codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

Telex 610181 FAO I

JOINT OFFICE: Via delle Terme di Caracalla 00100 ROME: Tel. 57971 Cables Foodagri

ALINORM 81/18

CODEX ALIMENTARIUS COMMISSION
Fourteenth Session 1981

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

Bergen (Norway), 5-10 May 1980

INTRODUCTION

1. The Codex Committee on Fish and Fishery Products held its fourteenth session in Bergen, Norway, from 5-10 May 1980 by courtesy of the Government of Norway. Dr. O.R. Braekkan, Norway, was in the chair.

2. The participants were welcomed on behalf of the Minister of Fisheries, Mr. Eivind Bolle, by Ivan Kristoffersen, First Secretary, who informed the Committee of the steps taken through the Norwegian Codex Committee, encouraged by Parliament, to harmonize work on food standardization and on vital points in food legislation. The Secretariat expressed its appreciation, on behalf of the Joint FAO/WHO Food Standards Programme, to the Government of Norway for the important steps it had already taken in preparing for an examination of the acceptance of Codex Standards. He also thanked the Government of Norway for providing language facilities in Spanish at this session. On behalf of the Spanish speaking delegations the delegation of Peru expressed appreciation to the Norwegian Government for providing Spanish interpretation and suggested that the announcement of the next meeting be given in a document with wide circulation so that other Spanish speaking countries could be made aware that the work of the Committee could now be followed directly in Spanish.

3. The session was attended by Government delegations from the following 28 countries:

Argentina	Germany, Fed.Rep.of	Poland
Australia	Iceland	Portugal
Belgium	India	Spain
Brazil	Ireland	Sweden
Canada	Japan	Switzerland
Cuba	Netherlands	Thailand
Denmark	New Zealand	United Kingdom
Finland	Norway	United States of America
France	Peru	Uruguay
		South Africa (Observer)

Observers were present from the following six international organizations:

Association des Industries de poisson de la CEE (AIPCEE)
Association of Official Analytical Chemists (AOAC)
International Institute of Refrigeration (IIR)
Organisation of Cellulose Gum Manufacturers (OFCA)
Marinalg International
International Association of Fish Meal Manufacturers (IAFMM)

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

ELECTION OF RAPPORTEURS

4. On the proposal of the Chairman, Mr. I.M.V. Adams (United Kingdom) and Mlle F. Soudan (France) were appointed as rapporteurs to the session.

ADOPTION OF THE AGENDA

5. The Agenda was adopted with the addition of an item on the Revision of Defects Tables to the Recommended International Standards for Quick Frozen Fish Fillets for which a document (CX/FFP 80/14) had been prepared by the Delegation of Norway. The Committee noted that documents on the subject were also available from the Federal Republic of Germany and the USA and agreed to the formation of an ad hoc Working Group to examine how harmonization of the standards might be achieved and to report its conclusions later in the session.

STATEMENT BY THE REPRESENTATIVE OF WHO

6. The representative of WHO reported on the following current and future activities of his Organization. A Joint FAO/IAEA/WHO Expert Committee meeting on the Wholesomeness of Irradiated Food was held in 1977 and discussed in particular the use of disinfestation doses of irradiation for some fish (fresh cod and redfish intended for evisceration).

7. The next Session of this Joint Expert Committee will be convened in Geneva, 27 October - 3 November 1980. Member countries of WHO had been invited to submit for consideration at the session any recent data which they might have on genotoxic studies with irradiated foods and studies of feeding irradiated foods to experimental animals.

8. The draft agenda for this meeting included such items as: a study of the various aspects of the food irradiation process i.e. the toxicological, microbiological, nutritional and radiation-induced chemical changes in food components; food irradiation technology; assessment of the wholesomeness of irradiated food and animal feed; and the acceptability of the food irradiation process per se, and review of "provisional" clearances for fish treatment.

9. Microbiological Contaminants. The third in the series of meetings of FAO/WHO Working Groups on Microbiological Criteria for Foods was held in Geneva from 20-26 February 1979. The Group considered and amended a proposal for "General Principles for the Establishment of Microbiological Criteria for Foods" and concerning the question of usefulness of microbiological criteria for raw meat and poultry, concluded that the eradication of Salmonella from raw meat and poultry cannot be achieved by the imposition of microbiological criteria on the finished product but only by the elimination from the live animal prior to slaughter or by an approved post-slaughter treatment to kill the micro-organisms. The same principle was considered to apply for other relevant pathogens and also raw foods in general.

10. The next meeting of the above group of experts will be held in November 1980 in Washington D.C., USA, and will discuss microbiological criteria for dried milk and mineral waters.

11. As a follow-up to the recommendations of the WHO Expert Consultation on Paralytic Shellfish Poisoning (PSP) held in December 1978, the Veterinary Public Health Unit of WHO was preparing a guide for the control of PSP which would give necessary information to the governments of the Member States on suitable counter measures for the health, economic and environmental hazards related to PSP.

12. A series of meetings had been held by WHO in Geneva and in the Regional Office for Europe, and the FAO/WHO Collaborating Centre for Research and Training in Food Hygiene, Berlin (West), concerning the WHO Surveillance Programme for Control of Foodborne Infections and Intoxications.

13. The WHO Mediterranean meeting on "Surveillance and Control of Zoonoses and Foodborne Diseases" met in Pendik, Turkey, from 27 November to 4 December 1979 and discussed national and international activities in the control of foodborne diseases in the participating countries.

14. The WHO Intercountry Seminar for the Planning of National and Regional Programmes for Surveillance, Prevention and Control of Zoonoses and Foodborne Diseases, New Delhi, 12-17 November 1979, gave adequate attention to development of food control projects in South-East Asian countries.

15. It was intended that immediately after the Congress of Foodborne Infections and Intoxications, Berlin (West), 29 June to 3 July 1980, a meeting of WHO experts for further implementation of this programme in the European Region would be held. The following aspects would be discussed: the organization and management of the programme, manual on surveillance of foodborne diseases, and the schedule and procedure for launching the programme, etc.

16. Joint FAO/WHO Food and Animal Feed Contamination Monitoring Programme - Phase II

Under this Programme 20 Institutes, each in a different country, had now been designated as Joint FAO/WHO Collaborating Centres for Food Contaminants. These Collaborating Centres had submitted, wherever possible, information on the following food contaminants for the period 1971-1977, particularly the levels of organochlorine pesticides and polychlorinated biphenyls in fin-fish, and lead and cadmium in molluscs and crustaceans.

