fish affected by foreign matter which is potentially a health hazard, eg. glass, etc.	Each instance	Defective
9.	DISCOULORATION	Each instance	Defective
	Any fish showing more than 1/2 of the face of the fish with intense bruising		
10.	BLOOD CLOTS	Each instance	Defective
	Any single or combination of coagulated blood clots greater than 5% of the total surface area of the fish.		

B. **DEFECTS REGARDING PRESENTATION** (Sub-section 2.3)

DEFECT		INSTANCE	DEMERIT POINTS
1.	DESIGNATED WITHOUT BLACK MEMBRANE (WHITE WINGS)	Each instance	16
	A fish with more than 1/4 of the black membrane still intact on any belly wall.		
2.	DESIGNATED SCALED	Each instance	12
	A fish which has not been scaled or more than 1/4 of the fish (skin side) has scales remaining.		
3.	DESIGNATED SPLIT FISH (2.3.1)	Each instance	Defective
	A fish which has been gutted but not split. A fish which has been split but the entire backbone has been left in.	Each instance	24
4.	PIECES OR FILLETS (2.3.1 and 2.3.2)	Each instance	12
	Any pieces of salted fish other than a salted split fish. For the purpose of this standard a salted split fish is defined as constituting more than 3/4 of the original size of the split fish.		
5.	OTHER SPECIES	Each instance More than 2 instances	24 Defective
	A fish other than that designated.		

DEFECTIVE UNIT

A sample unit shall be considered a defective if it is found to be defective or is allocated more than 60 Demerit Points.

DRAFT CODE OF PRACTICE FOR CEPHALOPODS
(Advanced to Step 8)

CONTENTS

INTRODUCTION

This code of practice has been written for the use of those engaged in the cephalopod processing industry. It contains technological and essential hygiene requirements for the preparation of high-quality cephalopod products, and is based on long-established and widely recognised good commercial practices.

This code is intended also as background information or as a guideline for the elaboration of national quality standards, quality control and fish inspection programmes in countries where these have not yet been developed.

However, it must be acknowledged that most of the practical information pertaining to the hygiene and technology of cephalopod processing has been gained from the industrial experience of very few countries. With this limitation in mind, this code should, therefore, not be regarded as a set of rules to be followed explicitly without any concern for local conditions.

The information provided is not intended to replace the advice or guidance of trained and experienced technologists regarding the complex technical problems which might be unique to a specific geographical area.

In some countries, cephalopods have been used for human consumption from ancient time, and many varieties of the products were available as their traditional food. Therefore, the practical application of this "international" code with regard to "national" cephalopod processing industries, will probably require some modifications according to local conditions and specific (traditional) consumer preferences. In other words, a "national" code of practice could be developed from the information contained in this code.

This code provides, as mentioned above, the information which covers typically standardized procedures for handling and processing of cephalopods at sea and on shore.

This code will require periodical revision, as research and experience in commercial practice bring new techniques and facilities into operation.

DRAFT CODE OF PRACTICE FOR CEPHALOPODS

Note

- The hygiene and some of the technological requirements of this code are partially based on FAO/WHO Recommended International Codes of Practice - General Principles of Food Hygiene, the Recommended International Code of Practice for Fresh Fish, the Recommended International Code of Practice for Canned Fish, the Code of Practice for Frozen Fish, the Code of Practice for Shrimps or Prawns, the Code for Lobsters and Related Species, the Code of Practice for Smoked Fish, and the Code of Practices for Crabs (See Appendix III).

- The letter and number codes given in the right hand margin indicate requirements taken from the following documents:

Recommended International Code of Practice for Fresh Fish	- FF
Recommended International Code of Practice for Canned Fish	- CF
Code of Practice for Shrimps or Prawns	- SP
Code of Practice for Lobsters and Related Species	- Lob
Code of Practice for Smoked Fish	- SMF
Code of Practice for Crabs	- Crb
Modified for the purpose of this Code	- Mod

1. SECTION I - SCOPE

This code of practice applies to fresh and processed cephalopods including commercially important cuttlefish (Sepia and Sepiella), squid (Ilex, Loligo, Loliolus, Sepioteutis, Symplectoteuthis and Todarodes), and octopuses (Octopus, Polypus and Eledone) intended for human consumption.

It contains the technological guidelines and the essential hygiene requirements for harvesting, processing and handling of cephalopods at sea and on shore. The technology of canning, other than the preparation of cephalopods for canning, is not covered in this code.

2. SECTION II - DEFINITIONS

For the purpose of this code:

2.1 "autolysis" is the breakdown or deterioration of the cephalopod meat or viscera by means of indigenous enzymes; (Crb 2.1/Mod)

2.2 "batch systems" are those processing methods where cephalopods are processed as bulk units; (Crb 2.3/Mod)

2.3 "brining" means the process of placing cephalopods in a solution of food grade salt (sodium chloride) in potable water for a period of sufficient length for the cephalopod tissue to absorb a desirable quantity of salt; (SMF 2.1/Mod)

2.4 "chilling" is the process of cooling cephalopods to a temperature approaching that of melting ice; (FF 2.4/Mod)

2.5 "chilled sea water" is clean sea water reduced in temperature by addition of ice prepared from potable water or clean sea water; (FF 2.5/Mod)

2.6 "chlorinated water" is potable water containing about 5 ppm available chlorine;

2.7 "clean sea water" is sea water which meets the same microbiological standards as potable water and is free from objectionable substances; (FF 2.6)

2.8 "cleaning" means the removal of soil, food residues, dirt, grease or other objectionable matter; (FF 2.7/Mod)

2.9 "contamination" means direct or indirect transmission of objectionable matters to the cephalopods; (FF 2.8/Mod)

2.10 "cooking" means boiling of cephalopods in potable water, clean sea water or brine or heating in steam for a period of time sufficient for the thermal centre of the cephalopods to reach a temperature adequate to coagulate the protein; (SP 2.7/Mod)

2.11 "disinfection" means the application of hygienically satisfactory chemical or physical agents and processes to clean surfaces with the intention of eliminating micro-organisms; (FF 2.9)

2.12 "dry-salting" is the process of mixing cephalopods with dry food grade salt (sodium chloride) and/or sugar in such a manner that the resulting brine drains away; (SMF 2.11/Mod)

2.13 "enzymatic activity" is the catalytic action of enzymes on biochemical reactions; (Crb 2.15)

2.14 "mechanical smoking kiln or smoking tunnel" means the type of equipment in which forced flow of smoke and air passes around the cephalopods to be smoked. The required smoke is generated outside the smoking chamber; (SMF 2.18/Mod)

2.15 "pasteurization" means subjecting cephalopod meat to heat at times and temperatures which destroy a high proportion of objectionable micro-organisms without noticeable changes in appearance, texture and flavour of the product; (SP 2.14/Mod)

2.16 "plant or establishment" means the building or buildings, or parts thereof, used for, or in connection with, the manufacture or holding of food for human consumption; (FF 2.17)

2.17 "potable water" is fresh water fit for human consumption. Standards of potability should not be lower than those contained in the latest edition of the "International Standards for Drinking Water", World Health Organization; (FF 2.18)

2.18 "refrigerated sea water" is a clean sea water reduced in temperature by a suitable refrigeration system. Its salt content is normally about 3 percent; (FF 2.21/Mod)

2.19 "roasting" means heat processing of cephalopods by holding cooked and seasoned fillets between two heated iron plates;

2.20 "salt" means salt (sodium chloride) of an appropriate quality and otherwise suitable for the purpose; (SMF 2.22)

2.21 "smoke" means the volatile products derived from combustion of wood or sawdust. This term includes derivatives obtained by condensation or absorption of smoke in a suitable food grade liquid; (SMF 2.23/Mod)

2.22 "splitting" means cutting cephalopods along the mantle to produce a single fillet;

2.23 "suitable corrosion-resistant material" means impervious material which is free from pits, crevices and scales, is non-toxic and unaffected by sea water, ice, fish slime or any other corrosive substance with which it is likely to come in contact. Its surface must be smooth and it must be capable of withstanding exposure to repeated cleaning, including the use of detergents; (FF 2.25)

2.24 "traditional smoking kiln" means an enclosed space, essentially a large chimney, in which cephalopods can be subjected to the action of smoke that flows around the product by natural draught; (SMF 2.26)

2.25 "viscera" refers to the contents of the gut cavity of cephalopods; (Crb 2.30)

2.26 "waste" means those cephalopod parts which remain after the meat removal operation is completed. (Crb 2.31)

3. SECTION III - RAW MATERIAL REQUIREMENTS

3.1 General Considerations

3.1.1 FRESH CEPHALOPODS ARE EXTREMELY PERISHABLE, AND SHOULD BE HANDLED AT ALL TIMES WITH GREAT CARE AND IN SUCH A WAY AS TO PREVENT CONTAMINATION AND INHIBIT THE MULTIPLICATION OF MICRO-ORGANISMS (FF 3.1.1/Mod)

Fresh cephalopods deteriorate rapidly and their potential keeping time is shortened if they are not handled and stored properly.

Cephalopods should not be exposed to direct sunlight or to the drying effect of winds, or any other harmful effects of the elements, but should be carefully cleaned and cooled down to the temperature of melting ice, 0ºC (32ºF), as quickly as possible. Any careless treatments or delay in reducing the temperature of the cephalopods will have a marked effect on their potential keeping time.

3.1.2 CEPHALOPODS INTENDED FOR MARKETING AS FRESH, SHOULD BE OF THE HIGHEST POSSIBLE QUALITY (FF 3.1.2/Mod)

With cephalopods intended for fresh market, special care should be taken to retain their natural colour, to prevent physical damage, and to control microbiological contamination.

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3.1.3 NO CEPHALOPODS OR INGREDIENTS WHICH HAVE DETERIORATED OR DECOMPOSED, OR ARE CONTAMINATED TO AN EXTENT WHICH RENDERS THEM UNFIT FOR HUMAN CONSUMPTION, SHOULD BE USED FOR THE PROCESSING OF FOOD PRODUCTS (SP 3.1.2/Mod)

Raw material should be rejected if it contains harmful, decomposed or extraneous substances which cannot be removed to acceptable levels by normal procedures of sorting or preparation.

Freshly caught cephalopods can easly be recognized by their appearance. The presence of lacerations, breakages and discolouration of the skin, or a yellowish tinge spreading from the liver and digestive organs inside the mantle, are the first indications of quality deterioration.

Any putrefaction or off odours can be detected by smelling. The material having any such unpleasant smell should be rejected.

3.1.4 CEPHALOPODS INTENDED FOR PROCESSING SHOULD RECEIVE THE SAME CARE AND ATTENTION FROM THE TIME OF CAPTURE UNTIL THEY ARE PROCESSED AS THOSE INTENDED FOR MARKETING FRESH (SMF 3.1.2/Mod)

The processes and the principles involved in the preparation of cephalopods for smoking or other processing are for the most part similar to those that would be involved in preparing them for marketing as fresh. Therefore, the recommandations of the Recommended International "Code of Practice for Fresh Fish" and, where applicable, the "Code of Practice for Frozen Fish" should be used as a guide for the handling and preparation of cephalopods for processing.

HANDLING OF CEPHALOPODS AT SEA

4. SECTION IV A - FISHING VESSEL FACILITIES AND OPERATING REQUIREMENTS

4.1 General Considerations

4.1.1 THE FISHING VESSEL SHOULD BE DESIGNED FOR RAPID AND EFFICIENT HANDLING OF CEPHALOPODS. EASE OF CLEANING AND DISINFECTION, AND SHOULD BE OF SUCH MATERIAL AND CONSTRUCTION AS NOT TO CAUSE ANY DAMAGE OR CONTAMINATION OF THE CATCH (FF 4.1.1/Mod)

In designing a squid or cuttlefish fishing vessel, many other factors, apart from the vessel's performance as a harvesting unit, should be considered. Contamination of cephalopods with bilge water, sewage, smoke, fuel, oil, grease or other objectionable substances must be avoided. The catch should be protected against physical damage, exposure to high temperatures and drying effects of sun and wind.

All surfaces with which the cephalopods might come in contact should be of suitable corrosion-resistant material which is smooth and easily cleanable.

4.2 Vessel Construction and Sanitary Design

4.2.1 DECK POUND OR PENS STANCHIONS AND DIVIDING BOARDS AND HOLDING TANKS SHOULD BE CONSTRUCTED OF SUITABLE CORROSION-RESISTANT MATERIAL. THEY SHOULD BE ADEQUATE IN NUMBER AND HEIGT TO PREVENT CRUSHING OF THE CEPHALOPODS DUE TO EXCESS WEIGHT OR TO THE VESSEL'S MOTION, AND TO HOLD THE ESTIMATED CATCH (Lob 4.2.1/Mod)

In practice, wood is still used in many fisheries for deck pound boards and steel for stanchions and other fixtures. Where this is the case, the wood should be

treated to prevent the entry of moisture and should be coated with a durable non-toxic paint or other non-toxic surface coating that is smooth, readily cleanable and light colour. Steelwork should be coated with an anti-corrosion non-toxic paint. Whenever possible, suitable corrosion-resistant materials should be used.

Use of well caulked timber which is in sound condition or on an exposed deck, provided that it is thoroughly washed, is acceptable.

4.2.2 VESSEL HOLDS OR TANKS FOR STORAGE OF ICED CEPHALOPODS, SHOULD BE ADEQUATELY INSULATED WITH A SUITABLE MATERIAL. ANY PIPES, CHAINS OR CONDUITS PASSING THROUGH THE HOLD SHOULD, IF POSSIBLE, BE SUNK FLUSH OR NEATLY BOXED IN AND INSULATED (Lob 4.2.2/Mod)

Adequate insulation will reduce the amount of heat entering the hold and consequently the rate of ice meltage. If the quality and structure of the insulation is poor, considerable ice meltage will take place near bulkheads and shipside.

4.2.3 HOLD OR TANK LININGS SHOULD BE COMPLETELY WATER-TIGHT. THE INSULATION LAYER SHOULD BE PROTECTED BY A LINING MADE OF CORROSION-RESISTANT METAL SHEETS OR ANY OTHER EQUALLY SUITABLE NON-TOXIC MATERIAL HAVING WATER-TIGHT JOINTS (FF 4.2.4/ Mod)

It is important to prevent water from carrying dirt and offal to parts of the vessel where efffective cleaning is virtually impossible. The melt water, seeping through the vessel hold lining, will also reduce the efficiency of the insulation and this will, in turn, lead to an increase in the temperature of the cephalopods. The insulation should be covered with corrosion-resistant metal sheets, or any other equally suitable material having water-tight joints to ensure protection from such contamination. An effective drainage system should be able to remove the melt water into a sump as fast as it accumulates.

4.2.4 WOODEN HOLDS OR WOODEN HOLDING TANKS SHOULD BE LINED WITH A SUITABLE MATERIAL (FF 4.2.5/Mod)

The linings of wooden holds or tanks should be similar to those described above. They should be sealed and coated with a suitable impervious and non-toxic material which is easy to keep clean and not difficult to repair.

4.2.5 THERE SHOULD BE NO SHARP CORNERS OR PROJECTIONS IN THE HOLD OR TANK AS THESE WILL MAKE CLEANING DIFFICULT AND MAY DAMAGE THE CEPHALOPODS (FF 4.2.14/Mod)

Contamination with dirt and offal will build up rapidly on surfaces, in corners or around projections which are not smooth and impervious.

Any ledges or projections resulting from the encasement of pipes, wires, chains and conduits, that are passing through the vessel hold, should be so constructed as to allow free drainage, ease of cleaning and not to cause any physical damage to the cephalopods.

4.2.6 PORTABLE BOARDS OF SUITABLE CORROSION-RESISTANT MATERIAL OR IMPREGNATED AND PAINTED WOOD, SHOULD BE USED FOR MAKING SHELVES AND VERTICAL DIVISIONS IN THE HOLDS (FF 4.2.6/Mod)

The use of portable boards, which are a good fit in the stanchions, allows the shelf and dividing structure to be dismantled and removed for cleaning. Wooden boards should be treated to prevent the entry of moisture and should be coated with durable non-toxic paint or other equally suitable surface coating that is smooth, readily cleanable and repairable. Wherever possible, the shelving and the partitioning boards should be interchangeable in size.

4.2.7 SHELVING BOARDS SHOULD BE DESIGNED TO ALLOW ADEQUATE DRAINAGE (FF 4.2.7)

A continuous trickle of melt water will help to carry away slime and micro-

organisms which should not be allowed to collect on the shelves. Corrugated boards of corrosion-resistant material are most suitable for this purpose.

4.2.8 THERE SHOULD ALWAYS BE AMPLE DRAINAGE SPACE BETWEEN THE LOWEST SHELVES OR THE "FALSE BOTTOM" AND THE FLOOR OF THE HOLD. THIS SPACE SHOULD BE OPEN TO A CENTRAL DRAIN, DISCHARGING DIRECTLY INTO ONE OR MORE SUMPS OR WELLS, LOCATED SO THAT THE HOLD CAN BE EFFICIENTLY DRAINED AT ALL TIMES. BILGE PUMP CONNECTIONS TO THESE SUMPS SHOULD BE FITTED WITH COARSE SCREEN FILTERS (FF 4.2.9/Mod)

Proper drainage facilities can prevent a build-up of large quantities of melt water, dirt and offal. If drainage is inadequate, the bottom layers of the cephalopods in the hold may be contamined by this dirty liquid, especially during the periods of severe motion of the vessel.

4.3 Sanitary Facilities

4.3.1 DECK HOSES SHOULD BE SUPPLIED WITH CLEAN SEA WATER, AT ADEQUATE PRESSURE, BY A PUMP USED ONLY FOR CLEAN SEA WATER (FF 4.3.4/Mod)

A good supply of clean sea water, at adequate pressure, with an addition of chlorine, if possible, should be available.

The intake for sea water should be well forward of and on the opposite side of the vessel from the toilet, waste and engine cooling discharge. Sea water should not be used while the vessel is in harbour or in areas where there is a danger of it being polluted. Clean sea water should be taken in while the vessel is in forward motion.

The piping for the clean sea water supply should have no cross connections with the engine or condenser cooling system. It should be so constructed as to prevent any possibility of back-syphonage from the kitchen sink or toilets.

4.3.2 ICE SHOULD BE MADE FROM POTABLE WATER OR CLEAN SEA WATER AND SHOULD NOT BE CONTAMINATED WHEN MANUFACTURED, HANDLED OR STORED (FF 4.3.5/Mod)

Ice made from water which is neither potable nor clean sea water, may contaminate the cephalopods with water-borne micro-organisms or other objectionable or even harmful substances. Such contamination will result in the loss of quality, reduced keeping time and may create a health hazard.

When vessels are taking ice to sea, only fresh clean ice should be taken on board at the beginning of each voyage. Ice storage on board should be in an insulated hold and all unused ice should be discarded at the end of the trip.

4.3.3 THE VESSEL'S TOILET FACILITIES AND ALL PLUMBING AND WASTE DISPOSAL LINES SHOULD BE SO CONSTRUCTED AS NOT TO CONTAMINATE THE CATCH (FF 4.3.7/Mod)

All the plumbing and waste disposal lines servicing the vessel's toilets, hand wash basins or kitchen sinks, should be large enough to carry peak loads, be water tight and should not go through the holds where cephalopods are being handled or stored.

4.3.4 IF POISONOUS AND HARMFUL MATERIALS, INCLUDING CLEANING COMPOUNDS, DISINFECTING MATERIALS AND PESTICIDES, ARE STORED ON BOARD THE VESSEL, THEY SHOULD BE KEPT IN A SEPARATE COMPARTMENT RESERVED AND MARKED SPECIFICALLY FOR THIS PURPOSE (FF 4.3.11/Mod)

Extreme caution must be exercised to prevent poisonous or harmful materials from contaminating the cephalopods. All such materials should be prominently and distinctly labelled so that there can be no confusion between these and edible materials used aboard the vessel. Such compartments should be kept locked and the materials contained in them should be handled only by personnel trained in their use.

4.3.5 THE FISHING VESSEL SHOULD BE EQUIPPED WITH BRUSHES, SCRAPERS, WATER HOSES, SPRAY NOZZELS AND OTHER SUITABLE WASHING AND DISINFECTING EQUIPMENT (FF 4.3.10)

Although there is a variety of cleaning and disinfecting equipment available on the market, good quality hand brushes, of several sizes and shapes, are still the most inexpensive and versatile tools for cleaning operations. Brushes should be kept in a clean and sound condition, disinfected after each use (dipping in 50 ppm chlorine solution is recommended) and when not used, should be stored in a dry state. Unclean brushes could spread dirt and micro-organisms. Micro-organisms may proliferate in a dirty brush when stored in a wet condition. The use of steel wool for scouring should be avoided as there is a constant danger of introducing small, sometimes hardly visible, bits of wire into the final product. If for some reason cleaning cannot be done effectively with a good brush, then plastic, brightly coloured scouring pads might be used.

The high pressure and high frequency oscillating water or detergent-spraying equipment has been found to be quite effective in cleaning, but it usually requires an experienced operator to prevent damage to painted surfaces.

4.4 Equipment and Utensils

4.4.1 ALL CONTAINERS USED FOR ICE STOWING OF CEPHALOPODS, SHOULD BE OF UNIFORM AND SUITABLE SIZE, EASY TO HANDLE WHEN LOADED, AND SHOULD BE CONSTRUCTED OF SUITABLE CORROSION-RESISTANT MATERIAL (FF 4.4.6/Mod)

Such containers, when fully loaded, should be easy to handle by one or two men without tilting, tipping or jerking.

If wooden boxes are used, they should be of a smooth construction and of durable, non-toxic and waterproof finish or should be new.

Baskets should not be used for handling cephalopods on board the vessel or on shore, as they are difficult to clean and disinfect.

4.4.2 ALL EQUIPMENT USED IN FREEZING AND FROZEN STORAGE OF CEPHALOPODS ABOARD THE VESSEL SHOULD MEET THE REQUIREMENTS OF THE RECOMMENDED INTERNATIONAL "CODE OF PRACTICE FOR FROZEN FISH"

Most of the recommendations made in that code would apply equally to freezing and frozen storage of cephalopods.

4.5 Hygienic Operating Requirements

4.5.1 ALL TUBS, TANKS, BARRELS AND OTHER EQUIPMENT USED IN HANDLING, WASHING AND CONVEYING OPERATIONS SHOULD BE THOROUGHLY CLEANED, DISINFECTED AND RINSED AFTER EACH CYCLE OF USE (FF 4.5.2/Mod)

Any dirt or offal if allowed to dry and accumulate on surfaces with which cephalopods come in contact, will be very difficult to remove later and will thus contaminate the subsequent loads of cephalopods.