17. The data which was received in 1977 and early 1978 had been published in the document "Summary Report of Data Received from Collaborating Centres for Food Contamination Monitoring, Stage I - 1977".

18. The WHO Food Safety Programme. A number of important WHO activities were included in the food safety programme, for example, programmes on (i) bacterial, viral and mycotic diseases, including zoonoses; (ii) nutrition; (iii) recognition and control of environmental hazards; and (iv) basic sanitary measures which included water supply and waste disposal systems. Of great importance were those activities concerned with the prevention and control of diarrhoeal diseases and of zoonoses transmitted through food.

19. In particular the WHO programme on food virology was an increasing service to food control authorities, epidemiologists dealing with foodborne disease, and research workers in Member States for data on foodborne viruses and their effects on human health. In addition to the existing WHO Collaborating Centre at Madison, Wisconsin, USA, a second centre had been established at Brno, Czechoslovakia, which would collect, evaluate and make available data on the characteristics of viruses relevant to food hygiene.

20. WHO, in collaboration with WAVFH, was preparing further steps for development of world Salmonella control. Because Salmonellosis was the most frequently reported foodborne disease in humans in most of the Member States and presented a very important problem, a Round Table Conference on the present status of the Salmonella problem (prevention and control) was intended to be held in Bilthoven, The Netherlands, in the latter part of this year. The main aim of the proposed conference was the exchange of knowledge and experience in this field and the recommendation of measures which would lead to the highest possible level of prevention and hopefully eradication of Salmonellosis throughout the world.

STATEMENT BY THE REPRESENTATIVE OF THE FAO FISHERIES DEPARTMENT

21. The Representative of FAO Fisheries Department informed the Committee of relevant activities of the Fish Utilization and Marketing Service that had taken place since the last session. He informed the Committee that the Service had issued a report covering its activities in 1978/79. Copies of this report were now available. Two FAO training courses on fish technology and quality control were scheduled this year for Latin America. The first, in July, would be held in Lima (Peru) for Spanish speaking countries. The second, for English speaking countries, would be held later this year in Paramaibo(Surinam). Similar training courses were planned in 1981 for South East Asia.

22. In the series of visual aids on hygiene and quality control a Fish Marketing and Utilization Service illustrated guideline had been prepared as a filmstrip "The Dirty War" - dealing with hygiene problems in processing plants.

23. The FAO Fisheries Department had begun the publication of a new "FAO Species Catalogue". The first volume "Shrimps and Prawns of the World" was now available and was part of a series that would consist of eleven volumes covering all marine and related organisms of interest to fisheries.

24. The Committee was also informed of the presentation of a "Catalogue of marine species commercially important for Latin America" vol. 1 printed in Spanish by the INFOPESCA-FAO/UNDP Regional Fish Marketing Information and Technical Advisory Service in the Latin American region.

REVIEW OF MATTERS RELEVANT TO THE COMMITTEE AS DISCUSSED BY THE CODEX ALIMENTARIUS COMMISSION AND VARIOUS CODEX COMMITTEES

Codex Alimentarius Commission (13th Session - ALINORM 79/38)

25. The Committee noted that the Commission had advanced the following to Step 9 of the Procedure for the elaboration of Worldwide Standards:

- Draft Standard for Canned Mackerel and Jack Mackerel
- Draft Code of Practice for Lobster
- Draft Code of Practice for Smoked Fish
- Draft Code of Practice for Salted Fish.

26. With regard to the Codes of Practice in general the Commission had agreed with the recommendation of the Codex Committee on Food Hygiene that Annex I of the Revised Code of Practice on General Principles of Food Hygiene (which dealt with Cleaning and Disinfection) should be attached as a new Appendix.

Amendment Procedure for the introduction of Additional Species in Step 9 Standards

27. The Commission agreed with the procedure which had been proposed by a Working Group and recommended by the Committee during its last session (see ALINORM 79/18, para 111).

Recommended International Standard for Canned Sardines and Sardine-type Products (CAC/RS 94-1978)

28. The Commission agreed to the Committee's recommendation to include the following species in this Standard: Sardinella fimbriata, Sardinella sirm, Sardinella longiceps, Sardinella gibbosata and Engraulis mordax.

Canned Mackerel and Jack Mackerel

29. The Commission agreed to include Rastrelliger sp. in this Standard.

Revised Recommended International Standard for Canned Pacific Salmon

30. The Commission advanced this Standard to Step 6 of the Procedure.

Draft Code of Practice for Minced Fish

31. This was returned to the Committee for further consideration and re-examination at the present session at Step 5.

Other Matters

32. The Commission noted that it had been proposed to hold a meeting of an ad hoc Working Group to consider the establishment of microbiological criteria for cooked ready-to-eat shrimps and prawns in the light of data available from the Report of the 2nd Joint FAO/WHO Expert Consultation on Microbiological Specifications for Foods (EC/Microbiol/77/Report 2). It had been hoped to hold such a meeting before the present session of the Committee but because sufficient data was not yet available from Governments, the meeting had been delayed. The need for establishing micro-

biological criteria for these products had been emphasized during the 2nd Session of the Coordinating Committee for Asia (see para 105 ALINORM 79/15).

33. The Commission also noted that the delegation of Thailand had reported that there was considerable usage in South East Asia of food grade fish concentrates corresponding to type B products of PAG guideline No. 19 and that it had been agreed that the delegation of Thailand should prepare a background document on the production and consumption of such products in order that the Committee could consider whether there was a case for the elaboration of a Code of Practice.

Possible Nutritional Aspects of Codex Standards

34. The Committee noted that both the Executive Committee and the Commission had examined the possibility of placing increased emphasis on nutritional considerations both in the work of the Commission and in that of its subsidiary bodies.

35. The Commission had agreed with the views of the Executive Committee at its 25th Session and had decided to include a review of the nutritional aspects of the Joint FAO/WHO Food Standards Programme as a standing item on the agendas of its future sessions.

36. The Commission had also decided that its subsidiary bodies should, if necessary, examine nutritional aspects when drawing up food standards, especially when they were of importance to the diets of developing countries. It was recognized that while many products moving in international trade were of great economic importance both to developing and developed countries, they were not necessarily of nutritional significance.