4.5.2 DURING FISHING TRIPS THE VESSEL'S HOLD AND BILGE SUMP SHOUD BE DRAINED REGULARLY. THE SUMP SHOULD BE ACCESSIBLE AT ALL TIMES (FF 4.5.3/Mod)

Bilge water containing dirt and offal, if not regularly pumped out, will provide a medium for the multiplication of micro-organisms and give rise to offensive odours in the hold.

4.5.3 ADEQUATE PRECAUTIONS SHOULD BE TAKEN TO ENSURE THAT HUMAN AND OTHER WASTES FROM THE FISHING VESSEL ARE DISPOSED OF IN SUCH A MANNER AS NOT TO CONSTITUTE A PUBLIC HEALTH AND HYGIENE HAZARD (FF 4.5.12)

With man's increased concern for the protection of his environment, in some countries the disposal of any waste from any boat into the surrounding water is restricted by law.

The fishermen should be fully aware of their responsabilities in this regard. Discharge of animal, human or any other wastes from the fishing vessel into the sheltered waters close to man-inhabited areas, or over the shellfish growing areas, should not be practised.

4.5.4 SEA WATER WHICH HAS BEEN USED FOR COOLING ENGINES, CONDENSERS OR SIMILAR EQUIPMENT SHOULD NOT BE USED FOR WASHING CEPHALOPODS, DECK, HOLD OR ANY OTHER EQUIPMENT WHICH MIGHT COME IN CONTACT WITH CEPHALOPODS (FF 4.5.5/Mod)

The water used for cooling engines is usually at a higher temperature than fresh sea water and might be contaminated with oil or other petroleum products or contain rust and other by-products of metal corrosion.

Such water, therefore, will considerably accelerate spoilage of cephalopods by raising the temperature and might impart objectionable taste, odour or undesirable discolouration.

4.5.5 WHEN CLEANING AND HOSING OPERATIONS ARE CARRIED OUT, WHILE THE VESSEL IS IN PORT, POTABLE WATER OR CLEAN SEA WATER SHOULD BE USED (FF 4.5.6/Mod)

Harbour water is usually heavily polluted and should never be used for cleaning purposes. This is also true for sea water in the close vicinity of towns, villages, industrial plants, fish processing establishments and factory ships.

4.5.6 IMMEDIATELY AFTER THE CATCH IS UNLOADED THE DECK AND ALL DECK EQUIPMENT SHOULD BE HOSED DOWN, BRUSHED, THOROUGHLY CLEANED WITH A SUITABLE CLEANING AGENT, DISINFECTED AND RINSED (FF 4.5.7/Mod)

Guts, slime and other residue left on the deck will support multiplication of micro-organisms which may contaminate future catches. If allowed to dry, dirt and offal are very difficult to remove.

Thorough cleaning should always precede disinfection, especially when chlorine is used as the disinfecting agent. Any organic matter which is not removed from the surfaces that are to be disinfected, will rapidly combine with and neutralize the micro-organism killing ability of chlorine or any other disinfectant.

4.5.7 AT THE END OF EACH TRIP ANY UNUSED ICE SHOULD BE DISCARDED (SP 4.3.13)

Despite all precautions, unused ice in the hold will become contaminated and will contaminate the new catch.

4.5.8 IMMEDIATELY AFTER THE CATCH IS LANDED THE HOLD AND BILGE SUMP SHOULD ALSO BE EMPTIED COMPLETELY. ALL SURFACES IN THE HOLD, POUND BOARDS AND SUMP SHOULD BE THOROUGHLY CLEANED WITH A SUITABLE CLEANING AGENT, DISINFECTED AND RINSED (FF 4.5.8/Mod)

This is necessary to remove all dirt, offal and other residue as soon as the catch is landed, in order to avoid multiplication of micro-organisms, offensive odours and the drying of residues on the hold or other surfaces. Cleaning should be completed before fresh ice is taken on board for the next trip.

4.5.9 CLEANING, WASHING AND DISINFECTING PROCEDURES SHOULD BE EFFECTIVE (SP 4.3.15/Mod)

Detergents and disinfectants should conform to public health requirements and should not be allowed to come into contact with cephalopods. Any residue of cleaning agents used for washing of boats and the equipment, should be removed by thorough rinsing with potable fresh or clean sea water before the area or equipment is used again for stowing or handling cephalopods.

In choosing and applying different detergents, sanitizers and disinfectants, one should be fully aware of their properties and limitations. Many agents are effective only when prepared and used in strict accordance with the manufacturer's recommendations.

Temperature of the solution, its acidity or alkalinity concentration of the active ingredient, presence of other chemicals, kind of surface to be treated or type of soil (dirt) and mode of application, are some of the factors that will determine the usefulness of the agent. Different agents should not be combined since one agent may neutralize the activity of another.

4.5.10 EMPTY VESSEL HOLDS OR STORAGE TANKS SHOULD BE VENTILATED (SP 4.3.16/Mod)

Strong odours associated with mildew, stagnant humid air and decomposing organic matter will develop in the absence of ventilation. All the containers, pails, boxes and tubs, after washing and sanitizing should be stacked in such a way as to permit sufficient aeration.

4.5.11 EFFECTIVE MEASURES SHOULD BE TAKEN TO PROTECT THE FISHING VESSEL AGAINST INSECTS, RODENTS, BIRDS OR OTHER VERMIN (FF 4.5.13/Mod)

Rodents, birds and insects are potential carriers of many diseases which could be transmitted to many by contamination of the catch. Fishing vessels should be regularly examined for evidence of infestation and when required, effective control measures should be taken.

All rodenticides, fumigants, insecticides and other harmful substances should be used only in accordance with the recommendations of the appropriate official agency having jurisdiction.

4.5.12 DOGS, CATS AND OTHER ANIMALS SHOULD BE EXCLUDED FROM AREAS OF THE VESSEL WHERE CEPHALOPODS ARE RECEIVED, HANDLED, PROCESSED AND STORED (FF 4.5.14/Mod)

Because of public health hazards and for aesthetic reasons, no surface of the fishing vessel and of the equipment thereon which comes in contact with cephalopods, should be exposed to contamination with animal hair or excreta.

4.6 Handling and Processing of Cephalopods at Sea

4.6.1 General Considerations

4.6.1.1 DURATION OF THE TRIP FOR A CEPHALOPOD HARVESTING VESSEL SHOULD BE DETERMINED BY THE FACILITIES AVAILABLE ON THE VESSEL FOR HANDLING AND KEEPING THE CATCH WELL CHILLED OR FROZEN, DISTANCE FROM THE PROCESSING PLANTS OR MARKETS AND THE LOCAL ENVIRONMENTAL CONDITIONS

From the time the cephalopods are caught, there is a continual and irreversible deterioration in quality. The progress and degree of such deterioration are governed mainly by the time the cephalopods are held and the temperatures at which they are handled and stored on board the harvesting vessel. With short distances from the processing plant and market, more time might be spent on the fishing grounds, providing the boat is equipped with adequate facilities to handle, effectively chill and hold the catch at low temperature. With more distant fishing grounds proper freezing and freezer store facilities should be provided.

4.6.2 Handling the Catch on Board

4.6.2.1 PROPER HANDLING OF CEPHALOPODS AT SEA SHOULD ENSURE THAT THE CATCH RETAINS ITS INITIAL FRESHNESS UNTIL LANDING

The freshness of caught cephalopods depends mainly on temperature and time of storage and cleanliness of immediate environment. The temperature is the most important single factor influencing the keeping quality of fresh cephalopods. The effects of increasing temperature are cumulative; that is, some potential keeping time is lost each

time the temperature of the cephalopods rises. The extent of this loss depends both on the degree of the rise and the length of time the cephalopods remain at the higher temperature. It is therefore important to chill the catch quickly to the temperature of melting ice and maintain it in a chilled condition until it reaches the processor or the market. Also, it is essential to maintain a high standard of cleanliness on deck, inside the holds and processing areas.

4.6.2.2 IMMEDIATELY AFTER THE CEPHALOPODS ARE CAUGHT THEY SHOULD BE TRANSFERRED RAPIDLY FROM HARVESTING MACHINE TO HOLDS OR WORKING AREA

For efficient and rapid transfer of the cephalopods from the deck to holds or working area a properly designed transfer system should be used. In the case of squid jigging vessels, an open flume, adequately sloped, should be provided along the harvesting machines. The cephalopods are dropped into the flume and are carried away toward the hatches of working areas by a stream of clean sea water.

4.6.2.3 THE CEPHALOPODS WHICH ARE TO BE TRANSFERRED TO THE PROCESSING HALL SHOULD BE CHILLED RAPIDLY IN MELTING ICE OR IN CHILLED SEA WATER OR REFRIGERATED SEA WATER AND SHOULD BE STORED SO THAT THE TEMPERATURE DOES NOT RISE

Cooling with ice should preferably be preceded by cooling in chilled sea water where direct and rapid heat removal takes place. Iced cephalopods are commonly stored in plastic or steel boxes. The amount of ice required to ensure adequate protection for three days storage depends on the ambient temperature. The amount of ice used should be adequate to chill and maintain cephalopods temperature at about 0ºC (32ºF).

Rapid chilling takes place only when the ice is melting and the resulting ice-cold melt water percolates downard through the layers of cephalopods. When the ice stops melting because of low temperature, its effectiveness as a cooling agent diminishes considerably.

If cephalopods are to be processed at sea they should be chilled immediately after they are caught and kept chilled until processing commences. The deteriorative effects of increased temperature are cumulative and cannot be reversed by further processing.

4.6.2.4 CEPHALOPODS IN ICE SHOULD BE STOWED IN SHALLOW LAYERS (SP 4.4.3.2/Mod)

In bulk stowing the cephalopods should be well mixed with finely divided ice or iced in layers which are not excessive in depth. Adequately shelved holds, or proper containers should be used for this purpose. Chilling of cephalopods in bulk by top icing only should be avoided.

4.6.2.5 FINELY DIVIDED ICE SHOULD ALWAYS BE USED (SP 4.4.3.4/Mod)

This gives close contact with the cephalopods, reduces damage by crushing and gives rapid cooling.

4.6.2.6 WHERE BOXES ARE USED FOR STOWING CEPHALOPODS THEY SHOULD BE PROPERLY ICED AND NOT OVERFILLED (SP 4.4.3.5/Mod)

It is an advantage to pack cephalopods with ice into boxes at sea. The cephalopods, if adequately iced, can remain undisturbed in the boxes until they reach the processor or the market. Unloading the catch can be simpler and, if required, more ice can be added to the boxes on landing without disturbing the cephalopods.

Each day's catch can also be separated more easily. Since boxes are stacked one on top of another in the hold, overfilling will result in damage to the cephalopods. For efficient cooling each box should contain a layer of ice on the bottom, then cephalopods and ice mixed together, and lastly a top layer of ice.

4.6.2.7 WHERE APPROPRIATE, A STOWAGE PLAN SHOULD BE KEPT ON ANY VESSEL FISHING FOR MORE THAN A DAY OR TWO (FF 4.6.27/Mod)

A well prepared stowage plan enables the various day's catches to be kept separate when unloading. Cephalopods from different days' catches should never be mixed together when stowed.

4.6.2.8 FOR RAPID CHILLING OF CEPHALOPODS THE USE OF CHILLED OR REFRIGERATED SEA WATER IS RECOMMENDED

Both methods, if properly used, will assure the most thorough and rapid heat removal. It has been suggested that the storage in ice should preferably be preceded by cooling in chilled or refrigerated sea water. For ice storage, the chilling takes place only when the ice is melting and the resulting ice-cold melt water percolates downward through the layers of cephalopods.

When the ice stops melting its effectiveness as a cooling agent deminishes considerably. This will not occur if the cephalopods are stored in either chilled sea water or RSW, where the low temperature of water is constantly maintained.

In certain countries the use of chilled or refrigerated sea water has been practised extensively and with excellent results.

4.6.3 Processing the Catch on Board

4.6.3.1 GUTTING OF CEPHALOPODS SHOULD BE CARRIED OUT WITH A CONTINUOUS SUPPLY OF CLEAN SEA WATER TO CARRY THE VISCERAL CONTENT OVER THE SHIPSIDE OR TO A SUITABLE CONTAINER

4.6.3.2 CHLORINATED WATER SHOULD BE USED FOR PROCESSING OF CEPHALOPODS

The use of chlorinated water during the processing helps to check the multiplication of micro-organisms on working surfaces of equipment and on the surface areas of the product.

Cephalopods which are intended for skinning, removal of tentacles, heads, viscera, deboning or trimming, should be thoroughly washed with clean sea or potable water containing about 5 ppm available chlorine.

After processing the fillets from cuttlefish and tubes from squids should be washed again in chilled/refrigerated sea water or potable water of the same chlorine level.

After careful evisceration and the removal of the eyes and the beak, the meat should be thoroughly washed in running clean sea water. The visceral content of cephalopods is highly proteolytic, containing a high concentration of digestive enzymes and spoilage micro-organisms, which if not removed rapidly and thoroughly, will result in marked deterioration of quality.

In disposing of offal into the surrounding water, some consideration should be given to the possibility of a serious pollution problem, especially if this is done in sheltered waters, close to public beaches or inhabited areas.

4.6.3.3 AS THE PROCESSING PROGRESSES THROUGH VARIOUS STAGES, CARE SHOULD BE TAKEN TO PREVENT ANY WARMING UP OF THE CEPHALOPOD MEAT

After completion of each stage of processing, it is strongly recommended to keep the material constantly chilled either by ice or by immersion in clean ice water.

4.6.3.4 CLEAN CHILLED BRINE OR REFRIGERATED SEA WATER SHOULD BE USED TO FIRM UP THE TEXTURE OF THE CEPHALOPOD MEAT

The original flesh texture of the meat could be regained by having them immersed in either one percent salt solution in ice potable water or in clean chilled or refrigerated sea water, preventing, however the absorption of water.

Approximately 15 to 20 minutes exposure to this level of salinity should be sufficient. The adequacy of treatment, could be easily ascertained by compressing the meat in between two fingers and comparing its texture with a freshly cut cephalopod fillet.

4.6.3.5 THE MATERIAL TREATED WITH SALT WATER SHOULD BE WASHED AGAIN IN CLEAN ICE WATER

Once the salt water treatment is completed, the material should be rinsed in clean ice water to excess salt that might have been absorbed. This procedure should be completed as quickly as possible, otherwise softening of texture will occur again and in a manner as to prevent absorption of water.

4.6.4 Freezing and Freezer Storage

4.6.4.1 THE CEPHALOPODS SHOULD BE FROZEN ON BOARD THE VESSEL IF THE FISHING OPERATIONS LAST LONGER THAN THREE DAYS

Any prolonged holding of raw cephalopods, even at temperatures approaching that of melting ice, results in gradual deterioration of quality. For fishing operations lasting longer than three days, the cephalopods should be frozen, glazed and stored at -20ºC (-4ºF) to -25ºC (-13ºF).

4.6.4.2 FREEZING AND FROZEN STORAGE ON BOARD VESSELS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE RECOMMENDED INTERNATIONAL "CODE OF PRACTICE FOR FROZEN FISH" (Lob 4.6.2.7/Mod)

The hygienic requirements on board vessels should be just as high as those required in shore processing plants. Although the Recommended International "Code of Practice for Frozen Fish" does not deal specifically with the freezing of cephalopods, most of the recommendations made would apply.

4.6.4.3 ONLY THE HIGHEST QUALITY CEPHALOPODS SHOULD BE USED FOR FREEZING WHOLE

Segregation should be made on the basis of species, colour, size and absence of visible physical damage. Such cephalopods should be thoroughly washed and the openings of ink sacks should be closed by a string or a plastic clip.

Immediately after the washing and segregation and prior to freezing, they should be well prechilled in clean ice water or refrigerated sea water. Time of prechilling and the presence of certain salts in the water might affect the texture and the colour.

4.6.4.4 FREEZING SHOULD BE RAPID TO ELIMINATE OR DIMINISH QUALITY DETERIORATION

The cephalopods should be rapidly frozen to ensure a high quality product. It is known that the cephalopods can suffer detrimental changes, including protein denaturation and cell damage when exposed to very slow or incomplete freezing. The quality losses can seriously affect the texture, flavour and keeping time of the products.

4.6.4.5 FREEZING SHOULD BE COMPLETED IN THE FREEZER AND SHOULD NEVER BE CARRIED OUT BY PLACING UNFROZEN OR PARTIALLY FROZEN PRODUCTS IN A FREEZER STORE

Freezing of cephalopods should be completed in a blast or contact freezer before they are moved to a freezer store. Refrigeration equipment in freezer stores usually does not have sufficient capacity to take care effectively of additional heat load. Warm products placed in a freezer store will not only take a very long time to freeze, but may also warm up other products already in the store.

4.6.4.6 PRECISE FREEZING TIMES FOR CEPHALOPODS SHOULD BE CAREFULLY DETERMINED

The freezing time required is influenced by many variables, such as product shape, size, the area exposed to the refrigerated surface and the temperature of the

refrigerant. The exact freezing time should be determined by direct measurement of the product temperature during the freezing process. In many countries, practical advice on how to freeze the cephalopods and how to measure product temperature adequately, can be obtained from fishery research organizations.

4.6.4.7 ACCURATE RECORDS SHOULD BE KEPT OF ALL FREEZING OPERATIONS

An accurate record of all loading and unloading times of the freezer, type and the size of the product and any other relevant information, will greatly assist the efficient management and control of the operation.

4.6.4.8 FROZEN CEPHALOPODS SHOULD BE PROTECTED FROM DEHYDRATION AND OXIDATION IN THE FREEZER STORE e.g. BY GLAZING AND WRAPPING IMMEDIATELY AFTER FREEZING

The cephalopods frozen in blocks or individually quick frozen are usually glazed or packed in wrappers or cartons to protect them from dehydration and oxidation and also to safeguard their hygienic condition.

Food additives cannot be used indiscriminately in ice glazing. Food laws differ from one country to another and it is essential to seek advice of a specialist in this field before an additive is used.

4.6.4.9 A STOWAGE PLAN OF THE FREEZER STORE SHOULD BE KEPT TO FACILITATE LOCATING PRODUCTS OF DIFFERENT SPECIES, SIZE AND RAW MATERIAL CONDITION

A well prepared stowage plan will assist, during unloading, in separating lots of different species, size, stage of processing, level in quality and intended for different purposes.

4.7 Unloading and Transport of the Catch

4.7.1 SUITABLE LANDING AREAS SHOULD BE PROVIDED (Lob 4.7.1)

Landing directly onto beaches or uncontrolled areas can lead to contamination. Provision of a wharf, quay or pier is most desirable.

4.7.2 LANDING AREAS SHOULD BE KEPT CLEAN (Lob 4.7.2)

Refuelling and handling of fuel, lubricants and other material which might contaminate the catch, should be done in areas separate from those where the catch is unloaded. It should be the specific responsibility of an individual to keep the unloading areas clean.

4.7.3 UNLOADING FACILITIES SHOULD EITHER BE PROVIDED ON THE WHARF OR INCORPORATED ON THE VESSEL (Lob 4.7.3/Mod)

Such facilities should enable the catch to be transferred to the wharf rapidly without causing damage and in a manner that will not lead to contamination.

4.7.4 CONTAINERS USED FOR UNLOADING SHOULD BE CONSTRUCTED OF SUITABLE CORROSION-RESISTANT MATERIAL. THEY SHOULD BE CLEAN TO AVOID CONTAMINATION AND STRONG ENOUGH TO PREVENT PHYSICAL DAMAGE TO THE CEPHALOPODS DURING TRANSIT. WICKER BASKETS AND WOODEN BOXES SHOULD NOT BE USED. (Lob 4.7.4/Mod)

Care should be taken not to damage the cephalopods during unloading, or removal from the container. If cephalopods are iced in boxes, the boxes should be large enough to hold sufficient ice.

4.7.5 CEPHALOPODS AFTER UNLOADING SHOULD BE TRANSFERRED WITHOUT DELAY INTO TRANSPORT VEHICLES (Crb 4.7.6/Mod)

Landings will either be direct to a processing plant or some transport by truck, rail or air will be necessary.

4.7.6 SURFACE TRANSPORT VEHICLES SHOULD BE INSULATED OR PREFERABLY REFRIGERATED TO KEEP CEPHALOPODS COOL (Crb 4.7.7/Mod)

Cephalopods iced at sea should be carried as close to melting ice temperature as may be practicable and re-iced as necessary. Cephalopods frozen at sea should not be allowed to thaw out in transit. The temperature should be maintained as close to the freezer store temperature as possible and should not exceed -18ºC (0ºF).

4.8 Hygiene Control Programme

4.8.1 IT IS DESIRABLE THAT EACH FISHING VESSEL SHOULD DEVELOP ITS OWN SANITARY CONTROL PROGRAMME BY INVOLVING THE WHOLE CREW AND BY ASSIGNING TO EACH MEMBER A DEFINITE TASK IN CLEANING AND DISINFECTING THE BOAT (FF 4.8/Mod)

A permanent cleaning and disinfecting schedule should be drawn up to ensure that all parts of the boat and equipment thereon are cleaned appropriately and regularly.

The fishermen should be well trained in the use of special cleaning tools; methods of dismantling equipment for cleaning and should be knowledgeable in the significance of contamination and the hazards involved.

HANDLING OF CEPHALOPODS ON SHORE

5. SECTION IV B - PLANT FACILITIES AND OPERATING REQUIREMENTS

5.1 Plant Construction and Layout

5.1.1 General Considerations

5.1.1.1 CEPHALOPOD PROCESSING PLANTS SHOULD BE DESIGNED AND EQUIPPED SO THAT ALL HANDLING AND PROCESSING OPERATIONS CAN BE CARRIED OUT EFFICIENTLY, AND ALL MATERIALS AND PRODUCTS CAN PASS FROM ONE STAGE OF PROCESSING TO THE NEXT IN AN ORDERLY MANNER AND WITH MINIMUM DELAY (SMF 4.1.1.1/Mod)

A great deal of care should be taken in planning the layout and equipment of a cephalopod processing plant to ensure that there is sufficient space and suitable facilities to carry out each operation efficiently with due concern for hygiene and quality of the final product and to move cephalopods and materials through the various stages in an orderly manner.

In order to prevent cross-contamination between different processing activities and safeguard the wholesomeness and quality of products, the following operations should be conducted in separate rooms or in well defined areas of adequate size.

(a) receiving and storage of raw materials;
(b) processing (dressing, skinning, dry-salting);
(c) roasting or smoking or splitting, seasoning;
(d) cooling, packaging, and
(e) storage of final products.

The handling of cephalopods and storage areas should be entirely divorced from:

(f) storage of waste materials;
(g) storage of packaging materials;
(h) storage of cleaning and disinfecting compounds, and
(i) storage of wood and wood products used in the smoking process.

Rooms or areas where dripping and drying of cephalopods prior to smoking or cooling of products after the smoking are carried out should comply with all building and sanitary requirements stated for other handling and processing areas. Adequate chill room facilities should be provided for dry-salting prior to smoking and after skinning, if the ambient temperature necessitates it.

5.1.1.2 CEPHALOPODS PROCESSING PLANTS SHOULD BE SPECIALLY DESIGNED FOR THE PURPOSE (SP 5.1.1.1/Mod)

Meat of cephalopods spoils even more rapidly than fish. It is therefore essential that the processing is carried out rapidly in a plant designed to handle cephalopods and that no build-up of part-processed products occurs.

5.1.2 Plant Construction and Sanitary Design

5.1.2.1 THE PLANT AND SURROUNDING AREA SHOULD BE SUCH AS CAN BE KEPT REASONABLY FREE FROM OBJECTIONABLE ODOURS, SMOKE, DUST OR OTHER CONTAMINATION. THE BUILDING SHOULD BE SUFFICIENT IN SIZE WITHOUT CROWDING OF EQUIPMENT OR PERSONNEL, WELL CONSTRUCTED AND KEPT IN GOOD REPAIR. THEY SHOULD BE DESIGNED AND CONSTRUCTED TO PROTECT AGAINST THE ENTRANCE AND HARBOURING OF INSECTS, BIRDS OR OTHER VERMIN, AND TO PERMIT READY AND ADEQUATE CLEANING (SP 5.1.2.1/Mod)

The location of a processing plant, its design, layout, construction and equipment should be planned in detail with considerable emphasis on the hygienic aspects, sanitary facilities and quality control.

Where new premises are constructed, or when existing buildings are modified, national or local authorities should always be consulted in regard to building codes, hygienic requirements of the operation and sanitary disposal of sewage and plant waste.

Prior to the construction of a new plant or modification of the existing one, a proper flow pattern of operation should be considered (see Appendix I, "Flow Diagram for Handling and Processing of Cephalopods"). Only a well-organized work flow can assure the maximum efficiency of the operation and a better quality product.

The food handling area should be completely separate from any part of the premises used as living quarters.

5.1.2.2 FLOORS SHOULD BE HARD SURFACED, NON-ABSORBENT AND ADEQUATELY DRAINED (FF 5.1.2.2)

Floors should be constructed of durable, waterproof, non-toxic, non-absorbent material which is easy to clean and disinfect. They should be non-slip and without crevices and should slope evenly and sufficiently for liquids to drain to trapped outlets fitted with a removable grill.

If floors are ribbed or grooved to facilitate traction, any grooving of this nature should always run toward the drainage channel.

The junctions between the floors and walls should be impervious to water and should be coved or rounded for ease of cleaning.

Concrete, if not properly finished, is porous and can be affected by animal oils, strong brines, various detergents and disinfectants. If used, it should be dense, of a good quality, and with a well finished waterproof surface.

5.1.2.3 DRAINS SHOULD BE OF AN ADEQUATE SIZE, SUITABLE TYPE, EQUIPPED WITH TRAPS AND WITH REMOVABLE GRATINGS TO PERMIT CLEANING (FF 5.1.2.3)

Suitable and adequate drainage facilities are essential for removal of liquid or semi-liquid wastes from the plant. There should be no floor area where water might collect in stagnant pools. Drains should be constructed of smooth and impervious material and should be designed to cope with the maximum flow of liquid without any overflowing and flooding. Each drainage inlet should be provided with a deep seal trap which is appropriately located and easy to clean.

Drainage lines carrying waste effluent, except for open drains, should be properly vented, have a minimum internal diameter of 10 cm (4 in) and, if required, run to a catch basin for removal of solid waste material. Such a basin should be located

outside the processing area and should be constructed of waterproof concrete or other similar material designed to the local specifications and approved by the local authorities having jurisdiction.

5.1.2.4 INTERNAL WALLS SHOULD BE SMOOTH, WATERPROOF, RESISTANT TO FRACTURE, LIGHT COLOURED AND READILY CLEANABLE (FF 5.1.2.4)

Acceptable materials for finishing walls inside are cement render, ceramic tiles, various kinds of corrosion-resistant metallic sheeting, such as stainless steel or aluminium alloys, and a variety of non-metallic sheeting which have adequate impact resistance, desirable surface qualities and are easily repairable.

All sheeting joints should be sealed with a mastic or other compound resistant to hot water and cover strips should be applied where necessary.

Wall-to-wall and wall-to-floor junctions should be coved or rounded to facilitate cleaning.

Walls should be free from projections and all pipes and cables should be sunk flush with the wall surface or neatly boxed in.

5.1.2.5 WINDOW SILLS SHOULD BE KEPT TO A MINIMUM SIZE, BE SLOPED INWARD AT 45° AND BE AT LEAST 1 METRE FROM THE FLOOR (FF 5.1.2.5)

Window sills and frames should be made of a smooth, waterproof material and, if of wood, should be kept well painted. Internal window sills should be sloped to prevent storage of miscellaneous materials or accumulation of dust and should be constructed to facilitate cleaning.

Windows should be filled with whole panes and those which open should be screened. The screens should be constructed so as to be easily removable for cleaning and should be made from suitable corrosion-resistant material.

5.1.2.6 ALL DOORS THROUGH WHICH CEPHALOPODS OR THEIR PRODUCTS ARE MOVED SHOULD BE SUFFICIENTLY WIDE, WELL CONSTRUCTED OF A SUITABLE MATERIAL AND SHOULD BE OF A SELF-CLOSING TYPE (FF 5.1.2.6/Mod)

Doors through which cephalopods or their products are moved, should be either sheathed with or made of corrosion-resistant metal or other suitable material with adequate impact resistance and, unless provided with an effective air screen, should be of a self-closing type.

Both the doors and the frames of the doorways should have a smooth and readily cleanable surface.

Doors through which the product is not moved, such as those providing staff access, should be appropriately surfaced, at least on the processing area side, to allow for ease of cleaning.

5.1.2.7 CEILINGS SHOULD BE DESIGNED AND CONSTRUCTED TO PREVENT ACCUMULATION OF DIRT AND CONDENSATION AND SHOULD BE EASY TO CLEAN (FF 5.1.2.7/Mod)

Ceilings should be preferably a minimum of 3 m from the floor in height, free from cracks and open joints and should be of a smooth, waterproof, light coloured finish, which does not permit the growth of mould.

In buildings where beams, trusses, pipes or other structural elements are exposed, the fitting of a suspended ceiling just below is desirable.

Where the roof beams and trusses cannot be covered, the underside of the roof may constitute a satisfactory ceiling providing all joints are sealed and the supporting

structures are of a smooth, well painted and light coloured surface, easily cleanable and constructed to protect the cephalopod products from falling debris, dust or condensate.

5.1.2.8 PREMISES SHOULD BE WELL VENTILATED TO PREVENT EXCESSIVE HEAT, CONDENSATION AND CONTAMINATION WITH OBNOXIOUS ODOURS, DUST, VAPOUR OR SMOKE (FF 5.1.2.8)

Special attention should be given to the venting of areas and equipment producing excessive heat, steam, obnoxious fumes, vapours or contaminating aerosols. The air-flow in the premises should be from the more hygienic areas to the less hygienic areas. Good ventilation is important to prevent condensation and growht of moulds in overhead structures. Ventilation openings should be screened and, if required, equipped with proper air filters. Windows which open for ventilation purposes should be screened. The screens should be made easily removable for cleaning and should be made from suitable corrosion-resistant material.

5.1.2.9 A MINIMUM ILLUMINATION OF 220 LUX (20 FOOT CANDLES) IN GENERAL WORKING AREAS AND NOT LESS THAN 540 LUX (50 FOOT CANDLES) AT POINTS REQUIRING CLOSE EXAMINATION OF THE PRODUCT, SHOULD BE PROVIDED AND SHOULD NOT ALTER COLOURS (FF 5.1.2.9/Mod)

Light bulbs and fixtures suspended over the working areas where cephalopods are handled at any stage of preparation, should be of the safety type or otherwise protected to prevent food contamination in case of breakage.

It is highly desirable to have the light fixtures either recessed flush with the ceiling or with the upper surface of the light fixtures fitting flush with the ceiling in order to prevent the accumulation of dust on them.

5.1.2.10 SEPARATE AND ADEQUATE STORAGE SHOULD BE PROVIDED FOR WOOD, SAWDUST OR SIMILAR MATERIALS USED IN SMOKING OF CEPHALOPODS (SMF 4.1.2.10/Mod)

Wood, wood shavings or sawdust should be stored in a separate storage room or building away from the cephalopods processing area and in such a manner that there is no contamination by dust of other foreign matter.

To prevent spontaneous heating and the growth of moulds, the wood shavings and sawdust should be sufficiently dry on delivery and should not be stored in large containers, heaps or silos. Storage in bags is advantageous as it allows better aeration, drying and more convenient handling.

5.1.3 Hygiene Facilities

5.1.3.1 AREAS WHERE RAW MATERIALS ARE RECEIVED, STORED OR HANDLED, SHOULD BE SEPARATED FROM THE AREAS IN WHICH PRODUCT PREPARATION, PROCESSING AND PACKAGING ARE CONDUCTED (FF 5.1.3.1/Mod)

Well defined areas of adequate size, preferably separate rooms, should be provided for receiving and storing of raw materials.

Receiving and storage areas should be clean and readily capable of being maintained in a clean condition and should provide protection for the raw cephalopods from deterioration and contamination.

5.1.3.2 A SEPARATE REFUSE ROOM OR OTHER EQUALLY ADEQUATE OFFAL STORAGE FACILITIES SHOULD BE PROVIDED ON THE PREMISES (FF 5.1.3.2)

If offal or other refuse is to be collected and held before removal, adequate precautions should be taken to protect it against rodents, birds, insects and exposure to warm temperatures.

A separate refuse room for storing waste in water-tight containers or offal bins should be provided. The walls, floor and ceiling of such a storage room, and the area under the elevated bins, should be constructed of impervious material which can be readily cleaned. Where waste material is held in containers outside the establishment,

the containers should be lidded. A separate enclosure should be provided for their storage with easy access for vehicle loading and unloading. Stands for the containers should be of solid, hard and impervious material, which can be easily cleaned and properly drained.

If containers are used in large numbers, a mechanical washing plant might be advisable to provide for routine washing. Containers should be capable of withstanding repeated exposure to normal cleaning processes.

5.1.3.3 ANY BY-PRODUCT PLANT SHOULD BE ENTIRELY SEPARATE FROM THE PLANT WHICH IS PROCESSING FRESH CEPHALOPODS FOR HUMAN CONSUMPTION (FF 5.1.3.3/Mod)

The layout and construction of a plant processing cephalopods for human consumption should be such as to ensure that the areas in which cephalopods for human consumption are held, processed and stored are used for these purposes only.

Any processing of by-products or non-fish products, not intended for human food, should be conducted in separate buildings or in areas which are physically separated in such a way that there is no possibility for contamination of fresh or processed cephalopods.

5.1.3.4 AN AMPLE SUPPLY OF COLD AND HOT POTABLE WATER AND/OR CLEAN SEA WATER UNDER ADEQUATE PRESSURE SHOULD BE AVAILABLE AT NUMEROUS POINTS THROUGHOUT THE PREMISES AT ALL TIMES DURING WORKING HOURS (FF 5.1.3.4/Mod)

All water available for use in those parts of establishments where cephalopods are received, held, processed, packaged and stored should be potable water or clean sea water and should be supplied at a pressure of no less than 1.4 kg/cm^2 (20 lb/in^2). If sea water is used, it must be clean sea water.

An adequate supply of hot water of potable quality and suitable temperature should be available at all times during working hours.

Water used for washing or conveying raw materials should not be recirculated unless it is restored to a level of potable quality.

5.1.3.5 WHEN INPLANT CHLORINATION OF WATER IS USED, THE RESIDUAL CONTENT OF FREE CHLORINE SHOULD BE MAINTAINED AT NO MORE THAN THE MINIMUM EFFECTIVE LEVEL FOR THE USE INTENDED (FF 5.1.3.5)

The cold water supply used for cleaning purposes should be fitted with an in-line chlorination system allowing the residual chlorine content of the water to be varied at will in order to reduce multiplication of micro-organisms and prevent the build-up of fish odours.

A chlorination system should not be relied on to solve all hygiene problems. The indiscriminate use of chlorine cannot compensate for a non-hygienic condition in a processing plant.

5.1.3.6 ICE USED IN THE OPERATION IN CEPHALOPOD PROCESSING ESTABLISHMENTS SHOULD BE MADE FROM POTABLE WATER OR CLEAN SEA WATER

A special room, or other suitable storage facilities, should be provided to protect the ice from contamination and excessive meltage. Dust, flakes of paint, bits of wood or sawdust, straw and rust, are the most frequent impurities transferable by ice into the final product.

Care must be taken to ensure that ice used to chill the raw material or products does not contaminate them.

5.1.3.7 WHERE A NON-POTABLE AUXILIARY WATER SUPPLY IS USED THE WATER SHOULD BE STORED IN SEPARATE TANKS AND CARRIED IN SEPARATE LINES, IDENTIFIED BY CONTRASTING COLOURS AND LABELLED AND WITH NO CROSS-CONNECTIONS OR BACKSIPHONAGE WITH THE LINES CARRYING POTABLE WATER (FF 5.1.3.7/Mod)

Non-potable water may be used for such purposes as producing steam, cooling heat exchangers and fire protection.

It is very important that the systems of storage and distribution of potable and non-potable water are entirely separate and there is no possibility for cross-connection of for inadvertent usage of non-potable water in the processing areas. Only potable quality water should be used for the supply of hot water.

5.1.3.8 ALL PLUMBING AND WASTE DISPOSAL LINES, INCLUDING THE SEWER SYSTEM SHOULD BE LARGE ENOUGH TO CARRY PEAK LOADS AND SHOULD BE PROPERLY CONSTRUCTED (FF 5.1.3.8)

All lines should be water-tight and have adequate deep seal traps and vents. Waste should not be disposed of in a way that may contaminate potable water or clean sea water supplies.

Sumps or solid matter traps of the drainage system should preferably be located outside the processing area and so designed as to allow them to be emptied and thoroughly cleaned at the end of each working day.

The plumbing and manner of waste disposal should be approved by the official agency having jurisdiction.

5.1.3.9 PROPER FACILITIES FOR WASHING AND DISINFECTION OF EQUIPMENT SHOULD BE PROVIDED (FF 5.1.3.9/Mod)

Facilities should be present in every cephalopod processing establishment for cleaning and disinfection of trays, removable cutting or filleting boards, containers and other similar equipment and working implements. Such facilities should be located in a separate room or in a designated area in the work rooms where there is an adequate supply of hot and cold potable water or clean sea water, under good pressure, and where there is proper drainage.

Any containers and equipment used for offal or contaminated materials should not be washed in the same area.

5.1.3.10 ADEQUATE AND CONVENIENTLY LOCATED TOILET FACILITIES SHOULD BE PROVIDED (FF 5.1.3.10)

Toilet rooms should have walls and ceilings of a smooth washable, light-coloured surface and floors constructed of impervious and readily cleanable material. Toilet facilities should be well lit, ventilated and kept in a hygienic condition at all times. Adequate supply of toilet paper should be available in each toilet cubicle.

The doors leading to the facilities should be of a self-closing type and should not open directly into the processing areas.

Handwashing facilities of a type not requiring operation by hand, with an adequate supply of warm or hot and cold potable water or clean sea water, with liquid or powdered soap and with suitable hygienic means of drying the hands, should be provided adjacent to the toilets and in such a position that the employee must pass them when returning to the processing room. Where hot and cold water are available, mixing taps should be provided. Where paper towels are used, a sufficient number of dispensers and receptables for used towels should be provided.

Notices should be posted directing personnel to wash their hands after using the toilets.

The following formula could be used as a guideline in assessing the adequacy of toilet facilities in relation to the number of employees:

1 to 9 employees = 1 toilet
10 to 24 employees = 2 toilets
25 to 49 employees = 3 toilets
50 to 100 employees = 5 toilets

for every 30 employees over 100 = 1 toilet

5.1.3.11 FACILITIES SHOULD BE AVAILABLE IN THE PROCESSING AREAS FOR EMPLOYEES TO WASH AND DRY THEIR HANDS AND FOR DISINFECTION OF PROTECTIVE HAND COVERINGS (FF 5.1.3.11)

In addition to hand washing facilities available in toilet rooms, a number of wash basins with an adequate supply of hot and cold potable water or clean sea water and liquid or powdered soap, should be provided whenever the process demands. They should be located in full view of the processing floor and should be of a type not requiring operation by hand or be fed by a continuous flow of potable water or clean sea water. Single-use paper towels are recommended, otherwise the method of drying hands should be approved by the official agency having jurisdiction. The facilities should be kept in a hygienic condition at all times.

5.1.3.12 STAFF AMENITIES CONSISTING OF LUNCH ROOMS, CHANGING ROOMS OR ROOMS CONTAINING SHOWER OR WASHING FACIILITIES SHOULD BE PROVIDED (FF 5.1.3.12)

Where workers of both sexes are employed, separate facilities should be present for each, except that the lunch rooms may be shared. As a general guide, the lunch rooms should provide seating accommodation for all employees and the changing rooms should provide enough space for lockers for each employee without causing undue congestion. Clothing and footwear, not worn during working hours, must not be kept in any processing area.

5.1.3.13 SALT AND OTHER INGREDIENTES USED IN CURING OF CEPHALOPODS SHOULD BE STORED DRY AND IN A MANNER TO PREVENT THEIR CONTAMINATION (SMF 4.1.3.13/Mod)

Salt and other ingredients used for processing cephalopods should be of food grade.

5.1.3.14 STORAGE FACILITIES SHOULD BE AVAILABLE FOR THE PROPER DRY STORAGE OF PACKAGING MATERIALS (FF 5.1.3.13)

Separate facilities for the storage of cartons, wrappings or other packaging materials should be provided in order to protect them against moisture, dust or other contamination.

5.1.3.15 IF POISONOUS OR HARMFUL MATERIALS, INCLUDING CLEANING COMPOUNDS, DISINFECTANTS AND PESTICIDES ARE STORED, THEY SHOULD BE KEPT IN A SEPARATE ROOM DESIGNED AND MARKED SPECIFICALLY FOR THIS PURPOSE (FF 5.1.3.14)

All such materials must be prominently and distinctly labelled so that they can be easily identified. The room should be kept locked and the materials contained in it should be handled only be personnel trained in their use.

5.2 Equipment, Utensils and Working Surfaces

5.2.1 ALL WORKING SURFACES AND ALL CONTAINERS, TRAYS, TANKS, VATS OR OTHER EQUIPMENT USED FOR PROCESSING CEPHALOPODS SHOULD BE OF SMOOTH, IMPERVIOUS, NON-TOXIC MATERIAL WHICH IS CORROSION-RESISTANT AND SHOULD BE DESIGNED AND CONSTRUCTED TO PREVENT HYGIENIC HAZARDS AND PERMIT EASY AND THOROUGH CLEANING. IN GENERAL THE USE OF WOOD FOR THIS PURPOSE IS NOT RECOMMENDED (SMF 4.2.1.1/Mod)

Contamination of cephalopods during processing can be caused by contact with unsatisfactory surfaces. All food contact surfaces should be smooth, free from pits and crevices, substances harmful to man, unaffected by salt, body fluids from cephalopods or other ingredients used, and capable of withstanding repeated cleaning and disinfection.

Wood should be used for cutting surfaces only when no other suitable material is available. Machines and equipment should be so designed that they can be easily dismantled to facilitate thorough cleaning and disinfection.

Containers, vats and barrels used for holding cephalopods should preferably be constructed of plastic or corrosion-resistant metal and, if of wood, they should be treated to prevent the entry of moisture and coated with a durable non-toxic paint or other surface coating that is smooth and readily washable. Wicker baskets should not be used.

Stationary equipment should be installed to permit easy access and thorough cleaning and disinfection.

Cephalopods washing tanks should be designed to provide a constant change of water with good circulation, and to have provisions for drainage and to be easily cleaned.

Equipment and utensils used for inedible or contaminated materials should be identified as such and should not be used for handling of cephalopods and products intended for human consumption.

5.2.2 BOARDS AND OTHER SURFACES ON WHICH CEPHALOPODS ARE CUT SHOULD BE MADE OF IMPERVIOUS MATERIALS WHICH MEET THE PHYSICAL REQUIREMENTS FOR CUTTING SURFACES (SMF 4.2.1.1/Mod)

Considerable microbial contamination of cephalopods is caused by contact with the filleting and cutting boards. Wooden cutting surfaces are porous and quickly become waterlogged and are practically impossible to clean throughly. They are not recommended as suitable for this type of work.

If in the absence of other materials wood has to be used, a single board of a well finished and smooth surface is recommended. Once the surface becomes badly worn or pitted, then the board should be reconditioned or discarded.

The use of plywood or other boards of laminated structure should be discouraged.

5.2.3 THE USE OF PROPERLY DESIGNED MACHINES FOR GUTTING, WASHING, SPLITTING, SKINNING, STEAKING, BRINING AND TENTERING IS TO BE ENCOURAGED. (SMF 4.2.1.3/Mod)

Where large quantities of cephalopods are processed, properly designed machines will simplify the production of cephalopod products in quantity with consistently low bacterial counts. This is mainly because well designed machines have impervious and corrosion-resistant working surfaces, are easy to dismantle, clean, disinfect and are capable of handling the cephalopods with a minimum of delay.

It is essential that the installation of new machinery should be well researched and economically justified. The units should be rigorously tested before being put into commercial use, otherwise costly failures may arise.