37. Delegates at the present session of the Committee were invited to comment on any aspects of the Codex Standards under consideration which they thought might have nutritional implications.

BULK LABELLING

38. The Committee was informed that the Codex Committee on Food Labelling had, at its 13th Session, considered a working paper on guidelines for the labelling of bulk (non-retail) containers and was of the opinion that international regulations or guidelines for the labelling of such containers were required and that Codex Committees should be consulted with regard to bulk (non-retail) labelling provisions in standards for which they were responsible.

39. The Committee noted that two types of provisions should be considered: those which would be allocated to Guidelines and would therefore be voluntary and those which would form part of a revised "General Standard for the Labelling of Prepackaged Food" which would be binding on Governments which accepted the Standard. At some future date, the Guideline and the Standard would need careful study to decide how provisions for non-retail containers of various kinds should be apportioned in the two texts.

FOOD ADDITIVE LISTS

40. It was noted that at its last session the Codex Committee on Food Additives had expressed concern that lists of Food Additives which had already been endorsed might be transferred into the Standards still under consideration without proper regard to their technological need. It wished to remind Commodity Committees that the justification for Food Additives should be carefully examined in all Standards being elaborated.

MICROBIOLOGICAL CRITERIA FOR COOKED, READY-TO-EAT SHRIMPS AND PRAWNS

41. The Committee noted that since the 13th Session of the Commission data had been supplied by the Governments of Canada and the USA. In addition the FAO/WHO Working Group on Microbiological Criteria for Foods (see para 9) had also considered the general problem of relating microbiological criteria to mandatory or advisory provisions in Codex documents.

42. The Committee agreed that an ad hoc Working Group should meet during the session to consider the newly available data and to inform the Committee of its conclusions later

DOCUMENTATION - ECONOMY MEASURES

43. The Committee noted that because stringent economy measures were required with regard to documentation throughout the Codex Committees, the Secretariat had been instructed that the usual practice of including the complete standards as amended by the Committee in toto for consideration would be suspended: instead only the amendments agreed by the Committee would be appended.

44. The delegation of the USA, supported by others, expressed deep concern at this measure and was of the opinion that it would not achieve real economy and could increase the possibility of misunderstanding and misinterpretation.

45. The Committee noted that the decision would not affect the printing and circulation of the completed texts in conjunction with the final report and agreed to adopt the measure as a temporary expedient.

REVIEW OF ACCEPTANCE OF RECOMMENDED CODEX STANDARDS FOR FISH AND FISHERY PRODUCTS

46. The Committee was informed that at its Thirteenth Session the Codex Alimentarius Commission had undertaken its regular review of the status of acceptances of Recommended Codex Standards and for Maximum Limits for Pesticide Residues and had noted considerable progress in acceptances since its 12th Session.

47. The Commission had emphasized the importance of facilitating international trade by permitting entry of products conforming to Codex Standards where acceptances would not be given and endorsed the recommendation made by the Executive Committee at its Twenty-fifth Session that as a measure to encourage acceptances, there should be a regular item on the agendas of Codex Commodity Committees or, when necessary, General Subject Committees reviewing acceptances of Standards elaborated by each Committee and at the regional level, by Codex Coordinating Committees.

48. The Committee noted that there were three kinds of acceptances posible under the Codex rules of procedure.

(i) Full acceptance

Full acceptance when the country concerned would ensure that a product to which the standard applied would be permitted to be distributed freely within its territorial jurisdiction under the name and description laid down in the standard, provided that it complied with all the relevant requirements of the standard.

(ii) Target acceptance

Target acceptance when the country concerned indicated its intention to accept the standard after a stated number of years and would meanwhile not hinder within its territorial jurisdiction the distribution of any sound products conforming with the standard by any legal or administrative provisions relating to the health of the consumer or to other food standard matters except for consideration of human, plant or animal health which were not specifically dealt with in the standard.

(iii) Acceptance with specified deviations

Acceptance with specified deviations when the country concerned gave acceptance, as defined, to the standard with the exception of such deviations as were specified in detail in its declaration of acceptance, it being understood that a product complying with the standard as qualified by these deviations would be permitted to be distributed freely within the territorial jurisdiction of the country concerned. The country concerned would further include in its declaration of acceptance a statement of the reasons for these deviations.

49. The Secretariat then listed the number of countries which had so far given acceptance as provided for by Codex procedure. So far, some 30 countries had given acceptance to one or more of the Recommended Codex Standards for Fish and Fishery Products.

REVISION OF RECOMMENDED INTERNATIONAL STANDARD FOR CANNED PACIFIC SALMON

50. The Committee examined the revision of the above Standard as contained in ALINORM 79/18, Appendix III, and a defects table provided by the delegation of Japan which was used by inspectors in its country. It was noted that as it stood the defects table enabled experienced food inspectors to grade products into three categories classed as upper, middle and lower of which only the upper and middle grade could be exported.

51. The Committee noted that the defects table as provided was not in the format used in other Codex Standards and that the relation between the provision in Section 3, Final Product, and any possible defects table would need careful examination. The delegations of Canada, Denmark, Japan and USA agreed to form a small working group which would attempt to devise a suitable defects table.

52. After discussion on the following points, the Committee agreed to the amendments to the Standard as given in Appendix II.

Scope

53. The delegation of Australia was of the opinion that the scope of the Standard was too restrictive and could bring it into possible conflict with sub-section 2.2.3 "Other presentation". It was further of the opinion that the term "portion" should be quantified in a manner similar to that of the Recommended Standard for Canned Mackerel.

54. The Committee decided that in the particular case of the Standard for Canned Salmon packed in its own juice the provisions under "Other Presentations" were adequate and that sub-section 3.4.1(i) covered the requirements for fish content in the pack.

55. The Committee noted that in smaller packs it was often necessary to add salmon oil derived from the product to maintain the necessary proportions and balance between own juice and oil. It was agreed to provide for "own juice with or without added oil".

Essential Composition and Quality Factors

56. The Committee noted that in the opinion of the delegation of Spain the provision for salt under optional ingredients should be completed by a reference to the proposed Draft Standard for Food Grade Salt at present under elaboration by the Codex Committee on Food Additives (see ALINORM 79/12A, Appendix 10). The delegation was also of the opinion that the Codex Committee on Food Additives should be requested to establish for this Committee the necessary modifications to the present proposed Draft Standard.