5.2.4 BRINING AND LASTING VATS SHOULD BE MADE OF SUITABLE CORROSION-RESISTANT MATERIAL AND SHOULD BE SO CONSTRUCTED AS TO PERMIT EASY CLEANING AND COMPLETE DRAINAGE. (SMF 4.2.1.4)

Such vats or containers could become a serious source of contamination by micro-organisms, rust, dirt and miscellaneous detritus if not made of suitable material or if not kept clean.

5.2.5 COOKERS SHOULD BE DESIGNED TO PROVIDE CONSTANT AND ADEQUATE SUPPLY OF HEAT SO THAT ALL CEPHALOPODS COULD BE GIVEN THE SAME TIME/TEMPERATURE EXPOSURE DURING THE COOKING OPERATION. (SP 4.2.5/Mod)

Cooking, or any other heat treatment of cephalopods, is a very critical process as far as the yield and quality of the final product are concerned.

The cooker should be constructed to provide a good control of time/temperature exposure of the cephalopods at the maximum processing load.

It is poor practice to keep cephalopods in hot water for a long time before the boiling commences. Furthermore, an inadequately fired cooker will slow down the whole operation sequence.

5.2.6 COOOKERS SHOULD BE MADE OF SUITABLE CORROSION-RESISTANT MATERIAL AND BE BUILT IN SUCH A WAY THAT THEY CAN BE DRAINED AND EASILY DISMANTLED FOR CLEANING. (SP 4.2.6/Mod)

All parts of the cooker that come in contact with the cephalopods should be made of suitable corrosion-resistant material. The cooker, of a conventional or continual type, should be designed to permit easy and frequent drainage and dismantling for washing and sanitizing.

5.2.7 SUITABLE EQUIPMENT FOR COOLING OF COOKED CEPHALOPODS SHOULD BE PROVIDED (SP 4.2.7/Mod)

Cephalopods should be colled rapidly and thoroughly either by immersion in a tank containing clean sea water or by exposure to an effective air cooling system.

The cooling tank should be of suitable corrosion-resistant material and should be designed to provide a constant change of water with good circulation. It should be located close to the cooker, but in such a way that the chance of contamination with micro-organisms derived from the raw cephalopods is reduced to a minimum.

5.2.8 DRYING EQUIPMENT SHOULD BE OF ADEQUATE CAPACITY FOR THE INTENDED PRODUCTION

In sun-drying, the drying proceeds so slowly in most cases, especially in bad weather, that a certain amount of decomposition is likely to take place before the desired reduction in water content. Therefore where economically justified, use of a mechanical dryer should be recommended.

5.2.9 REFRIGERATION AND FREEZING EQUIPMENT SHOULD BE PROPERLY DESIGNED AND CONSTRUCTED AND SHOULD BE OF ADEQUATE CAPACITY. (LOB 5.2.5/Mod)

The freezing equipment should be designed and operated in accordance with the requirements stated in the Recommended International "Code of Practice for Frozen Fish" (CAC/RCP 9-1976) so that freezing of cephalopods is accomplished rapidly.

5.2.10 ALL FREEZER AND COLD STORAGE FACILITIES SHOULD BE ADEQUATE FOR THE INTENDED PRODUCTION AND SHOULD BE FITTED WITH AUTOMATIC TEMPERATURE CONTROLLING AND RECORDING DEVICES. (Lob 5.2.6/Mod)

Frozen cephalopods and their products should be stored at a uniformly low temperature if a considerable quality loss is to be avoided. Freezer stores should be able to operate at $-30^{o}C$ ($-22^{o}F$) or lower as cephalopods deteriorate more rapidly than fish. Thermometers, or other temperature recording devices, should be capable of being read easily within a 2^{o} accuracy. More detailed requirements for the construction and operation of a freezer store are given in the Recommended International "Code of Practice for Frozen Fish". (CAC/RCP 9-1976).

5.2.11 TRANSPORT VEHICLES SHOULD BE DESIGNED TO PROTECT CEPHALOPODS FROM WARMING UP DURING TRANSPORTATION AND SHOULD BE OF SUCH MATERIAL AND CONSTRUCTION AS TO PERMIT EASY AND THOROUGH CLEANING. (FF 5.2.11/Mod)

Vehicles used for transporting cephalopods and cephalopod products should be designed to provide some means of refrigeration and constructed to ensure constant protection to the cephalopods against contaminantion by dust and the drying effect of sun or wind. Even where ice is very cheap and journey times or distances are relatively short, the use of an insulated vehicle provides an additional insurance against inadequate icing or unforeseen delays. The walls, roof and the floor of the vehicle

should be insulated. The thickness of insulation employed will depend on the outside temperatures normally encountered. It should be remembered that insulation cannot help to cool the cephalopods but helps to keep it at the temperature at which it was put into the vehicle.

Vehicles used for transporting frozen cephalopods should be capable of maintaing the cephalopods at a temperature appropriate of -18°C (0°F) or less.

For the purpose of cleaning, the vehicles transporting cephalopods should have the wall, floor and roof linings made of suitable corrosion-resistant material with smooth and non-absorbent surface. Floors should be adequately drained.

5.2.12 THE PROCESSING PLANTS SHOULD BE EQUIPPED WITH EITHER TRADITIONAL OR MECHANICAL SMOKING KILNS (SMF 4.2.2.1/Mod)

Both types of kilns, traditional and mechanical, should be preferably designed and constructed by specialists to ensure safe and efficient operation and to facilitate easy cleaning.

The mechanical kiln gives better prospects for controlling the operation and the quality of the final product. The traditional kiln is essentially a large chimney with means to suspend cephalopods strung on tenters (sticks or rods on which cephalopods are hung) over a fire of smouldering wood. It is easy and cheap to construct. In this type of kiln the hot air generated by the smouldering wood in the kiln creates a vertical current of smoke which passes the cephalopods to be smoked. The speed of this current is usually slow and uneven. Some improvement and a limited amount of process control can be obtained by installing a suction fan and dampers in the chimney at the top of the kiln. Recirculation of smoke is not practised.

The traditional type of kiln should preferably be constructed of material with good insulation properties such as bricks. This results in smaller heat losses, in more uniform temperature distribution, and prevents the condensation of moisture on the inner surfaces during cold weather.

The inner surface of the kiln should preferably be finished smoothly with a lining such as stainless steel or other suitable material to facilitate cleaning of the walls with steam and hot water.

In a traditional kiln the fire must be looked after constantly as it could flare up suddenly and cook, or even burn, the lowest hanging cephalopods. For this reason, therefore, it is advisable to equip the kiln with a high temperature alarm device which is relatively inexpensive and simple to install. The fire in the traditional kiln is usually built up of a layer of wood shavings covered by a layer of moist sawdust and should be attended by an experienced operator.

The mechanical kiln offers many more possibilities for process control. The movement of the air-smoke mixture in this type of kiln is done by ventilators (electric fans). The speed of the air-smoke current can be controlled as well as its relative humidity. If fitted with cooling coils, the temperature can be more precisely controlled and this facility will be of particular value in cold smoking.

Smoke required for the mechanical kiln is always produced outside the chamber in which cephalopods are smoked, either in a simple fire box or a more sophisticated smoke generator. The positive movement of the air-smoke mixture through the kiln allows for its recirculation which, in turn, will result in better fuel utilization.

In large and long mechanical kilns, in order to create more uniform processing conditions, it is advisable to shift the product's position with respect to the point of entry of the smoke or to provide for reheating of the air-smoke mixture during its passage.

5.3 Hygienic Operating Requirements

5.3.1 CEPHALOPOD PROCESSING SHOULD ALWAYS BE CARRIED OUT IN A HYGIENIC MANNER (SMF 4.3.1/Mod)

All the handling, processing and packaging of cephalopods should be carried out in a clean manner.

Precautions should be taken at all times to protect the cephalopods from contamination by animals, insects, birds, chemical or microbiological contaminants or other objectionable substances.

Preparatory operations leading to the finished product and the packaging operations should be so timed as to permit expeditious handling of consecutive batches in production within the time and temperature range that will prevent deterioration, spoilage or the multiplication of micro-organisms of public health significance.

It is considered good practice to develop a schedule of permitted times in which each operation will be allocated a definite portion of the total time permitted for each batch of cephalopod to remain on the premises of the processing plant.

5.3.2 THE BUILDING, EQUIPMENT, UTENSILS AND OTHER PHYSICAL FACILITIES OF THE PLANT SHOULD BE KEPT CLEAN, IN GOOD REPAIR AND SHOULD BE MAINTAINED IN AN ORDERLY AND HYGIENIC CONDITION (FF 5.3.2/Mod)

All surfaces which come in contact with fresh cephalopods should be hosed down with cold or hot water of potable quality, or clean sea water, as frequently as necessary to ensure cleanliness. It is important that the cleaning method used will remove all residues and the disinfecting method will reduce the microbial population of the surface being cleaned.

The use of cold or hot potable water alone is generally not sufficient to accomplish the required result. It is desirable, if not essential, that aids such as suitable cleaning and disinfecting agents, together with manual or mechanical scrubbing, wherever appropriate be used to assist in achieving the desired objective. After the application of cleaning and disinfecting agents the surfaces which come in contact with cephalopods should be cleansed thoroughly with cool potable water or clean sea water before use.

Cleaning agents and disinfectants used should be approved by the official agency having jurisdiction, should be appropriate for the purpose, and should be so used as to present no hazard to public health.

5.3.3 SPLITTING AND CUTTING BOARDS SHOULD BE FREQUENTLY AND THOROUGHLY SCRUBBED AND TREATED WITH DISINFECTANT. WHEREVER PRACTICABLE, THE BOARDS SHOULD BE CONTINUOUSLY FLUSHED WITH RUNNING POTABLE OR CLEAN SEA WATER DURING USE (FF 5.3.3/Mod)

It is recognized that the degree of microbial contamination found on cephalopods and cephalopod products is related to microbial contamination of the working surfaces on which they are processed. All such surfaces should, therefore, be cleaned, scrubbed and disinfected, at least at the end of each working day.

5.3.4 ALL MACHINES USED FOR GUTTING, BEATING, WASHING, SPLITTING, TENTERING OR SIMILAR OPERATIONS SHOULD BE THOROUGHLY CLEANED, DISINFECTED AND RINSED DURING REST OR MEAL BREAKS AND BEFORE RESUMPTION OF PRODUCTION FOLLOWING OTHER WORK STOPPAGES (FF 5.3.5/Mod)

The use of machinery reduces the risk of contamination from human sources. If, however, these machines are not properly maintained and cleaned at least once every day, they can become a serious source of contamination.

5.3.5 CLEANING OF SMOKING AND DRYING EQUIPMENT SHOULD BE MADE INTO A REGULAR ROUTINE (SMF 4.3.7/Mod)

The periodical removal of tarry deposits on walls, ceilings, fans, tenters, racks, trolleys, etc., is necessary not only for hygienic reasons but also to reduce the risk of fire.

Both the traditional and the mechanical kilns used for smoking and drying present a potential fire hazard if large amounts of tar are allowed to accumulate.

Centrifugal fans are likely to collect an appreciable amount of tar in the fan housing. A special drain hole should be provided on the bottom of the fan's enclosure.

Cleaning methods usually involve the application of alkaline solutions. This can be done manually with a brush or can be sprayed on the walls and ceilings by means of a spray gun which is connected to a hot water or steam supply. The detergent and the dissolved deposits should be rinsed off thoroughly with a copious amount of clean water. For better and more uniform contact of the detergent with the soiled surfaces the use of a foam solution of detergent is recommended.

Easy day-to-day maintenance can be achieved by installing permanent rotating spray nozzles inside the smoking kiln.

Whenever new kilns are being designed, consideration should be given to the accessibility of all parts for easy cleaning; necessary drainage points must be provided.

5.3.6 THE BRINE WHICH EXUDES DURING THE DRY-SALTING OF CEPHALOPODS SHOULD BE DISCARDED UNLESS THE RECOVERY OF SALT COULD BE ECONOMICALLY JUSTIFIED (SMF 4.4.3.5/Mod)

The resulting brine from the dry-salting operation will contain a high concentration of impurities, such as sugar, particles of dirt, slime, blood, gut content, dissolved proteins and other foreign matter. Such impurities, if not removed, will contaminante the subsequent loads of cephalopods and will, in turn, affect the quality of the final products.

In some countries, where salt is an expensive commodity, it may be worthwhile to recover it from the used brine.

5.3.7 UTENSILS AND FOOD-CONTACT SURFACES OF EQUIPMENT SHOULD BE PROTECTED FROM CONTAMINATION (SMF 4.3.6/Mod)

Cleaned and disinfected portable equipment and utensils should be stored above the floor in a clean, dry location. Suitable space and facilities should be provided for such storage so that food-contact surfaces are protected from splash, dust and other contamination.

The same requirement should also apply to the exposed food-contact surfaces of the fixed equipment.

Utensils should be air-dried before being stored or should be stored in a self-draining position on hooks or racks constructed of corrosion-resistant material. When the storage in protective liquids or other solutions is practised, the equipment and utensils so stored should subsequently be washed, disinfected and rinsed prior to re-use. Wherever practicable, stored containers and utensils should be covered or inverted.

5.3.8 SINGLE SERVICE ARTICLES, SUCH AS PLASTIC BAGS, BOXES AND PACKAGING MATERIALS SHOULD BE STORED IN A SEPARATE ROOM AND IN CLOSED CARTONS OR CONTAINERS TO PROTECT THEM FROM CONTAMINATION.

Such articles should be handled and dispensed in such a manner as to protect them from contamination with dust, dirt, water, insects, rodents, birds, or other vermin.

5.3.9 ONLY NEW AND CLEAN BOXES, CARTONS AND WRAPPING MATERIAL SHOULD BE USED FOR THE TRANSPORT AND DISTRIBUTION OF PROCESSED CEPHALOPOD PRODUCTS (FF 5.3.10/Mod)

As it is very important to protect processed cephalopod products from all sources of contamination, only new or clean non-returnable containers should always be used.

5.3.10 WATER USED FOR WASHING OR CONVEYING RAW MATERIALS, INCLUDING SEA WATER FOR CONVEYANCE OF CEPHALOPODS INTO THE PLANT, SHOULD BE FROM SUCH A SOURCE, OR SUITABLY TREATED, AS NOT TO CONSTITUTE A PUBLIC HEALTH HAZARD (SMF 4.3.10/Mod)

During gutting or for washing cephalopods, equipment and utensils, water of potable quality or clean sea water should be used. It should not be recirculated unless suitably treated to meet the required standards of potability.

5.3.11 REMOVAL OF SOLID, SEMI-SOLID OR LIQUID WASTES FROM CEPHALOPOD UNLOADDING, HOLDING AND PROCESSING AREAS SHOULD BE ON A CONTINUOUS OR NEAR CONTINUOUS BASIS USING WATER AND/OR APPROPRIATE EQUIPMENT SO THAT THESE AREAS ARE KEPT CLEAN AND THERE IS NO DANGER OF CONTAMINATING THE PRODUCT (FF 5.3.12/Mod)

All waste materials resulting from the operation of a processing plant should be disposed of as soon as possible in a way that they cannot be used for human food and in a manner that they cannot contaminate food and water supplies and offer harbourage or breeding places for rodents, insects, or other vermin.

Containers, flumes, conveyors, bins or storage bays used for removal, collection or storage of offal and other waste, should be cleaned frequently with potable water or clean sea water containing an appropriate amount of free chlorine.

All waste material from containers and vehicles should be removed in such a way as not to cause any contamination and not to create a nuisance.

Arrangements for the disposal of trade refuse and inedible waste should be approved by the appropriate official agency having jurisdiction.

5.3.12 EFFECTIVE MEASURES SHOULD BE TAKEN TO PROTECT AGAINST THE ENTRANCE INTO THE PREMISES AND THE HARBOURAGE ON THE PREMISES OF INSECTS, RODENTS, BIRDS OR OTHER VERMIN (FF 5.3.13/Mod)

An effective and continuous programme for the control of insects, rodents, birds or other vermin within the establishment should be maintained. The plant and surrounding area should be regularly examined for evidence of infestation. Where control measures are necessary, treatment should be under the direct supervision of personnel with a thorough understanding of the hazards involved, including the possibility of harmful residues being retained by the cephalopods or their products. The chemical, biological or physical agents used should meet the requirements of the official agency having jurisdiction.

The use of insecticides, during the plant operation, without any provision for collection of dead insects, should be discouraged. Instead the use of adhesive insect traps or very efficient "black light insecticutor" lamps with the attached collecting trays, are recommended. Insect traps should not be located directly over the processing areas and should be away from windows and doors.

All rodenticides, fumigants, insecticides or other harmful substances should be of an approved type and should be stored in separate locked rooms or cabinets and handled only by properly trained personnel.

5.3.13 DOGS, CATS AND OTHER ANIMALS SHOULD BE EXCLUDED FROM AREAS WHERE CEPHALOPODS ARE RECEIVED, HANDLED, PROCESSED OR STORED (FF 5.3.14/Mod)

Dogs, cats and other animals are potential carriers of diseases and should not be allowed to enter or to live in rooms or areas where cephalopods or their products are handled, prepared, processed or stored.

5.3.14 ALL PERSONS WORKING IN A CEPHALOPOD PROCESSING PLANT SHOULD MAINTAIN A HIGH DEGREE OF PERSONAL CLEANLINESS WHILE ON DUTY AND SHOULD TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE CONTAMINATION OF THE CEPHALOPOD PRODUCTS OR INGREDIENTS WITH ANY FOREIGN SUBSTANCE (FF 5.3.15/Mod)

All employees should wear clean protective clothing, appropriate to the nature of their work, including a head covering and footwear, all of which articles are either washable or disposable. The use of waterproof aprons, where appropriate, is recommended.

Gloves used in the handling of cephalopods should be maintained in a sound, clean and sanitary condition and should be made of an impermeable material except where their usage would be incompatible with the work involved. Hands should be washed thoroughly with soap or another cleansing agent and warm water before commencing work, on every occasion after visiting the toilet, before resuming work, and whenever necessary. The wearing of gloves does not exempt the operator from having thoroughly washed hands.

Any behaviour which can potentially contaminate the cephalopods, such as eating, smoking, chewing of tobacco or other materials and spitting should be prohibited in any part of the handling areas.

5.3.15 NO PERSON WHO IS KNOWN TO BE SUFFERING FROM, OR WHO IS A CARRIER OF ANY COMMUNICABLE DISEASE OR HAS AN INFECTED WOUND OR OPEN LESION, SHOULD BE ENGAGED IN THE PREPARATION ,HANDLING OR TRANSPORTING OF FRESH OR PROCESSED CEPHALOPODS (FF 5.3.16/Mod)

Plant management should require that any person afflicted with infected wounds, sores, or any illness, notably diarrhoea, should immediately report to the management. Management should not allow any person known to be affected with a disease capable of being transmitted through food, or known to be a carrier of such disease, or while afflicted with infected wounds, sores or diarrhoea, to work in any area of a plant in a capacity in which there is a likelihood of such a person contaminating raw or processed cephalopods with disease-causing micro-organisms.

Minor cuts and abrasions on the hands should be immediately treated and covered with a suitable waterproof dressing of contrasting colour and of a nature that it cannot be accidently detached, but if infection should occur subsequently, the worker should not be allowed to handle the cephalopods.

5.3.16 CONVEYANCES USED FOR TRANSPORTING CEPHALOPODS SHOULD BE CLEANED AND DISINFECTED IMMEDIATELY AFTER EACH USE AND SHOULD BE SO MAINTAINED AS NOT TO CONSTITUTE A SOURCE OF CONTAMINATION FOR THE PRODUCT (FF 5.3.17/Mod)

The cleaning of vehicles, together with receptacles and equipment thereon, should be planned to a regular routine. Hosing, scrubbing and cleaning with potable water or clean sea water, to which a suitable detergent or disinfectant has been added, is usually necessary.

5.4 Operating Practices and Production Requirements

5.4.1 General Considerations

5.4.1.1 THE CEPHALOPOD PRODUCTS SHOULD BE OF A GOOD QUALITY, WELL PREPARED AND PACKAGED SO THAT THEY WILL REMAIN ATTRACTIVE AND SAFE TO EAT (SMF 4.4.1.1/Mod)

Cephalopods which are not good enough to be sold as fresh or frozen should not be used for the processing of other products. Processing cannot correct faults that are due to the poor physiological condition of the raw material, improper handling practices or prolonged storage.

Even in smoking of cephalopods, the poor quality raw material will result in poor quality final product despite the masking effect of smoke on taste, odour and colour of cephalopod meats.

5.4.2 Handling of Raw Material

5.4.2.1 ALL CEPHALOPODS SHOULD BE CAREFULLY INSPECTED, SORTED, OR CULLED BEFORE THEY ARE PROCESSED. ANY DAMAGED, CONTAMINATE OR OTHERWISE UNACCEPTABLE CEPHALOPODS SHOULD BE DISCARDED (SMF 4.4.2.3/Mod)

The quality and keeping time of the final product is largely dependent on the quality of the raw cephalopods from which it is produced.

Cephalopods which are damaged (crushed, mutilated) will produce a very poor or unacceptable product and, if contaminated in any way, can spread this contamination to working surfaces and other raw cephalopods.

5.4.2.2 ALL CEPHALOPODS SHOULD BE THOROUGHLY WASHED BEFORE PROCESSING OR IMMEDIATELY AFTER OPERATIONS LIKE DRESSING (SMF 4.4.2.4/Mod)

Spoilage micro-organisms come mainly from the surface of the cephalopods and their digestive tract. Experience has shown that a large part of the surface micro-organisms can be removed by proper washing.

During the dressing, eviscerating (gutting), or trimming operations, each cephalopod should be washed by a flow or spray of potable water or clean sea water which is sufficient in quantity and pressure and is applied in such a manner as to clean the cephalopods thoroughly.

Water used for washing, rinsing or conveying, should not be recirculated unless suitably treated to maintain potable quality.

5.4.2.3 WHERE CEPHALOPODS ARE BEING GUTTED, PEN REMOVED, SKINNED OR PORTIONED, THESE OPERATIONS SHOULD BE CARRIED OUT IN A CLEAN AND HYGIENIC MANNER (SMF 4.4.2.5/Mod)

All waste material resulting from these operations should be collected immediately into suitable containers which are removed and emptied regularly or be removed continuously by mechanical means or flumes.

5.4.2.4 THAWING OF FROZEN CEPHALOPODS PRIOR TO PROCESSING SHOULD BE DONE IN THE MANNER OUTLINED IN THE RECOMMENDED INTERNATIONAL "CODE OF PRACTICE FOR FROZEN FISH"

The thawing method chosen should suit the volume and type of product that is to be processed and should be economically feasible. Exposure of cephalopods to elevated temperatures during the thawing should be carefully controlled.