57. The Committee also noted, however, that some of the food additives, for instance anti-caking agents containing magnesium salts, might aggravate the problem of struvite crystallization and that not all types of salt at present covered by this Standard would be suitable for addition to the product. It was agreed to wait until the proposed Draft Standard for Food Grade Salt, which was at present at Step 6 of the Procedure, had been further developed until taking a decision on whether or not it should be referenced. In the meantime, recognizing that the qualifying phrase was insufficient it was decided that it should be deleted and, in line with the Standard for Canned Mackerel and Jack Mackerel, the provision should refer only to "Salt". It was also agreed to delete the square brackets at sub-section 3.2.2 "Oil".

Contaminants

58. The delegation of Switzerland informed the Committee that some imported products which would be covered by the Standard had failed to meet the Swiss regulations regarding lead content. It was suggested that at some future date it might be necessary to consider the inclusion of provisions for contaminants as listed, for example, in the Standards for Processed Fruits and Vegetables. The Committee noted that the character of such products was such that they could not necessarily be compared with canned salmon products.

59. The Committee decided to make no provision for contaminants at the present time.

Final Product

60. The Committee discussed whether the provision 3.4.1(i) "the can shall be well filled with fish" properly belonged under Appearance, or whether it should be a separate statement under Final Product. It was decided that since the statement did not relate to weight requirements but rather to visual assessment, it was in its correct place.

61. The Committee noted that the section would require further examination during consideration of the defects table.

Hygiene

62. The Committee agreed that the provisions of the section would have a more logical sequence if the obligatory sub-sections **preceded** references to the relevant Codes of Hygienic Practice. The section was therefore rearranged and the references updated (see Appendix II).

Labelling

63. 5.1.2. The Committee noted that the major production of Canned Pacific Salmon was in the form of regular style (2.2.1.1) and regular pack (2.2.2.1) and agreed to re-word the sub-section to make the necessary declaration requirement clearer. The following wording was adopted. "The style or form of pack described in sub-sections 2.2.1 and 2.2.2 shall be declared on the label with the exception of the regular style (2.2.1.1) and regular pack (2.2.2.1) which need not be declared."

Methods of Analysis and Sampling

64. The Committee noted that the present sampling plan, the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5) (CAC/RM 42-1969) was, in the opinion of many delegations, unsuitable when it involved the destructive testing of valuable products.

65. The Committee was informed that the Codex Committee on Methods of Analysis and Sampling was aware of this problem and had established a Working Group to examine how appropriate methods of sampling could be incorporated into Codex Standards and to formulate general principles for the selection of Codex Procedures and that work on the revision of the above sampling plans had already begun. It was agreed not to amend the text at present but to note the problem so that an overall solution in Codex may be considered.

Defects Table

66. The Committee examined the Defects Table prepared by the Working Group (see para 51) in conjunction with the provisions listed under sub-section 3.4 Final Product.

67. The Committee agreed in general with the layout proposed.

68. It agreed that the classification should be modified. Since, as it stood, the allocation of points under 'serious' automatically disqualified the product, the score systems in this column were replaced by "defective" and the points classified section was modified accordingly.

69. It was also agreed that under G, Workmanship, the defect "ragged appearance" should be added with one minor demerit point and that another defect description "Fill" should be added, also with one minor demerit point.

70. It was pointed out that products containing "hard bone" should be considered as defective because its presence was an indication of undercooking and consequently of possible under-sterilization. After some discussion the Committee agreed that this was a broader issue which could apply to other standards and that before considering the matter further, information was needed on manufacturing practices, especially with regard to time/temperature treatment of products likely to be affected. It was agreed that such information should be requested from manufacturing countries for consideration by the Committee at its next session. It was noted that a definition for "hard bone" would also be required.

71. With regard to the defect description 'Foreign material' there were opinions expressed that for certain kinds of foreign matter automatic disqualification might be too harsh. The Committee recognized, however, that before any considered judgement on the workability of the table could be given, it would require testing by inspectors under operating conditions and decided not to make any further changes until the results of such testing were available.

72. To bring the provisions under 'Final Product' into line with the proposed defects table it agreed to the following re-wording of sub-section 3.5, Defects and Tolerances: "A can which does not comply with the definition and quality factors set forth in this standard subject to the tolerance allowances as defined in Annex 1 shall be considered a defective".

Status of the Standard

73. In the light of the changes made to the Standard and the addition of the defects table the Committee agreed that the Proposed Revision of the Recommended International Standard for Canned Pacific Salmon required further Government comments and decided that it should be retained at Step 6 of the Procedure.

REVISION OF
THE DRAFT STANDARD FOR QUICK FROZEN BLOCKS OF FILLETS AND MINCED (SEPARATED) FISH FLESH AND MIXTURES OF FILLET AND MINCED FISH AT STEP 3

74. The Committee had available for consideration the above Draft Standard (ALINORM 79/18, Appendix V) and Government Comments contained in CX/FFP 80/3 and CX/FFP 80/3 Add. 1. After discussion on the following points the Committee agreed to the amendments to this Standard as given in Appendix III.

Title

75. Several delegations thought that the inclusion of the word "separated" in the title might lead to confusion and suggested that it be deleted.

76. Delegations from the USA and France suggested that the inclusion of a footnote referring to the definition of Minced Fish Flesh contained in para 2.1(c) would remove any further ambiguity from the title.

77. The above suggestions were agreed to by the Committee.

Scope

78. Whilst some delegations thought that there was no need for the Standard, other delegations including Australia and Switzerland thought that there was such a need since the product moved considerably in international trade and the availability of the Standard would provide the producer with information on physical, compositional and quality factors of the product for guidance during manufacture.

79. The Committee noted that the present international trade was in quick frozen blocks of fish fillets from white fish, most of which were lean. Because of the recent international agreement on fishing limits of up to 200 miles offshore, most of the countries in the world were exploring the use of new species of fish, including brown fish, for making fish blocks. Restriction of the Standard to white fish would not allow countries to use other (brown) fish.

80. Some delegations suggested development of separate standards for products based on (i) white fish and (ii) brown fish.

81. The US delegation pointed out that when minced fish flesh was used in the product it would be difficult to determine whether certain "brown" fish had been used for the purpose since no colour requirements were provided. Hence restriction of the Standard to white fish would not be able to exclude use of "brown" fish.