Where cephalopods are thawed in still air, the ambient temperature should not exceed 18°C (65°F).

The water used for thawing should be either potable or clean sea water and its temperature should not exceed 20°C (68°F). Maximum time for use of water in batch thawing should not exceed 4 h.

All thawing operations should be carried out under strict hygienic conditions.

5.4.3 Cooking

5.4.3.1 ALL EQUIPMENT USED IN THE COOKING AND COOLING OF CEPHALOPODS SHOULD BE FREQUENTLY HOSED DOWN, BRUSHED TO REMOVE ALL VISIBLE DIRT, CLEANED WITH A SUITABLE CLEANING AGENT, DISINFECTED AND RINSED THOROUGHLY (SP 4.3.8/Mod)

During the cooking of cephalopods, impurities such as sand, clay miscellaneous sea-bottom detritus, parts of cephalopods and coagulated proteinaceous material accumulate. These may discoulour the cooked cephalopods and introduce undesirable odours and flavours. Foam which is formed in dirty cooking water may harbour and protect the spores of thermophilic micro-organisms and this may cause trouble during subsequent processing.

It is important, therefore, that a thorough cleaning of the cooker, cooling tank and other associated equipment should be carried out frequently and at least once daily.

5.4.3.2 PERSONNEL ENGAGED IN COOKING, COOLING AND HANDLING OF COOKED CEPHALOPODS SHOULD TAKE ALL THE NECESSARY PRECAUTIONS NOT TO CONTAMINATE THE COOKED PRODUCT WITH MICRO-ORGANISMS WHICH MIGHT CAUSE SPOILAGE OR CONSTITUTE A PUBLIC HEALTH HAZARD (SP 4.3.9/Mod)

Cephalopods, when removed from the cooker, are practically free from living micro-organisms. Recontamination commences during cooling and increases progressively during further handling. Workers who are engaged in cooking, cooling or handling of cephalopods should maintain the same high degree of personal cleanliness as workers in other parts of the processing plant. If the same worker handles the raw, as well as the cooked product, precautions should be taken to prevent contamination of cooked cephalopods with micro-organisms from the raw material.

5.4.4 Dry-Salting

5.4.4.1 DRY-SALTING SHOULD BE CARRIED OUT WITH THE FULL UNDERSTANDING OF THE EFFECT ON THE QUALITY OF THE FINAL PRODUCT AND SHOULD BE DONE UNDER STRICT HYGIENIC CONDITIONS (SMF 4.4.3.1/Mod)

Dry-salting gives the processed product its taste, appearance (attractive gloss), texture and prolongs its shelf life.

As there is usually a loss of moisture from the cephalopods, strict control of the process should be maintained in order to keep the resulting loss of weight within the profit margin of the operation.

To assure the uniform salt and sugar contents of the final product, the cooked cephalopods in dry-salting batch should be uniform in size and weight.

As a proper dry-salting procedure, it is advisable to arrange the cephalopods, which were sprinkled with salt, sugar and flavouring materials, in stainless steel containers in several layers. The top layer should be weighted to achieve uniform distribution of salt and sugar in the product.

5.4.4.2 DRY FOOD GRADE QUALITY, SALT AND SUGAR SHOULD BE USED IN DRY-SALTING OF CEPHALOPODS.

Salt used in the salting of cephalopods should be of good grade and with the least of impurities.

The composition of salt differs according to the origin. Some of the mine salts could be almost pure sodium chloride while the others could contain a high concentration of other salts like calcium sulphate, magnesium sulphate and chloride as impurities.

Magnesium salts, if present at too high a concentration, will give rise to unpleasant bitter flavours and may cause spoilage during the salting operation.

When only impure salt is available, most of the calcium and magnesium impurities can be washed away by using rain or fresh clean water and draining off wash water. This practice will remove calcium and magnesium salts which are highly soluble.

5.4.4.3 DURING DRY-SALTING CEPHALOPODS SHOULD BE KEPT AT A TEMPERATURE BELOW $3^{o}C$ ($37.4^{o}F$) (SMF 4.4.3.6./Mod)

Dry-salting should always be done in a chill-room temperature, if not, yeasts which survive in sugar may cause abnormal fermentation, forming acids and alcohols. Dry-salted cephalopods should be thoroughly covered by the juice exuded from the cephalopods to prevent rancidity, discoloration, and off-flavour and to give taste.

5.4.4.4 IMMEDIATELY AFTER DRY-SALTING, CEPHALOPODS SHOULD BE SUSPENDED ON RODS (TENTERS) OR HOOKS, OR LAID OUT ON TRAYS FOR DRYING (SMF 4.4.3.9/Mod)

After dry-salting, excess dry-salting compound should be removed and cephalopods should be subjected to drying which should be carried out in an open area or in a mechanical dryer under controlled conditions. For this reason and for the purpose of subsequent smoking or processing, the cephalopods should be suspended on rods, hooks or laid out on trays. Care should be taken to ensure that the suspended cephalopods do not touch each other, otherwise they will be unevenly dried and damaged physically during the separation.

5.4.4.5 DRYING OF CEPHALOPODS PRIOR TO SUBSEQUENT PROCESSING SHOULD BE CARRIED OUT UNDER CONTROLLED CONDITIONS AND IN A HYGIENIC MANNER (SMF 4.4.3.10/Mod)

Drying of cephalopods after the dry-salting refers to the removal of the adhering surface water and evaporation of the surface moisture. If it is done properly, the formation of a glossy pellicle will result. The pellicle is important because it helps to seal in the natural juices and flavours of the cephalopod meats and forms a smooth and attractive surface.

Drying of cephalopods may be done outdoors providing there is no chance for contamination by insects, birds and dust, or in the smoke house. An ideal system is in the chill room with the aid of a blower where a steady current of cool, clean air could be provided.

5.4.4.6 IF FOOD PRESERVATIVES ARE USED THEY SHOULD BE OF A TYPE APPROVED BY THE OFFICIAL AGENCY HAVING JURISDICTION (SMF 4.4.3.11/Mod)

Only approved food preservatives should be added to the brine or applied after brining. Dissolved food preservatives should not be applied to the surface of the smoked product as this will tend to spoil the appearance.

5.4.5 Smoking

5.4.5.1 FOR SMOKE PRODUCTION, THE WOOD, WOOD SHAVINGS OR SAWDUST SHOULD BE DRY AND FREE FROM SOIL DUST AND HARMFUL SUBSTANCES SUCH AS WOOD PRESERVATIVES AND PAINT (SMF 4.4.4.1/Mod)

Soft resinous woods give the product an acrid unpleasant taste.

The best combustion temperatures for the wood are in the range of 250-350°C (482-662°F). Temperatures of more than 400°C (752°F) are to be avoided because of the development of undesirable components in the smoke.

The smoking of cephalopods is carried out at 20-25°C (68-77°F) for the initial 1-2 h at 50-60°C (122-140°F) for the succeeding period, and at 60-70°C (140-158°F) for the final 2-3 h. It requires about 7-9 h to obtain good results.

Wet or mouldy sawdust should not be used; however, depending on the type of wood and the nature of the operation, it may be desirable to use damp sawdust. It is a bad practice to use water during the smoking operation for damping the fire in an attempt to regulate the rate of sawdust burning.

5.4.5.2 ASH DERIVED FROM BURNING WOOD OR SAWDUST SHOULD BE PREVENTED FROM BEING DEPOSITED ON THE PRODUCT (SMF 4.4.4.2)

It is important, therefore, that the current of air passing the burning wood or sawdust is not so fast that it carries burned particles (ash) into the kiln. Ash should not be allowed to accumulate in large amounts in the boxes where smoke is generated.

The use of smoke scrubbers for the removal of fly-ash, soot and tars is recommended. It may be necessary to re-circulate the scrubbing water which rapidly

becomes saturated with the lighter fractions which impart the desired smoke flavour, however use of carbon or coke filters will not remove as much flavour as will water scrubbers. Colour development of the product might be affected.

5.4.5.3 IN PREPARATION FOR SMOKING, CARE SHOULD BE TAKEN TO ARRANGE THE CEPHALOPODS ON TENTERS, HOOKS OR ON TRAYS IN SUCH A MANNER AS TO PROVIDE FOR UNIFORM SMOKE ABSORPTION, TEMPERATURE EXPOSURE AND DEHYDRATION (SMF 4.4.4.4/Mod)

Cephalopods should be hung or laid out on trays without overcrowding and touching each other.

Trays or screens used for laying out cephalopods will occasionally imprint a distinct design on one side of the product. In certain products, such a design might add to the appearance of the cephalopods, otherwise screens should not be used if the cephalopods can be hung. Trays and screens used in smoking should be clean and greased with food grade vegetable oil or should be coated with teflon or another suitable release agent approved by the official agency having jurisdiction.

In traditional kilns, the position of cephalopods in relation to fire should be changed frequently. The same requirement will also apply to mechanized kilns where electric fans are used and where cephalopods are located directly in front of the air/smoke inlet. If no remedial action is taken a distinctly darker colour, a bitter tarry taste and a tougher texture will result.

To obtain even smoking and dehydration of the cephalopods in the same batch, the cephalopods should be of reasonably uniform size and weight.

5.4.5.4 IMMEDIATELY AFTER SMOKING AND PRIOR TO FURTHER PROCESSING OR PACKAGING, THE WARM PRODUCTS SHOULD BE COOLED TO AN AMBIENT TEMPERATURE OR LOWER (SMF 4.4.4.8/Mod)

When smoking is finished, the resulting product should be cooled thoroughly before it is further processed, otherwise it will turn flabby, moist and sour or mouldy.
Cooling can be conducted in an ambient temperature or in a chill room, providing the hyumidity is not too high and there is a continual movement of clean, cool air or the kiln itself can be used for cooling at the end of the working day if it is equipped with cooling coils.

In large operations, air blast chilling tunnels, capable of accomodating full trolleys and operating at 0°C (32°F), can be used.

The ash from burning wood or sawdust or any other impurities deposited on the rface of smoked cephalopods should be wipped off with a clean cloth or brush.

5.4.5.5 SEASONING OF SMOKED CEPHALOPODS SHOULD PREFERABLY BE DONE IN A STAINLESS STEEL ROTARY MIXER

Smoked or roasted cephalopods, which are either split or cut up into relatively fine rings, are sprayed with the water solution of sugar, salt and spices, and then are placed into a stainless steel rotary mixer where, through agitation, a thorough and uniform distribution of seasoning liquor takes place.

5.4.5.6 IN CASE OF A FIRE IN A MECHANICAL KILN, THE FANS SHOULD BE SWITCHED OFF AND ALL DAMPERS CLOSED. ALL OTHER SUPPLIES OF ELECTRICITY TO THE KILN SHOULD ALSO BE TURNED OFF (SMF 4.4.4.10/Mod)

There is a serious fire hazard if the kiln is allowed to become coated with a fatty condensate from the smoke. If a fire occurs the outside of the kiln should, as far as possible, be kept cool by spraying water. The fire inside should be fought by the injection of carbon dioxide into the closed kiln.

5.4.6 Packaging, Storage and Distribution

5.4.6.1 PACKAGING MATERIALS SHOULD BE CLEAN AND STORED IN A HYGIENIC MANNER. PACKAGING SHOULD BE CARRIED OUT UNDER CONDITIONS THAT PREVENT CONTAMINATION OF THE PRODUCT (FF 5.4.3.14/Mod)

Packaging materials used for processed cephalopod products should not transfer to the products any objectionable or harmful substances or odours and flavours and should protect the products against damage, deterioration and contamination.

5.4.6.2 PROCESSED CEPHALOPOD PRODUCTS WHICH ARE NOT FROZEN, SHOULD BE PACKED FOR TRANSPORT SO THAT THERE IS NO DIRECT CONTACT WITH ICE OR MELT WATER (SMF 4.4.5.4/Mod)

Prolonged contact with ice or melt water will result in the discoloration, leaching away of flavour and colour, softening of the texture and in general deterioration of the product.

Ice packed in the same container with cephalopods, but not in direct contact with them, is still the most common method of maintaining a chilled condition during transport.

Wet-strength paper or plastic film should be used to wrap the products and separate them from ice. Dry ice or pre-chilled eutectic solutions, in plastic or metal containers, can be used in master cartons having good insulation.

5.4.6.3 BOXES CONTAINING PROCESSED CEPHALOPOD PRODUCTS SHOULD BE HANDLED VERY CAREFULLY DURING TRANSPORT AND DISTRIBUTION. THEY SHOULD NEVER BE UP-ENDED (FF 5.4.3.16/Mod)

In some areas boxes may be handled and stacked many times during distribution. Handling practices are often very rough, due to shortage of time at transfer points and use of outdated methods for handling large quantities of boxes. Boxes should never be up-ended as this can result in physical damage to the product.

5.5 Sanitary Control Programme

5.5.1 IT IS DESIRABLE THAT EACH CEPHALOPOD PROCESSING PLANT IN ITS OWN INTEREST DESIGNATES A SINGLE INDIVIDUAL, WHOSE DUTIES ARE PREFERABLY DIVORCED FROM PRODUCTION, TO BE HELD RESPONSIBLE FOR THE CLEANLINESS OF THE ESTABLISHMENTE (FF 5.5.1/Mod)

Such a person or his staff should be a permanent part of the organization or employed by the organization and should be well trained in the use of special cleaning tools, methods of dismantling equipment for cleaning and in the significance of contamination and the hazards involved. A permanent cleaning and disinfection schedule should be drawn up to ensure that all parts of the establishment are cleaned appropriately and that critical areas, equipment and material are designated for cleaning and/or disinfection daily or more frequently if required.

5.6 Laboratory Control

5.6.1 IN ADDITION TO ANY CONTROL BY THE OFFICIAL AGENCY HAVING JURISDICTION, IT IS DESIRABLE THAT EACH CEPHALOPOD PROCESSING PLANT IN ITS OWN INTEREST SHOULD HAVE ACCESS TO LABORATORY CONTROL TO ESTABLISH QUALITY OF THE PRODUCTS PROCESSED (FF 5.6.1/Mod)

The extent and type of such control will vary with the food product, as well as the needs of management. Such control should reject all foods that are unfit for human consumption.

Analytical procedures used should follow recognized standard methods in order that the results may be readily interpreted.

6. SECTION V - END PRODUCT SPECIFICATIONS (Crb 6/Mod)

6.1 Appropriate methods should be used for sampling and examination to determine the compliance with the following specifications:

A. Cephalopods or cephalopod products should be, to the extent possible in good manufacturing practice, free from objectionable matter and parasites;

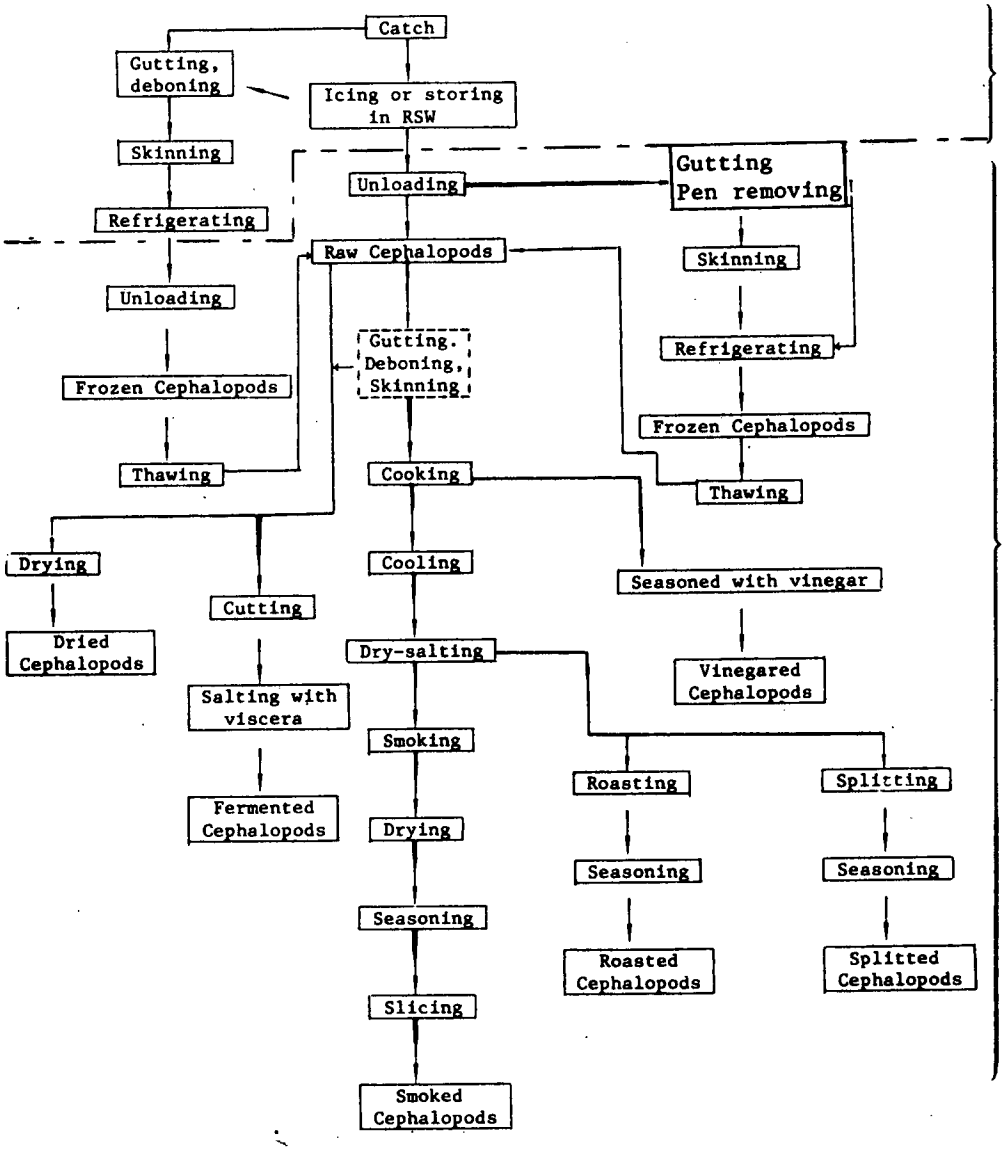
B. Cephalopods or cephalopod products hould be free from microorganisms in amounts harmful to man, free from parasites harmful to man and should not contain any substances originating from micro-organisms in amounts which may represent a hazard to health;

C. Cephalopods or cephalopod products should be free from chemical contaminants in amounts which may represent a hazard to health;

D. Cephalopods or cephalopod products should comply with any requirements set forth by the Codex Alimentarius Commission on pesticide residues and food additives as contained in permitted lists or Codex commodity standards, or should comply with the requirements on pesticide residues and food additives of the country in which the cephalopods will be sold.

APPENDIX I

Flow Diagram for Handling and Processing of Cephalopods



ALINORM 89/18
APPENDIX V
ANNEX II

References to Related Codes and Standards

Recommended International Code of Practice for Fresh Fish	CAC/RCP 9 - 1976
Recommended International Code of Practice for Canned Fish	CAC/RCP 10 - 1976
Code of Practice for Shrimp and Prawns	CX/FFP 77/7 (FAO Fish.Circ., Nº C322-Rev.1)
Code of Practice for Lobsters and Related Species	CX/FFP 76/16 (FAO Fish.Circ., Nº 330)
Code of Practice for Smoked Fish	CX/FFP 77/6 (FAO Fish.Circ., Nº C321-Rev.1)
Code of Practice for Crabs	FAO Fish.Circ., (349):49 pages 1977
International Standards for Drinking Water	(WHO) Third edition, 1971
Code of Practice for Frozen Fish	CX/FFP 77/16 (FAO Fish.Circ., Nº C145-Rev.1)

PROPOSED DRAFT GENERAL STANDARD FOR QUICK FROZEN FISH FILLETS
(At Step 5 of the Procedure)

1. SCOPE

This standard applies to quick frozen fillets of the species as defined below and offered for direct consumption without further processing. It does not apply to the product indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product definition

2.1.1 Quick frozen fillets are obtained as appropriate from fish of the following species:

a) Species of the family Gadidae
b) Species of the family Merluccidae
c) Species of the family Scorpanidae
d) Species of the order Pleuronectiformes (Heterosomata)

2.1.2 Fillets are slices of fish of irregular size and shape which are removed from the carcase by cuts made parallel to the backbone and sections of such fillets cut so as to facilitate packing.

2.2 Process Definition

The product after any suitable preparation shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18ºC (0ºF) at the thermal center after thermal stabilization. The product shall be maintained under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale.

The recognized practice of repacking quick frozen products under controlled conditions followed by the reapplication of the quick freezing process as defined is permitted.

2.3 Presentation

a) Skin-on, unscaled, pin bones present.
b) Skin-on, scaled, pin bones present or removed.
c) Skin-on light side only, scaled (applying to flat fish only).
d) Skinless, pin bones present or removed.
e) Other presentations; any other presentation of the product shall be permitted provided that it

   i) is sufficiently distinctive from other forms of presentation laid down in this standard,
   ii) meets all other requirements of this standard, and
   iii) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

Quick frozen fish fillets shall be prepared from sound fish of the appropriate species which are of a quality fit to be sold fresh for human consumption.

3.2 Optional Ingredients

Food grade salt may be added provided that the total sodium chloride content does not exceed 1% m/m.

3.3 Final product

3.3.1 The product shall contain no more defects than are permitted in Annex B.

3.3.2 Thawing, cooking, baking, boiling or steaming to determine any defects are undertaken as set out in Annex A.

3.3.3 Glazing. Quick frozen fish fillets may be glazed either individually or in bulk. When glazed the coating of ice shall cover the fillets so as to minimise dehidration and oxidation. The water used in glazing shall be of potable quality. Standards of potability shall not be less than those contained in the latest edition of the "WHO Guidelines for Drinking Water Qualities".

4. FOOD ADDITIVES

Additive	Maximum level in the final product
Moisture/Water - Retention Agents	
- Monophosphate, monosodium or monopotassium (Monosodium or Monopotassium orthophosphate)	5 g/kg expressed as P_2O_5, singly or in combination
- Diphosphate, tetrasodium or tetrapotassium (Na or K pyrophosphate)	
- Triphosphate, pentadosium or pentapotassium or calcium (Na, K or Ca tripolyphosphate)	
- Polyphosphate, sodium (Na hexametaphosphate)	

5. HYGIENE AND HANDLING

5.1 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.2 When tested by appropriate methods of sampling and examination, the product:

a. shall be free from micro-organisms in amounts which may represent a hazard to health;
b. shall be free from parasites which may represent a hazard to health; and
c. shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

5.3 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the following Codes:

i) the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1985, Rev. 2);

ii) the Recommended International Code of Practice for Frozen Fish (CAC/RCP 16-1978).