82. The Canadian delegation suggested inclusion in the Scope of a list of species of fish as in the other Step 9 Fish Standards, but it was felt that such an inclusion would limit the use of different types of fish and might be unwise.

83. The Committee noted that the Standard had wide application and agreed not to amend the Scope.

Product Definition

84. The Committee agreed to include the wording of the Recommended International Standard for Quick Frozen Fillets of Hake (CAC/RS 93-1978) so as to cover pieces.

Process Definition

85. The Observer from South Africa suggested that the process definition be modified so as to be in conformity with that in fish sticks. The Committee agreed to this suggestion.

Presentation

86. There was considerable discussion on the proportion of minced flesh to be included in the product as a natural proportion from the V cut, backbone, head, etc. and it was finally agreed to put the figure of 30% in square brackets and ask for Government comments. The rapporteur drew the attention of the Committee to the Code of Practice for Quick Frozen Blocks of Minced Fish where in 4.4.4.5 the amount of fish solids could vary from 15-25%. The presentation of products was discussed and the Committee accepted the suggestion of the delegation of the USA as in CX/FFP 80/3, Add. 1.

Raw Material

87. The delegation of the Netherlands suggested that the term "well drained" be removed from the definition since it was covered by the Code of Practice. The Committee, however, decided to retain it and to make no amendments to the existing definition, but to note that there was discussion and leave the matter for Government comments.

Optional Ingredients

88. Some delegations suggested that the use of sodium chloride as an optional ingredient in Quick Frozen Blocks should not be allowed, so as to bring the Standard into harmony with other standards such as those for various Quick Frozen Fillets. The delegation of France, however, drew to the attention of the Committee that sodium chloride was indeed allowed in the "Hake Standard" perhaps for technological reasons.

89. The Committee was informed that fish were often transported in refrigerated sea water and hence the quick frozen fish fillets prepared from such fish were bound to contain some salt. It was agreed to leave 3.2 without change.

Final Product

90. The delegation of Australia informed the Committee that there could be voids (empty spaces) in the quick frozen blocks if they were prepared from large fillets and suggested that sub-section 3.3.1 be modified to cover this. The Committee thought that there was no such need since this was covered in Annex B to the Standard.

91. The delegation of the Netherlands informed the Committee that it was unnecessary to limit the area covered by deep dehydration to not more than 5% since such an area could be easily removed from the block to give a material which answered to all the requirements of the Standard (sub-section 3.3.2). The delegation of the USA, however, felt that deep dehydration was an indicator of poor storage handling and turnover and hence should be of limited extent. No change was made to this section.

92. The Committee accepted the suggestion of the delegation of the USA to include a new sub-section 3.3.4 to indicate the proportion of minced fish flesh in the quick frozen blocks as declared in sub-section 6.1.5.

93. The Committee agreed to put the method of the West-European Fish Technologists' Association proposed by the Federal Republic of Germany for the determination of minced fish flesh in the quick frozen blocks as Appendix III, Annex E, to the Report and to ask for comments from the users on the efficacy of the method. If found suitable this method would replace that existing at 7.2.6.

Food Additives

94. The delegation of the USA suggested inclusion of Guar Gum and Carob (Locust) bean gums at a maximum level of 5 g/kg in the block to the list of additives and provided technological justification for their use in the product.

95. The International Pectin Producers Union in addition suggested that consideration be given to the inclusion of (i) Pectin, (ii) Carboxy methyl cellulose, sodium salt and (iii) xanthan gum, each at a level of 5 g/kg in the list of additives, and provided information on technological justification for their use in the product. The information was contained in a private communication addressed to the Chairman of the Codex Committee on Fish and Fishery Products, and made available to the Codex Secretariat.

96. The Committee was informed by the delegation of the Netherlands that the phosphates included in the list of additives would act as water binding agents in the Quick Frozen Blocks of Fish Fillet only while they were in the raw state and that this property was lost as soon as the product was heated for preparation. The delegation of the USA, however, expressed the view that phosphates in quick frozen blocks continued to exert their activity as water binding agents even after cooking.

97. The delegation of South Africa suggested the inclusion of monosodium glutamate at a level of 1 g/kg for enhancing the flavour of the product and agreed to provide the Committee with technological justification for its use. Other delegations, however, objected to this proposal.

98. The Committee agreed to include the additives suggested by the USA and those put forward by the International Pectin Producers as required by fish product manufacturers and to ask for comments on the need and justification for these and other additives in the Standard. Comments would be sought from Governments and interested international organizations.

99. After some discussion on the method of expression of polyphosphate it was agreed that it represented the combined total of natural and added phosphate as a maximum P_2O_5 content in the final product and it was left unchanged.

Hygiene and Handling

100. The Committee agreed to rearrange the order of sub-sections under the above heading and bring the mandatory provisions as contained in 5.3 ahead of the other sub-sections (5.1 and 5.2). It also agreed to refer to the Code of Practice for Minced Fish (CX/FFP 79/4, Rev.1) which was being developed.

Labelling

101. The Committee noted the suggestions of many delegations on the need to change certain sub-sections under the above heading but did not take any action since they were under review by the Codex Committee on Food Labelling.

102. The consequential effects of the amendments to sub-section 2.3 on the natural proportions of mince related to fillets was discussed and in view of these amendments the delegation of the USA suggested a wording to meet the additional requirement in 6.1.5.

Country of Origin and Lot Identification

103. The Committee noted the observations of some delegations that declaration of the country of origin and lot identification would not serve any useful purpose and that such reference be omitted. The Committee, however, did not take any action since it noted that these provisions were being reviewed by the Codex Committee on Food Labelling.

Determination of Net Contents of Products covered by Glaze

104. The delegation of the USA informed the Committee that the method above as contained in 7.2.2 was inappropriate for blocks and suggested that a new method should be developed. The Committee agreed to this suggestion and amended 7.2.2 accordingly.

Physical Defects (Thawed State)

105. The attention of the Committee was drawn to the need to update and harmonize defects tables in the Fish Standards (see ALINORM 79/18, para 134). The USA gave a detailed account of the investigations which they had carried out to determine defects in Quick Frozen Blocks of Fish Fillet. The investigations as contained in document CX/FFP 80/15 showed that there was no uniform distribution of defects in the block. Consequently, if only one portion of the block were examined, the results would not provide an actual representation of the defects. The USA delegation therefore recommended that the entire block should be taken for examination of defects instead of a portion as described under 7.2.4.