6. LABELLING

In addition to sections 2, 3, 7 and 8 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) 1/, the following specific provisions apply:

1/ Thereafter referred to as "General Standard".

6.1 Name of the Food

6.1.1 The name of the products obtained from the species listed in 2.1.1 shall be, as appropriate:

(a) Species of the genera Merluccius and Urophycis: "fillets of hake" or "hake fillets", whether qualified or not, or in countries where laws and customs so provide, other names which do not mislead the consumer.

(b) Gadus morrhua (G. callarias), Gadus ogae, Gadus macrocephalus: "fillets of cod" or "cod fillets".

(c) Melanogrammus aeglefinus: "fillets of haddock" or "haddock fillets".

(d) Pollachius virens: "fillets of saithe" or "fillets of coalfish" or "saithe fillets" or "coalfish fillets".

(e) Theragra chalcogramma: "fillets of Alaska pollack" or "Alaska pollack fillets".

(f) Ocean Perch: "fillets of ocean perch" or "ocean perch fillets". The terms "fillets of redfish" or "fillets of rosefish" are permitted in the countries where they are customarily used.

(g) Flat fish and other fish covered by the standard not mentioned especially above.

The name of the product as declared on the label shall be the name according to the law, custom or practice in the country in which the product is to be distributed.

6.1.2 Packs of fillets cut from blocks which may possibly contain a number of small pieces in excess of the tolerances stated in Annex B may be labelled as "fillets of ..." provided that such labelling is customarily used in the country where the products are to be sold, and provided the product is identified to the consumer so that he will not be misled.

6.1.3 In addition, there may appear on the label reference to the form of presentation in accordance with subsections 2.3(a) through (d), as appropriate. This information shall be included if the omission of such labelling would mislead the consumer.

6.1.4 If the product is produced in accordance with subsection 2.3(e), the label shall contain in close proximity to the name of the food such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.5 The term "quick frozen", shall also appear on the label, except that the term "frozen" 1/ may be applied in countries where this term is customarily used for describing the product processed in accordance with subsection 2.2 of this standard.

6.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with section 4.2 of the General Standard.

6.3 Net Contents

6.3.1 The net contents shall be declared in accordance with section 4.3 of the General Standard.

6.3.2 Where products have been glazed, the declaration of the net contents of the product shall be exclusive of the glaze.

1/ "Frozen": This term is used as an alternative to "quick-frozen" in some English-speaking countries.

6.4 Name and Address

The name and address shall be declared in accordance with section 4.4 of the General Standard.

6.5 Country of Origin

The country of origin shall be declared in accordance with section 4.5 of the General Standard.

6.6 Lot Identification

The lot identification shall be declared in accordance with section 4.6 of the General Standard.

6.7 Storage Instructions

The label shall include information on proper storage conditions.

6.8 Instructions for Use)
6.9 Irradiated Foods)
6.10 Labelling of Ingredients (Quantitative)) see paras 40 and 45 of this
6.11 Exemptions) Report (ALINORM 89/18)

6.12 Labelling of non-retail containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provision applies to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

Information on Sections 6.1 to 6.7 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address shall always appear on the container.

However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

7. SAMPLING, EXAMINATION AND ANALYSIS

7.1 Sampling

Sampling of lots for examination of the product shall be in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL-6.5) CAC/RM 42-1971.

7.2 Organoleptic and Physical Examination

Samples taken for organoleptic and physical examination shall be assessed by persons trained in such examination.

7.3 Determination of Net Weight

7.3.1 The net weight (exclusive of packaging material) of each sample representing a lot shall be determined in the frozen state.

7.3.2 Determination of Net Weight of Products Covered by Glaze

As soon as the package is removed from low temperature storage, open immediately and place the contents under a gentle spray of cold water. Agitate carefully so that the product is not broken. Spray until all ice glaze that can be seen or felt is removed. Remove adhering water by the use of a paper towel and weight the product in a tared pan.

Note: Storage of the product may cause or contribute to a low net weight (whether or not the product has been glazed).

7.4 Candling Procedure for the Detection of Parasites

Parasites are detected by placing a sample on a 5 mm thick acryl sheet with 45% translucency and candled with a light source giving 1500 lux 30 cm above the sheet.

Parasitic infestation may be detected by this candling procedure, by visual examination.

7.5 Determination of Sodium Chloride

According to the Codex General Method for the Determination of Chlorides in Foods (ALINORM 76/23, Appendix IV).

8. CLASSIFICATION OF DETECTIVES

A sample unit of the product shall be considered as "defective" when it fails to meet the requirements of section 3.3.

9. LOT ACCEPTANCE

A lot will be considered as meeting the final product and weight requirements of this standard when:

(i) the total number of "defectives" as classified according to section 8 does not exceed the acceptance number (c) of the appropriate sampling plan in the Sampling Plans for Prepackaged Foods (AQL-6.5) - (CAC/RM 42-1969); and

(ii) the average net contents of all containers examined is not less than the declared weight, provided there is no unreasonable shortage in individual containers.

ANNEXE "A"

Thawing (CAC/RM 40-1971)

The sample is thawed by enclosing it in a film type bag and immersing in an agitated water bath held at approximately 20ºC (68ºF). The complete thawing of the product is determined by gently squeezing the bag occasionally so as not to damage the texture of the fish, until no hard core or ice crystals are felt.

Cooking Methods

The following procedures are based on heating product to internal temperature > 70ºC (> 160ºF). Cooking times vary according to size of product and equipment used. If determining cooking time, cook extra samples using temperature measuring device to determine internal temperature.

Baking Procedure

Wrap product in aluminium foil and distribute evenly on flat cookie sheet or shallow flat pan. Heat in ventilated oven, preheated to 204ºC (400ºF) until internal temperature of product reaches > 70ºC (> 160ºF).

Steaming Procedure

Wrap product in aluminium foil and place on wire rack suspended over boiling water in covered container. Heat until internal temperature of product reaches > 70ºC (> 160ºF).

Boil-in-bag Procedure

Place the product into a boilable film-type pouch and seal. Immerse the pouch and its contents into boiling water and cook until the internal temperature of the product reaches > 70ºC (> 160ºF).

ANNEX "B"

Note: The total number of demerit points is to be calculated on a 1 kg basis and recorded to the nearest whole number.

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
A. FROZEN STATE		
1. Dehydration (Freezerburn)		
(i) Deep dehydration - An excessive loss of moisture from the surface of the sample unit which shows clearly on the surface penetrates below the surface, and cannot be easily removed by scraping.	Over 10% of total surface area or: (a) ≤ 200g units ≥ 25cm² (b) 201-500g units ≥ 50cm² (c) 501-5000g units ≥ 150cm² (d) 5001-8000g units ≥ 300cm² (e) > 8000g units ≥ 500cm²	Defective
	Over 1% up to and including 10% of the total surface area, or (a) ≤ 200g units 2.5-25cm² (b) 201-500g units 5.0-50cm² (c) 501-5000g units - 15.0-150cm² (d) 5001-8000g units - 30.0-300cm² (e) > 8000g units ≥ 500cm²	4
(ii) Moderate dehydration A loss of moisture from the surface of the sample unit which is colour masking, but does not penetrate the surface and can be easily removed by scraping.	Over 10% of total surface area, or (a) ≤ 200g units ≥ 25cm² (b) 201-500g units ≥ 50cm² (c) 501-5000g units ≥ 150cm² (d) 5001-8000g units ≥ 300cm² (e) > 8000g units ≥ 500cm²	2

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
2. Ragged or torn fillets Longitudinal edges markedly and excessively irregular.	Each instance	1
B. THAWED STATE		
3. Small pieces		
A fillet piece weighing less than 25g	If the sample unit came from a pack of 1 kg or greater, each occurrence over 1 piece.	4
(not applicable to fillets cut from blocks)	If the sample unit came from a pack less than 1 kg per pack, each occurrence over one piece per pack.	4
4. Skin and black membrane skin Does not include subcutaneous layer (silver-lining). In flat fish white skin is not regarded as a defect. 1/	a) Skinless fillets (i) Each piece greater than 3 cm^2 up to and including 10 cm^2.	4
	(ii) Over 10 cm^2 each additional complete area of 5 cm^2 or part thereof.	2
Black membrane or belly-lining Does not include white membrane.	b) Skin-on fillets (i) Each instance greater than 3 cm^2 up to and including 10 cm^2.	4
	(ii) Over 10 cm^2 each additional area of 5 cm^2 or part thereof.	2
5. Scales - Attached to skin	a) Skin-on fillets - scaled (i) Each area of scale greater than 3 cm^2 up to and including 10 cm^2.	2*
	(ii) Each additional complete 5 cm^2 or part thereof.	2*

1/ In skinless flat fish, small pieces of white skin are not regarded as defects provided that the skin does not exceed more than 10% of the surface area of the fillets in the sample unit.

* For ocean perch fillets only, 1 demerit point.

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
- Readily noticeable loose scales	b) Skinless fillets	
	(i) First 5 to 10 (in the case of hake fillets 10 to 20).	2
	(ii) If more than 10 (for hake 20) loose scales each additional complete unit of 5 (for hake 10).	2
6. Colour Defects Blood clots (spots) Any mass or lump of clotted blood.	a) Each clot greater than 5 mm in diameter.	2
Bruises Diffused blood causing distinct reddish, brownish or other off-colouration.	b) (i) Any aggregate area of discolouration or bruising exceeding 3 cm^2 up to and including 5 cm^2.	2
Discolouration Appears as significantly intense discolouration due to melanin deposits, bile stains, liver stains or other causes.	(ii) Each additional area of 5 cm^2 or part thereof.	2
7. Fins or part of fins Two or more bones connected by membrane, including internal or external bones, or both in a cluster.	Any instance where a bone in the fin exceeds 40 mm in length.	Defective
	Each separate instance up to and including 3 cm^2.	4
	Each additional 3 cm^2 or part thereof in the same cluster.	2
8. Bones - Defect Bones A bone is regarded as a defect if its length is $\geq$ 10 mm or its diameter is $\geq$ 1 mm; a	a) Fillet with pin bone removed. (i) Each defect bone.	2
	(ii) Each critical bone.	Defective

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
bone ≤ 5 mm in length is not to be considered as a defect if its diameter is not ≥ 2 mm. The foot of a bone (where it has been attached to the vertebra) shall be disregarded if its width is ≤ 2 mm or if it can be easily stripped off by a finger nail. Critical degree of bone defect Each defect bone whose maximum profile cannot be fitted into a rectangle, drawn on a flat solid surface, which has a length of 40.0 mm and a width of 10.0 mm.	b) Fillet with pin bone in. (i) Each defect bone excluding pin bones. (ii) Each critical bone excluding pin bones.	2 8
9. Viscera		
Any portion of the viscera.	Each instance	8
10. Parasites		
Parasites or parasitic infestation detected by the candling procedure.	Each parasite with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 10 mm in length.	4
Each parasite infestation may be recognised by its colour, its effect on softening the fish flesh or by other physical indications.	Each parasite with a capsular diameter smaller than 3 mm or a parasite not encapsulated and smaller than 10 mm in length. Each fillet affected by any significant parasitic infestation.	2 8
11. Foreign Matter		
(i) Any material not derived from fish or not permitted by the standard other than packaging.	Each instance	Defective

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS
(ii) Packaging material.	Each instance	2
12. Odour (Thawed state)		
Objectionable odour	Any odour which is distinctly objectionable.	Defective
13. Texture (Thawed state)		
Any texture which is significantly different to the characteristics of the species.	Any texture which is significantly different to the characteristics of the species.	Defective
C. COOKED STATE (Extra sample unit of 200 g.)		
14. Odour and Flavour		
Objectionable odour or flavour.	Any odour or flavour which after cooking is distinctly objectionable.	Defective
15. Texture		
Any texture which is significantly different to the characteristics of the species.	Distinctly objectionable, e.g. the flesh is definitely spongy, rubbery, mushy, soft, gelatinous, tough or gritty.	Defective
A sample unit is considered defective if the demerit points total more than:		20 for cod, haddock, hake. 32 for ocean perch and flat fish.

PROPOSED DRAFT AMENDMENTS (EDITORIAL) TO THE RECOMMENDED INTERNATIONAL CODE OF PRACTICE FOR SALTED FISH (CAC/RCP 26-1979)

The Committee decided to amend Section 5.4.2 of the Code of Practice for Salted Fish as indicated below and to delete Annex A to the Draft Standard for Dried Salted Fish (Klippfish) of the Gadidae Family (Appendix IV):

5.4.2 Salt Requirements

5.4.2.1 SALT USED IN THE SALTING OF FISH SHOULD POSSESS AN APPROPRIATE COMPOSITION FOR THE PRODUCT.

The composition of salt differs according to the origin. Mine salt is usually almost pure sodium chloride but solar salt of marine origin contains several other salts like calcium sulphate, magnesium sulphate and chloride as impurities.

A relatively pure salt is needed for the dry-salting of fatty fish but for some products the presence of small quantities of calcium salts will give the product a somewhat superior appearance. Too much calcium may reduce the rate of salt penetration to an extent that spoilage may occur. In some cases, for a lean fish like cod, levels of calcium salts between 0.15% and 0.30% have been found satisfactory.

Magnesium salts if present at too high a concentration will give rise to unpleasant bitter flavours and may cause spoilage during the salting operation. Levels of not more than 0.10% have been recommended.

For some products other levels of these impurities may be satisfactory but this should be determined by experimentation.

When only impure salt is available, most of the calcium and magnesium impurities can be washed away by using rain or fresh clean water and draining off the wash water. This practice will remove those calcium and magnesium salts which are more soluble than sodium chloride.

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ALINORM 89/18
APPENDIX VIII

PROPOSED DRAFT AMENDMENTS TO THE CODEX STANDARD FOR CANNED SHRIMPS OR PRAWNS (CODEX STAN 37-1981)
(At Step 3 of the Procedure)

2.2.3 Size

2.2.3.1 Canned shrimps or prawns in either conventional or cleaned styles may be designated as to size in accordance with the following scheme:

Size Designation	Counts per ounce	Counts per 4.25 ounce can/grams	Counts per 100 grams
Jumbo	Under 4.70	Under 20	Under 16.58
Large	4.70 to 7.05 inclusive	20 to 30 inclusive	16.58 to 24.86 inclusive
Medium	More than 7.05 but not more than 12.95	More than 30 but not more than 55	More than 24.86 but not more than 45.67
Small	More than 12.95 but not more than 21.20	More than 55 but not more than 90	More than 45.67 but not more than 74.77
Tiny Cocktail or Extra Small	More than 21.20 but not more than 28.20	More than 90 but not more than 140	More than 74.77 but not more than 99.46
Tiny	More than 28.20 but not more than 51.57	More than 140 but not more than 220	More than 99.46 but not more than 181.89
Tiny/Broken	More than 51.57 but majority	More than 220 but majority	More than 181.89 but majority
	(- - - - - - - four or more segments - - - - - - - - - - - - - - - -)		

3.3.6 Tolerances

3.3.6.1 Tolerances for improperly cleaned and deveined shrimps, based upon size designation in accordance with Subsection 2.2.3.1 shall apply:

Size Designation	% M/M
Jumbo Large	5
Medium Small Tiny Cocktail or extra Small Tiny	10
Tiny/broken Broken	15

7.2.3 Size

The section should be modified as follows:

"If canned shrimps are labelled as to size, the size designation used and the corresponding size shall comply with the provisions of Section 2.2.3.1. "

PROPOSED DRAFT STANDARD FOR QUICK FROZEN SQUID
(At Step 3 of the Procedure)

1. SCOPE

This standard applies toquick frozen squid of the species as defined below and offered for direct consumption without further processing; and to the product indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Quick frozen squid and squid products are obtained from squid species of the following families: a) Loliginidae, b) Ommastrephidae.

2.2 Process Definition

The product, after any suitable preparation, shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed wuickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C (0°F) at the thermal centre after thermal stabilization. The product shall be maintained under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale.

The recognized practice of repacking quick frozen products under controlled conditions followed by the reapplication of the quick freezing process as defined is permitted.

2.2.3 Squid shall be either individually quick frozen or quick frozen in mass.

2.3 Presentation

Squid and squid products shall be presented as:

2.3.1 Whole squid, ungutted, with or without ink sac.

2.3.2 Whole squid, gutted, split or not.

2.3.3 Whole, squid, cleaned and gutted, with skin, eyes, beak and viscera removed.

2.3.4 Head/tentacles, skinned or not.

2.3.5 Tubes with fins, skinned or not.

2.3.6 Tubes without fins, skinned or not.

2.3.7 Tubes, split with fins, skinned or not.

2.3.8 Tubes, split without fins, skinned or not.

2.3.9 Rings - skinned tubes without fins, cut transversely.

2.3.10 Strips - skinned and split tubes, cut into uniform widths.

2.3.11 Squid Parts (tubes, heads, fins and tentacles) may be packed singly or in combination in the same container. If two or more parts are packed in the same container, they shall be present in their natural proportions unless otherwise specified.

2.3.12 Other presentations: any other presentation of the product shall be permitted provided that it:

(i) is sufficiently distinct from other forms of presentation laid down in this standard,

(ii) meets all other requirements of this standard; and

(iii) is adequately described on the label to avoid confusing or misleading the consumer.

2.4 Type of Pack

2.4.1 Product arrangement

(i) systematic/orderly - arranged or disposed in some order or pattern

(ii) semi-orderly

(iii) random.

2.4.2 Size Classification

Quick frozen squid products in any form of presentation may be sized or unsized.

(i) Sized squid products may be packed by count i.e., the average number of squid units of comparable size per unit weight (or mass) expressed as a range or the average number of squid units, either in the metric system or avoirdupois or both systems as required by the country in which the product is sold, and may be so declared on the label.

(ii) Sized squid products may be packed by mantle length, with the units having comparable length, expressed in unit length in the metric system or avoirdupois or both systems as required by the country in which sold. The size classification shall be in increments of about 4 cm.

2.4.2 Glazing

Quick frozen squid products may be unglazed or glazed, individually or in mass.

3. Essential Composition and Quality Factors

3.1 Raw Material

Quick frozen squid shall be prepared from sound squid which are of a quality fit to be sold fresh for human consumption.

3.2 Glazing

When glazed, the coating of ice shall cover the squid so as to minimise dehydration and oxidation. The water used in glazing shall be of potable quality. Standards of potability shall not be less than those contained in the WHO Guidelines for Drinking Water Quality.

3.3 Optional Ingredients

Water utilized either for glazing or freezing may contain:

- Food grade salt
- Sugars
- Others (to be specified)

3.4 Final Product

3.4.1 The product shall contain no more defects than are permitted in Annex A.

3.4.2 Thawing and cooking to determine any defects are undertaken as set out in 7.4 and 7.5.

4. FOOD ADDITIVES
(to be developed)

5. HYGIENE AND HANDLING

5.1 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.2 When tested by appropriate methods of sampling and examination, the product:

a. shall be free from micro-organisms in amounts which may represent a hazard to health;

b. shall be free from parasites which may represent a hazard to health; and

c. shal not contain any substances originating form of micro-organisms in amounts which may represent a hazard to health.

5.3 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the following Codes:

(i) the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969), Rev.1.

(ii) the Recommended International Code of Practice for Frozen Fish (CAC/RCP 16-1978).

(iii) the Recommended International Code of Practice of Cephalopods (under elaboration).

6. LABELLING

In addition to sections 2, 3, 7 and 8 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) 1/, the following specific provisions apply:

6.1 Name of the Food

6.1.1 The name of the products derived from the species listed in 2.1 as declared on the label shall be "squid" immediately followed by the appropriade product form of presentation detailed in 2.3.1 through 2.3.12 provided that the product is identified to the consumers so that they will not be misled.

6.1.2 The term "quick frozen" shall also appear on the label, except that the term "frozen" 2/ may be applied in countries where this term is customarily used for describing the product processed in accordance with section 2.2 of this standard.

6.1.3 Squid products in any form of presentation may be individually quick frozen, and in such cases the labelling may be "individually quick frozen" or "individually frozen".

6.1.4 In addition to the specified labelling designations in 6.1.1, the usual or common trade names of the variety may be added so long as it is not misleading to the consumer in the country in which the product will be distributed.

1/ Thereafter referred to as "General Standard".
2/ "Frozen": This term is used as an alternative to "quick-frozen" in the same English-speaking countries.

6.2 Size Classification

If quick frozen squid and squid products are labelled as to count, the classfication must comply with the provisions of sub-section 2.4.2.

6.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with section 4.2 of the General Standard.

6.4 Net Contents

6.4.1 The net contents shall be declared in accordance with section 4.3 of the General Standard.

6.4.2 Where products have been glazed, the declaration of the net contents of the product shall be exclusive of the glaze.

6.5 Name and Address

The name and address shall be declared in accordance with section 4.4 of the General Standard.

6.6 Country of Origin

The country of origin shall be declared in accordance with section 4.5 of the General Standard.

6.8 Storage Instructions 1/
6.9 Instructions for Use 1/
6.10 Quantitative Labelling of Ingredients 1/
6.11 Exemptions 1/
6.12 Irradiated Foods 1/
6.13 Non-retail Container

7. SAMPLING, EXAMINATION AND ANALYSIS

7.1 Sampling

(i) Consumer Packs

Sampling of lots for examination of the product shall be in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (CAC/RM 42-1977).

(ii) Blocks (for further processing). Sampling of lots for examination of the product shall be in accordance with the sampling plan developed for quick frozen fish blocks (ALINORM 87/18, Part.II Appendix V).

7.2 Organoleptic Assessment

Organoleptic assessment of the product shall be made only by persons trained in such assessment and shall take place after the sample has been thawed in accordance with the procedure as set forth in section 7.4. When applicable, the sample shall be cookeed prior to organoleptic assessment by a method set out in section 7.5.

7.3 Determination of Net Weight

The net weight (exclusive of packaging material) of each sample representing a lot shall be determined in the frozen state.

1/ Note: The Committee should consider the need for these provisions. (See also paras 35-50 of the Report).