106. Many delegations thought that the use of an entire block which might weigh about 20 kg would be a costly operation. The delegation of Denmark pointed out that the method for determination of defects would probably be used only occasionally as an international referee method in cases of dispute.

107. The Committee decided to leave 7.2.4 as it was, and to ask for comments from Governments and interested international organizations on the recommendation that an entire block be used for determining defects.

Status of the Draft Standard for Quick Frozen Blocks of Fish Fillet, Minced Fish Flesh and Mixtures of Fillets and Minced Fish Flesh

108. The Committee decided to retain the Draft Standard at Step 3 of the Procedure.

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

109. The Committee had available for consideration the above Draft Standard (ALINORM 79/18, Appendix IV) and Government comments contained in CX/FFP 80/4 and CX/FFP 80/4, Add. 1. After discussion on the following points the Committee agreed to the amendments to this Standard as given in Appendix IV.

Scope

110. Some delegations thought that the Scope should cover breaded products containing natural fillets; others were of the opinion that they should not be included since the use of fillets for preparation of fish sticks and fish portions involved different technologies. The delegation of the UK thought that it was not entirely clear that natural fillets were excluded from the Scope and suggested that the text could be qualified to make this clearer.

111. The delegation of Canada proposed and the Committee agreed to include "offered for human consumption" in the Scope.

Product Definition

112. Several delegations thought that the weight (50 g) of the fish portion referred to was greater than that currently produced in their countries and suggested that it be reduced to 20 g. The Committee agreed to this amendment.

113. The Committee noted that fish portions could be of any shape and size and easily distinguished from fish fingers and agreed to amend the definition of fish portion accordingly.

Minimum Requirements for Fish Flesh Core

114. The delegation of the Netherlands thought that variations in figures presented by different countries for content of fish flesh core in the various types of products might be due to variations in the methodology used.

115. The delegation of Denmark stated that there were too many categories in the products being considered and proposed to reduce the number from 7 to 3. These would be (1) Raw breaded product, (2) Partially cooked breaded products, and (3) Battered products partially cooked. The delegation of the Federal Republic of Germany, however, was of the opinion that this would pose a problem since variations in weight and surface area of the products would make it difficult to arrive at representative figures for minimum proportions of fish flesh core.

116. The Committee noted that proportions of fish flesh core in different types of products such as fish sticks, fish portions etc., varied with processing and preferred to have values in products as presented to the consumer.

117. The delegation of the USA brought to the attention of the Committee that the percentage of fish flesh core would vary during storage due to migration of moisture and possible interaction of fat with other constituents.

118. The Committee agreed that a suitable method was needed for determination of fish flesh core which could be easily adopted universally and which would give comparable results. The delegation of the USA proposed the AOAC stripping method be adopted and informed the Committee that the method had been subjected to a collaborative trial and yielded comparable results. The Committee was informed that the AOAC method could be used as a reference method.

119. The Committee finally agreed to consider products under seven headings: (i) Raw breaded fish stick (finger), (ii) Raw breaded fish portion, (iii) Partially breaded fish stick (finger), (iv) Partially cooked breaded fish portion, (v) Battered fish stick (finger) partially cooked, (vi) Battered fish portion, partially cooked and (vii) Other presentation, and agreed to appropriate figures for percentage of declared weight of final product as fish flesh core.

Process Definition

120. The Committee noted that the text was too detailed and agreed to delete the first paragraph since most of the information it contained was already available in the Code of Practice for Frozen Battered and/or Breaded Fish Products (CX/FFP 79/8).

121. The Committee agreed to make a reference to the Code of Practice. The delegation of Canada suggested and the Committee agreed to delete the word "raw" in the last sentence in line with ALINORM 79/18, para 77.

Presentation

122. The delegations of the Netherlands, United Kingdom and the Federal Republic of Germany suggested that "other presentations" should be deleted from the list of presentations since all products were now covered by 2.1.2 and they felt that for "other presentations" there would be considerable difficulty in arriving at an appropriate figure for content of fish flesh core.

123. The delegation of the USA proposed the inclusion of "Other presentations" since this would provide an opportunity to industry for new product development.

124. The Committee agreed to retain the provision.

Essential Composition

Raw material

125. The Committee agreed to the suggestion of the delegation of the Netherlands to delete reference to "fillets" in 3.1.1 and to bring the text into line with the Scope.

Coating

126. The Committee agreed to modify the definition of "coating" as contained in 3.1.2 according to ALINORM 79/18, para 78.

Frying Fat

127. The delegation of the Federal Republic of Germany brought to the attention of the Committee that any fat suitable for human consumption which gave the desired final product characteristics could be used for frying. The Committee agreed to this suggestion and amended the text under 3.1.3 accordingly.

Final Product

128. The Committee agreed to introduce a new paragraph for "Other Ingredients" similar to the Standard for Canned Mackerel and Jack Mackerel (ALINORM 79/18, Appendix II) to include spices, spice oils, extracts of paprika, turmeric, cocoa etc. Accordingly the above materials were deleted from the list of food additives.

Food Additives

129. Many delegations thought that the list of additives included was fairly long and contained additives for use both in (i) Fish flesh core and (ii) Batter and breading coating.

130. The Committee recognized this and agreed to separate the additives in the list as (i) for use in fish flesh core and (ii) coating. The list of additives under examination for use in Quick Frozen Blocks of Fish Fillets which is under elaboration provided the Committee with the required information for classifying the additives in the fish core and thus distributing them under the two classes.

131. Some delegations thought that the use of colours in batter was for cosmetic purposes and suggested their deletion since they had no technological justification. The Committee, however, agreed to retain colours since it was of the opinion that the use of colours in batter could improve the organoleptic quality of the product and meet consumer demand.

132. The Committee agreed to retain the complete list of additives presented to it and to ask producing countries to provide technological justification for the use of all the additives they had requested.

133. The Committee also agreed to remove the natural flavours from the list of additives as they had been included as optional ingredients. Monosodium glutamate, which could be used for improving the flavour of batter, was retained in the list.

Hygiene

134. The Committee decided to rearrange the order of existing sub-sections to bring the mandatory provisions ahead of the others.

Labelling

135. The delegation of Canada felt that it was obligatory for the producer to inform the consumer what species of fish had been used for the preparation of fish portions or fish sticks and suggested that the word "may" in sub-section 6.1.2 be changed to "shall".

136. The Committee was informed by the Secretariat that inclusion of "shall" in the sub-section made it mandatory, but the countries could, if they did not agree to the sub-section, express a specific deviation at the acceptance stage.

137. The Committee agreed to change "may" into "shall" but to retain the brackets.

138. The delegation of Canada and the Federal Republic of Germany thought that when products were prepared from minced fish flesh, whole fish fillet or mixtures of both, it should be mandatory to make a label declaration and suggested that the word "shall" be used in place of "may" in sub-section 6.1.5. The Committee, however, retained the original text but agreed to remove the brackets.

139. The delegation of South Africa proposed that 6.1.6 be deleted since a product prepared from raw material from which the pin bones were removed could not possibly comply with the requirements laid down in the defects table in respect of bone. The Committee, however, retained the text.

140. The delegation of Sweden suggested inclusion of a new sub-section 6.7 to provide information on storage conditions. Other delegations thought that information on date marking should also be provided. The Committee accepted the above suggestions and agreed to include a new sub-section 6.7 to be elaborated.

Methods of Sampling and Analysis

141. The Committee agreed to include a new sub-section 7.4 for estimation of fish flesh core in fish sticks and fish portions and to make the consequential amendment to the paragraph on classification of defects referring to the defects table.

Annex A

Shallow Frying

142. The Committee noted that in shallow frying the depth of the oil was the most important requirement and agreed to delete reference to the diameter of the frying pan. The delegation of the Federal Republic of Germany informed the Committee that further work on the conditions for shallow frying was in progress (see Conference Room Document "Cooking Methods for Quick Frozen Fish").

Deep Fat Frying

143. The delegation of South Africa pointed out that any type of deep fat fryer would serve the purpose. Accordingly the Committee agreed not to make a specific mention of "aluminium".

Grilling

144. The Committee agreed to delete reference to the conditions for heating.

Annex B

Size Uniformity

145. Several delegations brought to the attention of the Committee that the size irregularity referred to was applicable to only two types of presentation - 2.2(i) and 2.2(iii). The Committee agreed to make amendments to include this information.

Damaged (other than broken or cracked)

146. The last part of the sentence was deleted as redundant.

Bones

147. The Committee agreed to harmonize the text under the above heading with that in the Standard for Quick Frozen Blocks.

Annex C

148. The Committee agreed to change all places where "6" appeared under "serious" to "defective" to bring them into line with other defect tables in standards for similar products, and to reflect a more uniform amount of material for examination in relation to the size of the product available.

Status of the Standard

149. The Committee noted that this Standard and the Standard for Quick Frozen Blocks were closely linked and should advance together through the Step Procedure and therefore decided to retain the Draft Standard at Step 3 of the Procedure.

CONSIDERATION OF DRAFT CODES OF PRACTICE

150. As requested by the Committee, an ad hoc Working Group comprising members of the delegations of Canada, Denmark, Finland, Federal Republic of Germany, India, Ireland, the Netherlands, New Zealand, South Africa, United Kingdom and the USA and with representatives of FAO - Mr. Z.S. Karnicki (Rapporteur), WHO - Dr. A. Koulikovskii, met under the chairmanship of Mr. C.J. MacGrath (Ireland). They reviewed the various Codes of Practice listed in the light of comments either received or made known by the representatives of the various delegations attending the meetings of the Group.

151. The Working Group agreed that there was an urgent need to harmonize these Codes and noted that, with the passage of time and the acquisition of greater experience in the various subjects, recommendations now being formulated were of greater value than those originally proposed. Care should therefore be taken in the harmonization process to ensure that the most recent recommendations framed were adopted in the final document.

152. In the case of the Codes of Practice for Minced Fish and Frozen Battered and/or Breaded Fishery Products, the Committee noted that the Working Group found itself lacking in knowledge about or expertise on the utilization of Cyclostomes and did not advise the inclusion of these species in these Codes.

DRAFT CODE OF PRACTICE FOR MINCED FISH AT STEP 3

153. This Code was reviewed and the text revised in the light of comments made by the members of the Working Group.

154. The Committee agreed with the Working Group that the Code as now revised should be submitted to the next meeting of the Food Hygiene Committee for approval of the hygiene provisions and, if that Committee recommended no changes of substance in the text, the Code should be submitted to the Commission at Step 5 of the Procedure.

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* The Codes of Practice revised at the session will be issued separately after examination by the Codex Committee on Food Hygiene.

DRAFT CODE OF PRACTICE FOR FROZEN BATTERED AND/OR BREADED FISHERY PRODUCTS

155. This Code was reviewed and the text revised in the light of comments made by the members of the Working Group.

156. The Committee agreed with the view of the Working Group that, with the commencement of work on the preparation of this Code, products were now being dealt with requiring even greater attention to hygiene requirements than in the past and providing for techniques of a greater degree of sophistication than previously. These required the preparation of detailed recommendations to ensure that the high standards in production and preservation now demanded in the end product were reached.

157. It also agreed that Section 4.5, Quality Control Programme, required very careful study as the implications of many of the proposals embodied in this section had far-reaching consequences.

158. The Committee decided that this whole section should be placed in square brackets and submitted to Governments for further study and comments; these would be considered by the Committee at its next session.

159. It was also agreed that the Code as revised should be referred to the Hygiene Committee for comment and that its attention should be directed to this particular section.

DRAFT CODE OF PRACTICE FOR CRABS AT STEP 3

160. The working document prepared by the Fish Production and Marketing Service of FAO Fishery Industries Division and the revisions embodied in CX/FFP 80/7 and 80/8, together with Conference Room Document CX/FFP 80/9 prepared by the USA, were reviewed by the Working Group and the text of the document was revised accordingly taking into account the views expressed by the representatives of the various delegations present.

161. The Committee agreed with the proposal of New Zealand that the Scope of the Code be enlarged to include the Red Swimming Crab - Nectocarcinus and the Common Swimming Crab - Ovalipes catharus.

162. The case for a possible need for the inclusion of microbiological criteria in Section V - End Product Specifications was discussed but did not receive the unanimous support of the Group.