7.4 Determination of Net Contents of Products covered by Glaze

Procedure

(1) Open the package of quick frozen squid immediately after removal from low temperature storage. Place the contents in container into which fresh water at room temperature is introduced from the bottom at a flow of approximately 25 litres per minute.

(2) Weigh a dry clean sieve with woven wire cloth with normal size of thee square aperture 2.8 mm (ISO Recommendation R 565) or alternatively 2.38 mm (U.S. Nº 8 Standard Screen).

(i) If the quantity of the total contents of the package is 500 g (1.1 lbs) or less, use a sieve with a diameter of 20 cm (8 inches).

(ii) If the quantity of the total contents of the package is more than 500 g (1.1 lbs) use a sieve with a diameter of 30 cm (12 inches).

(3) After all glaze than can be seen or felt has been removed and the squid separate easily, empty the contents of thee container on the previously weighed sieve. Incline the sieve at an angle of about 20° and drain for two minutes.

(4) Weigh the sieve containing the drained products. Substract the mass of the sieve; the resultant figure shall be considered to be the net content of the package.

7.5 Cooking Procedure (to be used prior to examination, as appropriate)

7.5.1 Boiling in bag - Place a 250 g sample into a boilable film type pouch and seal. Immerse the pouch and its contents into boiling water and cook until the internal temperature of the product reaches 70°C (150°F). Remove the boiled product from the pouch and drain, and cool quickly. Annex B provides a schedule of cooking time for various sizes of squid (by mantle length).

7.6 Examination of Physical Defects

The sample shall be examined for defects set out in Annex A.

8. CLASSIFICATION OF DEFECTIVES

A sample unit shall be considered a "defective" when it exceeds the tolerance for defects in final product as established in Annex A.

9. LOT ACCEPTANCE

A lot will be considered as meeting the final product requirements of this standard when:

a. (i) the total number of "defectives" does not exceed the acceptance number (c) of the appropriate sampling plan in the Sample Plans for Prepackaged Foods (AQL 6.5) (CAC/RM 42-1969); for package sizes up to 2, 5 kg; or

(ii) the total number of defectives does not exceed the acceptance number (c) of the sampling plan for fish blocks for package sizes greater than 2.5 kg.

b. the average net contents of all sample units examined is not less than the declared contents.

Definition of Defects	Defect Description	Forms of presentation	Demerits Points
A. **FROZEN STATE**			
1. Dehydration (freezerburn)			
(i) Deep dehydration - An excessive loss of moisture from the surface of the sample unit which masks the color of the surface, penetrates below the surface, and cannot be easily removed by scrapping.	Over 10% of total surface ---	All	3
	Additional Instance is an additional 1% up to and including 10% of total surface area		3
(ii) Moderate dehydration A loss of moisture from the surface of the sample unit which is colour mask, but does not penetrate the surface and can unit which masks the color of the surface, penetrates below the be easily removed by scrapping	Over 10% of total surface area	All	2
	Additional Instance is an additional 1% up to and including 10% of total surface area		
Note: The total number of demerit points is to be calculated on a 1 kg basis and recorded to the nearest whole number.			
B. **THAWED STATE**			
Physical damage, broken, torn, crushed, missing or separated tentacles/fins	> 10% by weight of the package content	All	2
	Each additional 5% by weight	All	2
SKIN			
(i) broken or missing patches of skin	> 25% - 50% by weight of the package contents	Skin-off forms of presentation	1
(ii) Inadequate removal of skin	presence of pieces of skin on more than 10% by weight of the package contents	skinless forms of presentation	1
	Each additional 10% by weight having pieces of skin	skinless forms of presentation	1

Definition of Defects	Defect Description	Forms of presentation	Demerits Points
COLOR			
(i) Unskinned - deviation from natural color of redish brown to pink or red	> 10% by weight of package content is pink to red	Skin on forms	4
	Each addition 10%		4
(ii) Skinned deviation from natural white colour to pink	> 10% by weight of package content flesh is light pinkisk colour	Skinless form	4
	Each addition 10%		4
(iii) Ink staining	Overall appearance/ presence of ink staining throughout the package contents	Skin-on forms only	3
GUTTING & CLEANING			
Inadequate removal of gills, pen, ink sac, beaks and viscera	Each instance of gills, pen, ink sac, beaks or viscera	All formss except whole ungutted	3
Extraneous material	Presence of any foreign materials such as seaweed or other non-harmfull material each instance	All forms	2
SIZE UNIFORMITY			
Improperly size graded by count or mantle length; or improperly cut rings or strips or tubes	(i) for size graded products - > 10% by weight in the next larger or smaller size category	Size graded forms	1
	(ii) 10% by weight of irregular tubes, rings or strips inconsistent with the intended package content	" " "	1
	Each additional 10%	" " "	1
Arrangement and pack proportions	(i) Arrangement that substantially deviates from declared style of pack	Applicable for declared arrangement	1
	(ii) Packs of squid parts that substantially deviate from natural proportions	Sub-section 2.3.11	1

Definition of Defects	Defect Description	Forms of presentation Points	Demerits
RAW ODOR OR TEXTURE	(i) Texture is not reasonably firm; soft or mushy		
	(ii) odor is slightly fishy, unpleasant, sour, stale or offensive		
	> 5% of package content by weight	All forms of presentation	4
	(iii) > 1% of package content by weight	" " "	Defective

C. COOKED STATE	ACCEPTABLE	UNACCEPTABLE	
ODOUR	Strong rubber and cooked cabbage odour. Slightly stable. Slight musty	Unpleasant. Slight ammoniacal. Stale, musty, sour.	
APPARENT	Slight sheen. Yellow to light brown. Slightly scabby, chalky, curdy inside	Light brown to dark brown. Bruised and moderately scabby outside. Chalky and curdy inside. No sheen	
TEXTURE	Sticky and gluey (outside), chalky and crumbly (inside)	Slightly mushy (outside) slightly blemished and scarred musty inside and slimy	
FAVOR	Cabbage flavor Slight after-taste	Slightly bitter, cheese-like flavor. After-taste	
	Product that is unacceptable in odor, appearance texture or flavor; singly or in combination	All forms of presentation	Defective

A sample unit is considered defective if the demerit points total more than 15.

Cooking schedule for quick frozen squid to be examined organoleptically.

Thawed squid of different sizes should be cooked in accordance with procedure provided in sub-section 7.5.1 for the following recommended lenght of time.

Size	Time
Under 10 cm	2 min
11-20 cm	2-3 min
21-25 cm	4-5 min
26-30 cm	5-6 min
Over 30 cm	6-7 min

PROPOSED DRAFT STANDARD FOR DRIED SHARK FINS
(At Step 3 of the Procedure)

1. SCOPE

This standard applies to dried shark fins, as defined below, offered for human consumption, and subjected to possible further processing.

2. DESCRIPTION

2.1 Definition of the Product

2.1.1 Dried fins shall mean the dorsal and pectoral fins and the lower lobe of the caudal fin, obtained through specific cuts from sharks of adequate length, from which all flesh has been totally eliminated to avoid contamination.

2.1.2 The shark families used in the processing of this product are those which have a high or medium amount of fibres, as listed below:

Alopias Sp
Carcharhinus longimanus
Carcharhinus falciformis
Carcharhinus obscurus
Carcharhinus altimus
Carcharhinus limbatus
Carcharhinus leucas
Carcharhinus plumbeus
Galeocerdo cuvieri
Hexanchus griseus
Hypoprion signatus
Isurus Oxyrinchus
Mustelus canis
Prionace glauca
Sphyrna lowini
Squalus cubensis
Heterodentus ahillipi
Sahyros makarran
Sphyrna tiburotiburo
Scuatica Sp
Ciuglymostoma cerratum

2.2 Definition of the Processing

2.2.1 The dorsal and pectoral fins shall be cut in the form of a half moon and the lower lobe of the caudal fins shall be cut straight, so that there is no residual flesh. (See Annex A).

2.2.2 Drying can be carried out in the following ways:

- Natural: By exposure to the sun for several days.
- Artificial: By means of a current of hot air, in a mechanical drier.

2.3 Presentation

The dried fins may be presented:

- With the skin
- Without the skin

2.4 Classification of Fins

Dried shark fins are classified in accordance with their fibre, cartilage and gelatine content, which depends on the species of shark, and on the type and size of the fin.

The size of the fins shall be measured from a point in the middle of the part of the body where the cut is made, to the tip of the fin, as shown in Annex A.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

Dried shark fins shall be prepared using healthy sharks, suitable for human consumption.

3.2 The Final Product

The dried fins shall have the colour and odour characteristic of their species, and shall be free of all extraneous odours.

The texture shall be firm, and the fins shall be clean, with no residual flesh; they shall not present irregularities in cutting, burns or blemishes, and shall be free from insects, mites, worms and fungi.

3.3 Percentage of Moisture

The percentage of moisture shall be such as is required for conservation.

4. FOOD ADDITIVES (To be defined)

5. HYGIENE

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1985, Rev. 2).

5.2 To the extent possible in good manufacturing practice the products shall be free from objectionable matter.

5.3 When tested by appropriate methods of sampling and examination, the products:

(a) Shall not contain micro-organisms in amounts which may represent a hazard to health;

(b) shall not contain parasites which may represent a hazard to health; and

(c) shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

6. PACKAGING

The containers for the fins shall be clean and dry and shall safeguard the sensory and other quality characteristics of the product during storage and transport. They shall not transfer to the product any extraneous odour, colour or other characteristics.

7. LABELLING

In addition to the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) 1/, the following specific provisions shall apply:

7.1 Name of the Product

7.1.1 The name of the product to be declared on the label shall be "dried shark fins" or any other appropriate name in accordance with the law and custom of the country in which the product is distributed.

7.1.2 In addition, the label shall indicate, next to the name of the product:

(a) the form of its presentation;
(b) classification by family, type of fin and size.

7.2 Net Contents

The net contents shall be declared by weight in accordance with Section 4.3 of the General Standard.

7.3 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

7.4 Country of Origin

The country of origin of the product shall be declared in accordance with Section 4.5 of the General Standard.

7.5 Lot Identification

Lot identification shall be declared in accordance with Section 4.6 of the General Standard.

7.6 Date Marking and Storage Instructions 2/

7.7 Instructions for Use 2/

7.8 Irradiated Foods 2/

7.9 Exemptions 2/

7.10 Non-Retail Containers 2/

8. METHODS OF ANALYSIS, SAMPLING AND EXAMINATION

The methods of analysis, sampling and examination which are described below are in accordance with the international methods of arbitration.

8.1 Sampling

8.1.1 Sampling for Visible and Sensory Defects

Sampling of lots to check the product shall be in accordance with the Codex Sampling Plans of Prepackaged Foods (AQL-6,5) (CAC/RM 42-1969).

1/ Thereafter referred to as "General Standard".

2/ Note: The Committee should consider the need for these provisions. (See also paras 35-50 of the report).

8.1.2 Sampling for Net Weight

The sampling shall be carried out according to the Methods of analysis of the Codex for determining net weight (CAC/RM 29-1970).

8.2 Examination of Physical Defects and Sensory Evaluation

The sensory and physical evaluation of the product shall be carried out exclusively by qualified persons.

9. DEFINITION OF "DEFECTIVE"

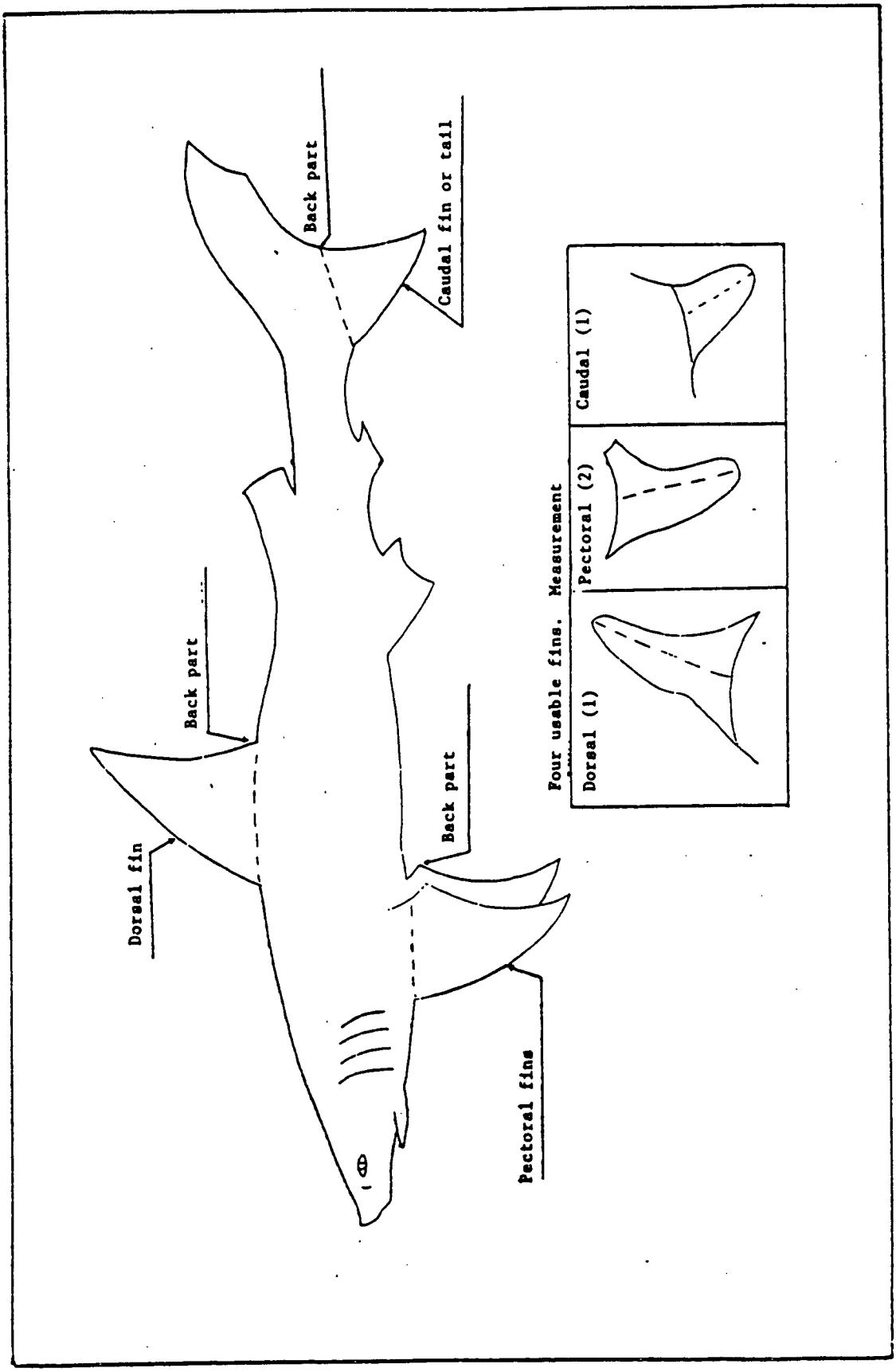
All sample units of the product which do not comply with the requisites in Section 3 shall be considered "defective" (see Annex B).

10. ACCEPTANCE OF THE LOT

A lot shall be considered to comply with the requisites of the final product and the net content of the present standard if:

(a) The total number of defective units according to the definition in Section 8 of the present standard does not exceed the acceptance number (c) of the sampling plan corresponding to the plans for the sampling of prepackaged food.

(b) The net content of all the containers, determined by the respective sampling plans for net content, is not inferior to the net content declared.


Back part
Caudal fin or tail
Back part
Back part
Dorsal fin
Pectoral fins
Four usable fins. Measurement
Caudal (1)
Pectoral (2)
Dorsal (1)

ALINORM 89/18
APPENDIX X
ANNEX B

Definition of defects

(a) Blemishes due to decay

- These are caused by bad handling and delay in cutting

(b) Irregular cuts

- These are caused by inexpert or careless handlers when removing the fins from the body of the shark, resulting in residual flesh remaining on the fins, or in cuts which are not well defined.

(c) Residual flesh

- The presence of flesh left sticking to the fins.

(d) Burns

- These are deep, hard furrows caused by prolonged exposure to the sun of the shark or its skin, or by mechanical drying, or by the fact that the shark has been left a long time in the water after its death.

DRAFT GUIDELINES FOR INSPECTION TECHNIQUE FOR QUICK FROZEN FISH BLOCKS

Acceptance shall be determined by evaluating samples of fish blocks (selected from consignments) in the frozen, thawed, and cooked states; determining the frequency and intensity of defects; calculating a numerical score for each sample unit; and finally, determining lot acceptance based upon the maximum allowable "defectives" per the sampling plan.

Sample Selection

For examination in the frozen and thawed state, a sample unit is one entire fish block. The number of fish blocks comprising the sample selected from a consignment for evaluation shall be in accordance with the sampling plan.

Examination for Defects (frozen)

Each fish block (sample unit) shall be evaluated in the frozen state for those defects specified for examination in the frozen state and demerits assigned as provided by the defect table.

Examination for defects (thawed)

Each fish block (sample unit) shall be thawed under controlled time and temperature conditions prior to examination. For fillet blocks, each block shall be examined for the specified defects and demerits assigned for each identified defect as provided by the defects table.

For fillet/mince blocks, each thawed block shall be evaluated for fillet/mince ratio using one of the prescribed procedures. Subsequently, the fillets and pieces shall be examined for specified defects for fillets and demerit points assigned for each identified defect.

The minced fish meat separated from each fillet/mince block shall be examined for the specified defects for minced fish meat and demerits assigned for each identified defect. Before examination, the minced fish meat shall be uniformly distributed to a height of approx. 1 cm on a shallow tray (dimensions to be given) to facilitate identification of each defect.

Examination for defects (cooked)

The prescibed amount of fillets pieces and minced fish meat from each block shall be cooked by the prescribed method. The cooked product shall be examined for defects specified for the cooked state and demerits assigned for each identified defect.

Listing Demerit Points and Score

When examination of a sample unit has been completed, determine the number of demerit points assigned to the product in (A) frozen state and (B) thawed and cooked states.

Determine the demerit score for each sample unit by the following formula:

A = sum of demerits in frozen state

$$B = \frac{\text{sum of demerits (thawed and cooked state)}}{\text{Nº of kilograms}}$$

Sample unit score = A + B

ALINORM 89/18
APPENDIX XII

REVISION OF LABELLING PROVISIONS IN CODEX STANDARDS FOR FISH AND FISHERY PRODUCTS *

CODEX STANDARD FOR QUICK FROZEN GUTTED PACIFIC SALMON (CODEX STAN 36-1981)

5. LABELLING

In addition to Sections 2, 3 and 8.1.3 of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) 1/, the following specific provisions shall apply:

5.1 The Name of the Food

The name of the food to be declared on the label shall be the name prescribed for the particular species under sub-section 5.2 with the words "quick frozen" and the words "dressed headless" or "dressed head-on" as appropriate. However, the term "frozen" 2/ may be applied on the national level in countries where this term is customarily used for the type of product processed in accordance with sub-section 2.2.

5.2 Designation

Quick Frozen Gutted Pacific Salmon shall be designated as follows according to the species packed:

Species	Designation
Oncorhynchus-nerka	Sockeye Salmon or Red Salmon
Oncorhynchus-kisutch	Coho Salmon or Silver Salmon
Oncorhynchus-tschawytscha	Spring Salmon, King Salmon or Chinook Salmon
Oncorhynchus-gorbuscha	Pink Salmon
Oncorhynchus-keta	Chum Salmon or Keta Salmon
Oncorhynchus-masou	Cherry Salmon

5.3 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

5.4 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

5.5 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

5.6 Net Contents

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* See paras 35-50 of the Report.
1/ Thereafter referred to as "General Standard".
2/ "Frozen": this term is used as an alternative to "quick frozen" in some English speaking countries.

5.6.1 The net contents shall be declared by weight in accordance with Section 4.3 of the General Standard.

5.6.2 Where the food has been glazed, the declaration of net contents of the food shall be exclusive of the glaze.

5.7 Storage Instructions
Clear directions for storage shall be given.

5.8 Irradiated Foods (*) (Awaiting advice from CCFL)

5.9 Information on Sections 5.1 to 5.7 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address shall always appear on the container.

However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

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CODEX STANDARD FOR CANNED SHRIMPS OR PRAWNS
(CODEX STAN 37-1981)

7. LABELLING
In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply:

7.1 The Name of the Food
The name of the food shall be "shrimp" or "shrimps" or "prawns".

7.2 Style, Type, Size and Form of Pack

7.2.1 Style
The style of pack need be declared only when the contents are of the cleaned or deveined style. Unless so specifically designated, the canned shrimps or prawns will be considered to be of the conventional or regular style of pack.

7.2.2 Type
The type of pack may be declared.

7.2.3 Size
If the canned shrimps or prawns are labelled as to size, the size shall comply with the provisions of sub-section 2.2.3.

7.2.4 Broken Shrimps or Broken Prawns
These shall be labelled and identified as "broken shrimp" or "broken shrimps" or "broken prawns", or alternatively as "pieces of shrimp" or "pieces of shrimps" or "pieces of prawns".

1/ Thereafter referred to as "General Standard".
2/ The Committee proposed to the Codex Committee on Food Labelling that the following provisions should be included in the preamble by reference to the relevant sections of the General Standard. (See para. 45 of the Report):
Instructions for use (Section 4.8)
Quantitative Labelling of Ingredients (Section 5.1)
Irradiated Foods (Section 5.2)
Exemptions for Small Units (Section 6).
(*) The CCFL had not given specific advice in its Guidelines on Labelling Provisions in Codex Standards on the subject of irradiated foods in non-retail containers.

7.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

7.4 Net Contents and Drained Weight

7.4.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

7.4.2 The drained weight of the food shall be declared in accordance with Section 4.3.3 of the General Standard.

7.5 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

7.6 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

7.7 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

7.8 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provision applies to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

7.8.1 Information on Sections 7.1 to 7.7 shall be given either on the container or in the accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

7.8.2 However, lot identification and the name and address may be replaced by an identification mark, provided that such mark is clearly identifiable with the accompanying documents.

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CODEX STANDARD FOR CANNED TUNA AND BONITO IN WATER OR OIL (CODEX STAN 70-1981)

6. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food to be declared on the label shall be "tuna", "bonito", or "bonito-tuna", whether qualified or not, used in accordance with the law and custom of the country in which the product is sold and in a manner so as not to mislead the consumer 3/. The description "tuna", "bonito", or "bonito-tuna", shall not be applied to fish of any species other than those listed in sub-section 2.1.

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981)
3/ When accepting the standard, governments are requested to indicate the requirements in force in their country.

6.1.2 The name of the product may be qualified or accompanied by a term descriptive of the colour of the product, provided that the term "white" shall be used only for Thunnus alalunga and the terms "light", "dark" and "blend" shall be used only in accordance with any rules of the country in which the product is sold. 1/

6.2 Form of Pack and Style

6.2.1 The form of pack and the packing medium shall be declared on the label.

6.2.2 When the style is as described in sub-section 2.2.1.2, such style shall be indicated on the label as "packed without pre-cooking", or "packed directly from raw fish", or when labelled in French, as "au naturel", or by similar descriptive wording.

6.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

6.4 Net Contents and Drained Weight

6.4.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

6.4.2 The drained weight of the food shall be declared in accordance with Section 4.3.3 of the General Standard.

6.5 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

6.6 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

6.7 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

6.8 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

6.8.1 Information on Sections 6.1 to 6.7 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

6.8.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

1/ When accepting the standard, governments are requested to indicate the requirements in force in their country.

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CODEX STANDARD FOR CANNED CRAB MEAT
(CODEX STAN 90-1981)

7. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply:

7.1 The Name of the Food

The name of the food to be declared on the label shall be "crab meat" preceded or followed by the common or usual name applied to the species legally accepted in the country where the product is distributed. 3/

7.2 Presentation

The forms of presentation as described in sub-sections 2.2.1-2.2.6 respectively, shall be declared as follows:

7.2.1 - Twin Face Pack (Two End Leg Pack)
7.2.2 - Single Face Pack (One End Leg Pack)
7.2.3 - Chunk Pack
7.2.4 - Flake Pack
7.2.5 - Lump Pack
7.2.6 - Claw Pack

7.2.7 - Other Presentations - If the food is produced in accordance with sub-section 2.2.7 the label shall contain in close proximity to the words "crab meat" such additional words or phrases that will avoid misleading or confusing the consumer.

7.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

7.4 Net Contents and Drained Weight

7.4.1 The net contents, exclusive of wrapping material, shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

7.4.2 The drained weight of the food shall be declared in accordance with Section 4.3.3 of the General Standard.

7.5 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

7.6 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

7.7 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981).
3/ When accepting the standard, governments are requested to indicate the requirements in force in their country.

7.8 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

7.8.1 Information on Sections 7.1 to 7.7 shall be given either on the container or in the accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

7.8.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

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CODEX STANDARD FOR QUICK FROZEN SHRIMPS OR PRAWNS (CODEX STAN 92-1981)

6. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/ the following specific provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food to be declared on the label shall be "shrimp" or "shrimps" or "prawns" provided that such labelling is customarily used in the country where the food is intended to be sold and provided the food is identified to the consumer so that he will not be mislead.

6.1.2 In addition, there shall appear on the label in conjunction with the name of the food, the form of presentation as indicated below:

Form of Presentation	Labelling Designation
(a) Whole	- Whole shrimp, shrimps or prawns.
(b) Headless	- Headless shrimp, shrimps or prawns.
(c) Peeled (tail fans on)	- Peeled (tail fans on), shrimp, shrimps or prawns. In addition, one of the words "round", "deveined", "fantail", "split", "cutlet", or "butterfly" may be used as appropriate.
(d) Peeled (tail fans removed)	- Peeled shrimp, shrimps or prawns. In addition, the word "deveined" may be used as appropriate.
(e) Pieces	- Pieces of shrimp, shrimps or prawns - shell on.
(f) Peeled Pieces or Broken Shrimp Meat	- Peeled pieces of shrimp, shrimps or prawns. In addition, the word "deveined" may be used if appropriate.
(g) Other Presentations	- If the product is produced in accordance with sub-section 2.3.6, the label shall contain in close proximity to the word "shrimps" or "prawns" such additional words or phrases that will avoid misleading or confusing the consumer.

6.1.3 The nature of the food shall appear on the label: raw, parboiled, or cooked. In the case of heated products, an indication of the degree of cooking shall conform to the provisions of sub-section 2.2.1.

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to the Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981).

6.1.4 (i) The term "quick frozen" shall also appear on the label, except that the term "frozen" 1/ may be applied in countries where this term is customarily used for describing the food processed in accordance with sub-section 2.2.2 of this standard.

(ii) Shrimps or prawns in any form of presentation may be individually quick frozen, and in such cases the labelling may be "individually quick frozen" or "individually frozen" 1/.

6.1.5 In addition to the specified labelling designations above, the usual or common trade names of the variety may be added so long as it is not misleading to the consumer in the country in which the product will be distributed.

6.2 Size Classification

If quick frozen shrimps or prawns are labelled as to count, the classification must comply with the provisions of sub-section 3.3.5.

6.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

6.4 Net Contents

6.4.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

6.4.2 Where the food has been glazed, the declaration of net contents of the food shall be exclusive of the glaze.

6.5 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

6.6 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

6.7 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

6.8 Storage Instructions

Clear instructions for storage shall be given.

6.9 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

6.9.1 Information on Sections 6.1 to 6.8 shall be given either on the container or in the accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

6.9.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

1/ "Frozen" - this term is used as an alternative to "quick frozen" in some English speaking countries.

CODEX STANDARD FOR CANNED SARDINES AND SARDINE-TYPE PRODUCTS
(CODEX STAN 94-1981)

6. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply.

6.1 The Name of the Food

6.1.1 The name of the food to be declared on the label shall be:

(i) "Sardines" (to be reserved exclusively for Sardina pilchardus (Walbaum)); or

(ii) "X sardines", where "X" is the name of a country, a geographic area, the species, or the common name of the species in accordance with the law and custom of the country in which the product is sold, and in a manner so as not to mislead the consumer. 3/

6.1.2 The name of the packing medium used shall form part of the name of the food.

6.1.3 If the fish has been smoked or smoke flavoured, this information shall appear on the label in close proximity to the name.

6.1.4 Where in a product containing oil the exuded water exceeds 12%, the product shall be declared as "X processed in own juice with oil added" ("X" shall be the name of the food).

6.1.5 If the product is produced in accordance with sub-section 2.2.3, the label shall contain in close proximity to the name of the food such additional words or phrases that will avoid misleading or confusing the consumer.

6.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

6.3 Net Contents and Drained Weight

6.3.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

6.3.2 The drained weight of the fish and/or the range of the number of fish in the can may be declared. If the drained weight is declared, it shall be in accordance with Section 4.3.3 of the General Standard.

6.4 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

6.5 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

6.6 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to the Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981).
3/ When accepting the standards, governments are requested to indicate the requirements in force in their country.

6.7 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

6.7.1 Information on Sections 6.1 to 6.6 shall be given either on the container or in the accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

6.7.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

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CODEX STANDARD FOR QUICK FROZEN LOBSTERS (CODEX STAN 95-1981)

6. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply:

6.1 The Name of the Food

6.1.1 The name of the food to be declared on the label shall be:

(i) "Lobster" if derived from the genus Homarus;

(ii) "Rock Lobster", "Spiny Lobster" or "Crawfish", if derived from species of the family Palinuridae;

(iii) "Slipper Lobster" or "Bay Lobster" or "Sand Lobster" if derived from species of the family Scyllaridae.

6.1.2 The form of presentation shall be declared as follows:

(i) Whole: lobster, rock lobster, spiny lobster, crawfish, slipper lobster, bay lobster, sand lobster;

(ii) whole, split with head on: split lobster, split rock lobster, split spiny lobster, split crawfish, split slipper lobster, split bay lobster or split sand lobster;

(iii) tail: lobster tail, rock lobster tail, spiny lobster tail, crawfish tail, slipper lobster tail, bay lobster tail, or sand lobster tail;

(iv) tail meat: lobster tail meat, rock lobster tail meat, spiny lobster tail meat, crawfish tail meat, slipper lobster tail meat, bay lobster tail meat, or sand lobster tail meat. (If tail in one piece, product may be designated lobster tail meat (whole), rock lobster tail meat (whole), spiny lobster tail meat (whole), crawfish tail meat (whole), slipper lobster tail meat (whole), bay lobster tail meat (whole) or sand lobster tail meat (whole));

(v) meat: lobster meat, rock lobster meat, spiny lobster meat, crawfish meat, slipper lobster meat, bay lobster meat, or sand lobster meat.

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to the Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981).

6.1.3 If cooked the word "cooked" shall appear on the label.

6.1.4 (i) In addition there shall appear on the label the term "quick frozen" or "frozen" 1/ whichever is customarily used in the country of sale to describe a product subjected to th e freezing process as defined in sub-section 2.2.2.

(ii) Lobsters, rock lobsters, spiny lobsters and slipper lobsters in any form of presentation may be individually quick frozen, and in such case the labelling may be "individually quick frozen" or "individually frozen". 1/

6.1.5 In addition to the specified labelling designations above, the usual or common trade names of the variety may be used as an alternative so long as it is not misleading to the consumer in the country in which the product will be distributed.

6.1.6 If the product is produced in accordance with sub-section 2.3.6, the label shall contain in close proximity to the name of the food such additional words or phrases that will avoid misleading or confusing the consumer.

6.2 Weight and Count

6.2.1 If the product is labelled according to weight, all lobsters or tails in the container so designated must be within the declared weight range subject to the tolerance provided in Annex C-II (page 14).

6.2.2 The product may be labelled by count provided that the actual count is in accordance with the number declared.

6.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard, except when the product is glazed no specific label declaration shall be required unless the cooking and/or glazing water contains additives.

6.4 Net Contents

6.4.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

6.4.2 Where the food has been glazed the declaration of the net contents of the food shall be exclusive of the glaze.

6.5 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

6.6 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

6.7 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

6.8 Storage Instructions

Clear instructions for storage shall be given.

1/ "Frozen": this term is used as an alternative to "quick frozen" in some English speaking countries.

6.9 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

6.9.1 Information on Sections 6.1 to 6.8 shall be given either on the container or in the accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

6.9.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

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CODEX STANDARD FOR CANNED MACKEREL AND JACK MACKEREL (CODEX STAN 119-1981)

7. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply:

7.1 The Name of the Food

7.1.1 The name of the food to be declared on the label shall be:

- "Mackerel" or "jack mackerel" in accordance with sub-section 2.1, whether qualified or not, used in accordance with the law and custom of the country in which the product is sold, and in a manner so as not to mislead the consumer;

- A local designation may be used provided it is not misleading to the consumer in the country in which the product is distributed.

7.1.2 The name of the packing medium used shall form part of the name of the food.

7.1.3 If the fish has been smoked or smoke flavoured, or fried, this information shall appear on the label in close proximity to the name.

7.1.4 Where in a product containing added oil the exuded water exceeds 8% in the case of oil packs or 12% in the case of packs in oil with own juice, the product shall be declared as "X packed in oil with own juice" or "X processed in own juice with oil added" ("X" shall be the name of the food).

7.1.5 The term "natural juice" can be used as an alternative to "own juice" provided it does not mislead the consumer in the country in which the product is distributed.

7.1.6 If the product is produced in accordance with sub-section 2.2.3 the label shall contain in close proximity to the name of the food such additional words or phrases that will avoid misleading or confusing the consumer.

7.2 Presentation

Except where the product is in the form of dressed fish, the method of presentation specified in sub-sections 2.2.1.2-2.2.1.9 shall be described on the label. The packing medium shall be declared as specified in 2.2.2.1-2.2.2.8.

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to the Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981).

7.3 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

7.4 Net Contents and Drained Weight

7.4.1 The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

7.4.2 The drained weight of the food shall be declared in accordance with Section 4.3.3 of the General Standard.

7.5 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

7.6 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

7.7 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

7.8 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

7.8.1 Information on Sections 7.1 to 7.7 shall be given either on the container or in the accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

7.8.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

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REVISED TEXT OF CODEX STANDARD FOR CANNED PACIFIC SALMON (CODEX STAN 3-1985) (Supplement 2 to Volume V of the Codex Alimentarius)

5. LABELLING

In addition to Sections 2, 3, 7 and 8 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1985) 1/ 2/, the following specific provisions apply:

5.1 The Name of the Food

5.1.1 The name of the food to be declared on the label shall be the designation appropriate to the species of the fish packed as shown below:

1/ Thereafter referred to as "General Standard".
2/ See Footnote 2 to the Codex Standard for Canned Shrimps or Prawns (CODEX STAN 37-1981).

Species	Designation
Oncorhynchus nerka	Sockeye Salmon or Red Salmon
Oncorhynchus kisutch	Coho Salmon, Silver Salmon or Medium Red Salmon
Oncorhynchus tschawytscha	Spring Salmon, King Salmon or Chinook Salmon
Oncorhynchus gorbuscha	Pink Salmon
Oncorhynchus keta	Chum Salmon or Keta Salmon
Oncorhynchus masou	Cherry Salmon

5.1.2 The style and form of pack shall be declared in accordance with sub-sections 2.2.1 and 2.2.2 with the exception of Regular Style 2.2.1.1 and Regular 2.2.2.1 which need not be declared.

5.1.3 If the product is produced in accordance with sub-section 2.2.3, the label shall contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.

5.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

5.3 Net Contents

The net contents shall be declared by weight in accordance with Sections 4.3.1 and 4.3.2 of the General Standard.

5.4 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

5.5 Country of Origin

The country of origin shall be declared in accordance with Section 4.5 of the General Standard.

5.6 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

5.7 Labelling of Non-Retail Containers

In addition to Sections 2, 3 and 8.1.3 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), the following specific provisions apply to the labelling of non-retail containers as defined by the Codex Alimentarius Commission (see page 123 of the Procedural Manual, 6th Edition):

5.7.1 Information on Sections 5.1 to 5.6 shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address shall always appear on the container.

5.7.2 However, lot identification, and the name and address may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

PROPOSALS TO AMEND THE CODEX STANDARD FOR CANNED MACKEREL AND JACK MACKEREL (CODEX STAN 119-1981)

The Federal Republic of Germany has proposed that the "Codex Standard for Canned Mackerel and Jack Mackerel" be amended to include canned herring and herring-type products.

The proposal is as follows:

Codex (General) Standard for Canned Mackerel and Mackerel-type Products and for Herring and Herring-type Products

1. SCOPE

This standard applies to canned mackerel and mackerel-type products and to canned herring and herring-type products in water or oil or other suitable packing medium. It does not apply to speciality products where the fish (proportion) constitutes less than 50 per cent m/m of the net contents of the can.

2. DESCRIPTION

2.1 Product Definition

2.1.1 Canned mackerel and mackerel-type fish, respectively canned herring and herring-type fish, are the products from medium-sized fish of the following families and genera:

Mackerel (Scombridae)
Scomber and Rastrelliger

Mackerel-type
Jack Mackerel (Carangidae)
Trachurus and Decapterus

Herring (Clupeidae)
Clupea harengus
Clupea pallasi

Herring-type
Sardina pilchardus
Sardinops sp.
Etrumeus sp.
(The list may be extended)..

7.1 Name of the Food

7.1.1 The name of the product shall be: - mackerel or herring or the common name of the species in accordance with sub-section 2.1, whether qualified or not, used... (following text unchanged).

In the following paras, the words "mackerel or jack mackerel" have to be replaced by the word "fish":

8.4 (heading); 8.4.2 (ii); (iii); 8.4.3 (iii); (iv); 8.4.4 (heading) and in the first line of the text; Annex A (heading and corresponding in the text).

Further, a revision of the Defects Table should be considered in the light of the harmonization between all fish standards: only one column of demerit points should be introduced to facilitate its use.

DEFECTS TABLE FOR CANNED MACKEREL AND HERRING AND MACKEREL-TYPE OR HERRING TYPE PRODUCTS: FILLETS, BITS, AND FLAKES IN VARIOUS PACKING MEDIA

Note: Sample unit min. 5 cans (or 1 kg: e.g. 5 cans of 200 ml water capacity)

Definition of Defects		Defect Description	Demerit Points
1.		Cutting and trimming	
	a) Parts of head or tail	Each instance	4
	b) Hard scutes (jack mackerel)	Each instance	4
	c) Parts of viscera	Each instance	8
	d) Noticeable parasites?	Each instance	(8)?
2.	Skin (fillets labelled skinless)	a) Each instance 3 to 10 cm²	2
		b) Each additional 5 cm²	2
3.	Black membrane	a) Each instance 5 to 10 cm²	2
		b) Each additional 5 cm²	2
4.	Non-characteristic pieces (fillets and pieces only) Flake or further disintegrated fish flesh clearly separated from fillets or pieces of fillets (expressed as % of drained fish solid material)	a) Over 35%	Defective
		b) over 25 to 35%	8
		c) Over 15 to 25%	4
		d) Over 10 to 15%	2
5.	Discolouration, flesh (surface discolouration derived from packing medium remains disregarded)	a) severe (overall)	8
		b) Slight or localized	2
6.	Discolouration, packing media	a) Severe (overall)	8
		b) Slight	2
7.	Foreign matter Any material not derived from fish or from ingredients of packing medium	Each instance	Defective
8.	Texture	a) Excessively mushy flesh	Defective
		b) Excessively tough or fibrous or crumbly flesh	8
		c) Hard bones (not easily friable using thumb and forefinger), each inst.	4
		d) Honeycombing	Defective
9.	Exuded water (oil packs only) Water content (expressed as % of declared net content of can)	a) fish packed in oil	
		(i) over 8% (if >8%, Section 7.1.4 applies)	Defective
		(ii) Over 6 to 8%	4

Definition of Defects		Defect Description	Demerit Points
	b)	fish packed in oil with own juice	
	(i)	Over 12% (if > 12%, Section 7.1.4 applies)	Defective
	(ii)	Over 10 till 12%	4
10. Separation of sauces Sauce separated into solid and liquid (except oil)	a)	Severe (overall)	8
	b)	Partly (objectionable appearance)	2

ALINORM 89/18
APPENDIX XIII
ANNEX B

DEFECT TABLE FOR CANNED MACKEREL AND HERRING AND MACKEREL-TYPE OR HERRING-TYPE PRODUCTS:
DRESSED FISH AND CUTLETS IN VARIOUS PACKING MEDIA

Note: Sample unit min. 5 cans (or 1 kg: e.g. 5 cans of 200 ml water capacity)

Definition of Defects		Defect Description	Demerit Points
1. Cutting and trimming and evisceration			
a) Parts of tail (except for small fish) and/or head		Each instance	2
b) Hard scutes (jack mackerel)		Each instance	2
c) Excessive amount of viscera and/or feed (one or more fish not eviscerated)		Each instance	Defective
d) Small amounts of viscera and/or feed (except for small fish and cutlets with belly uncut)		Each instance	4
2. Non-characteristic pieces			
a) Additional small pieces		Each instance beyond 2:	2
b) Flake or further disintegrated fish flesh, skin, bone or fin fragments (expressed as % of drained fish solid material)	(i)	Over 10%	Defective
	(ii)	Over 7 to 10%	4
3. discolouration, flesh	:		
4. discolouration, packing media	:		
5. Foreiogn matter	:		
6. Odour and flavour, flesh or packing media	:	As per Annex "A"	
7. Texture	:		

DEFECTIVE UNIT

A sample unit shall be considered defective if the demerit points total more than 20.

Final Remarks

Canned fish products are produced world-wide in accordance with the size of the fish.

Small fish are processed into sardine-type products (preferably dressed whole fish).

Medium-sized fish into mackerel- or herring-type products (preferably fillets).

Large-sized fish into tuna-type products (preferably solid pack or chunks).

Therefore, a related extension and revision of corresponding standards is recommended, including the harmonization of defects tables.

ALINORM 89/18
APPENDIX XIV

PROPOSED AMENDMENT TO THE CODEX STANDARD FOR CANNED SARDINES AND SARDINE-TYPE PRODUCTS (CODEX STAN 94-1981)
(At Step 3 of the Procedure)

2. DESCRIPTION

The following species should be added to those listed under 2.1 (a) Product Definition:

Opisthonema Oglinum

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ALINORM 89/18
APPENDIX XV

REVIEW OF METHODS OF ANALYSIS IN CODEX STANDARDS FOR FISH AND FISHERY PRODUCTS
- Report of an Ad-Hoc Working Group -

The Working Group considered document CRD 1 prepared by UK at the request of the 17th Session of the Committee.

Codex Standards for Canned Fish

Vacuum test: The Working Group recommended that the procedure in CODEX STAN 3-1981 (Salmon) should be included in the standards for shrimps or prawns, tuna, cod meat, sardines and mackerel but not where these products are packed in drawn, flat cans.

Drained weight: A procedure needs to be developed for CODEX STAN 37-1981 (Shrimps or Prawns) for gelled packs. A procedure is needed for CODEX STAN 70-1981 (Tuna or Bonito) for packs in brine or water. The Working Group recommended the procedure in paragraph 8.4.2 of CODEX STAN 119-1981 (Mackerel) except that the first sentence of sub-paragraph (iii) relating to the use of a paper towel, should be deleted in both standards.

The Working Group noted that there is no reference to a drained weight requirement or a procedure in CODEX STAN 94-1981 (Sardines) but that to recommend amendment would introduce significant further changes to the standard.

Water capacity of container: The Working Group agreed that the detailed procedure given in CODEX STAN 90-1981 (Crab Meat) and CODEX STAN 119-1981 (Mackerel) should be inserted in the remaining canned fish standards.

Minimum drained weight: The Working Group considered that this requirement was only appropriate where Codex Food Labelling provisions applied. It appeared to be needed in CODEX STAN 70-1981 (Tuna).

Net contents: The superior procedures given in CODEX STAN 94-1981 (Sardines) and CODEX STAN 119-1981 (Mackerel) should be written into the remaining standards.

Exuded water: The Working Group recommended that this requirement should be expressed as a percentage of the measured net contents, not the declared net contents. A specification on exuded water content is needed in CODEX STAN 70-1981 (Tuna in oil) and CODEX STAN 119-1981 (Mackerel in oil). The draft test procedure provided by UK should be considered for insertion in the above standards and in CODEX STAN 94-1981 (Sardines in oil).

Remaining Codex Standards for Quick Frozen Fish

Net contents of products covered by glaze: CODEX STAN 36-1981 (Gutted Salmon) requires a method. The Working Group recommended the insertion of CODEX Method CAC/RM 41-1971 (AOAC method 18.002, 14th Edition). The method in CODEX STAN 92-1981 (Shrimps or Prawns) requires amendment to clarify that the amount of water used should be eight times the weight of the sample.

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