163. The delegation of the United Kingdom was of the opinion that expression of numerical values for bacterial limits could be misleading because of sampling problems, variations in analytical methodology and interpretation of results. In addition, because there was no epidemiological evidence for the need for numerical limits, such criteria could divert attention from the primary purpose of hygiene requirements, that is, to ensure good manufacturing and processing practices.

164. After some discussion, the Committee agreed with the recommendation of the Group that the Code as now revised should be submitted to the next meeting of the Food Hygiene Committee for approval of the hygiene provisions and that if the Committee recommended no changes of substance in the text, the Code should be submitted to the Commission at Step 5 of the Procedure.

ANNEX OF CODE OF PRACTICE FOR SALTED FISH
"OBJECTIVE METHODS OF DETERMINING THE FINAL QUALITY OF SALTED FISH DURING PROLONGED STORAGE"

165. The Committee noted that the above document had been amended by Finland since it was originally considered by a Working Group which met during the 13th Session of the Committee (see ALINORM 79/18, para 126) but that Governments had not yet been requested to comment on the following questions:

- was there a need to develop methods to monitor dry-salted products?
- what other methods are suggested to be used to monitor and determine the quality of salted fish?
- is there need to extend the proposed Annex to cover species other than herring?

166. It was decided to defer further consideration of the Annex until Governments had had an opportunity to comment.

CODE OF PRACTICE FOR CEPHALOPODS

167. The representative of the FAO Fisheries Department informed the Committee that a Code of Practice for Cephalopods had been prepared and had been recently reviewed. It was expected to be ready at the end of June 1980 after re-editing and harmonization with other codes and would be submitted to the Committee for consideration at its next session.

168. In addition to the Code of Practice for Cephalopods the Fisheries Department was preparing a technical review on current handling and processing methods for Cephalopods.

PROPOSAL FOR A DRAFT STANDARD FOR SALTED AND DRIED GADIDAE

169. The Committee had before it the above document which had been prepared by Norway. After a brief discussion the Committee decided to circulate the document as a proposed Draft Standard for Salted and Dried Gadidae for Government comments at Step 3 of the Procedure (see Appendix V).

170. The Committee expressed its appreciation to the Klippfisknaeringens Reklamefond which provided a display of the products covered by the Standard and showed a film on the catching and processing of Gadidae.

HARMONIZATION OF RECOMMENDED INTERNATIONAL CODEX STANDARDS FOR QUICK FROZEN FISH FILLETS

171. The Committee had before it document CX/FFP 80/14 and a report of an ad hoc Working Group which had been established to harmonize the defects tables to the above standards.

172. The following delegations and observers were represented in the Working Group: Canada, Denmark, France, Federal Republic of Germany, Iceland, the Netherlands, New Zealand, Norway, Poland, South Africa, United Kingdom, the United States of America (Rapporteur).

173. The Chairman of the Working Group was Mr. R.L. Alderton (UK) and the Rapporteur Dr. F.J. King (USA).

174. The Committee further considered the revised defects table and after some discussion and amendments agreed that the revised table of the proposed revision of harmonizing the Recommended International Standards for Quick Frozen Fillets of Cod and Haddock (CX/FFP 80/14) should be circulated to Governments for examination and testing and that the matter would be further considered in the light of comments at the next session of the Committee.

175. **The revised table is attached as Appendix VII.**

MICROBIOLOGICAL SPECIFICATIONS FOR SHRIMPS AND PRAWNS

176. As requested by the Committee an ad hoc Working Group comprising members of the delegations of Canada, Federal Republic of Germany, Iceland, Norway, Spain, Thailand, United Kingdom, USA, and a representative of WHO (Dr. A. Koulikovskii) met to discuss the above subject and other relevant matters resulting from the recommendations made at the 13th Session of the Codex Committee on Fish and Fishery Products (ALINORM 79/18, para 128). The Group also discussed recommendations made by the 16th Session of the

Codex Committee on Food Hygiene concerning the need for microbiological criteria for fresh fish, frozen fish, shrimps and prawns, lobsters and froglegs. And,finally, the Working Group discussed the need for collection of data if microbiological criteria are to be appended at some future time to the Proposed Draft Code of Practice for Crabs.

177. At the 13th Session of the Codex Committee on Fish and Fishery Products an ad hoc Working Group had noted that "although numerous data existed relative to hygienic operation of in-plant processes and import, little had been gathered in accordance with the sampling plans and methodologies referenced in the Report of the 2nd Joint FAO/WHO Expert Committee on Microbiological Specifications for Foods held in Geneva in 1977 (EC/Microbiol/77/Report 2)". The Working Group thought it necessary to have available such data both at the production level and at the point of import so that valid comparisons could be made and objective decisions reached. The Group therefore recommended that Governments be requested to produce such data making use of the sampling plans and methodologies as contained or referenced in the above document. The reference to all sampling plans and methodologies would be attached by the Secretariat to the circular letter seeking Government comments which must be sent to member countries as soon as possible after the conclusion of this meeting. It was further stressed that for Guideline purposes it was necessary that all microbiological and sampling methods be done in plants which complied with the hygiene provisions of the Codex Code of Practice for Shrimps or Prawns. All data was to be sent to the Codex Secretariat six months in advance of the next meeting of the Codex Committee on Fish and Fishery Products" as described in CL 1979/34 on the subject, issued in September 1979.

178. The Working Group noted that no replies had so far been received to this request for Government comments.

179. The 2nd Joint FAO/WHO Expert Consultation recommended the following Microbiological Specifications for attachment to the Recommended International Code of Practice for Shrimps and Prawns for frozen, cooked, ready-to-eat shrimps and prawns: Mesophilic Aerobic Bacteria per g, N = 5, C = 2, m = 10^5, M = 10^6; Staphylococcus aureus per g, N = 5, C = 2, m = 500, M = 5,000; and Salmonella N = 5, C = 0, m = 0. The USA felt that the specifications for Staphylococcus aureus and Salmonella were too liberal since the product under consideration is often ingested without further heat treatment. They therefore suggested that the specifications for Staphylococcus aureus be N = 5, C = 2, m = 10, M = 100 and for Salmonella be N = 30, C = 0, m = 0.

180. The USA data, based upon the agreed protocol developed at the 13th Session, showed that all 49 lots (245 sample units) would meet both the recommended and the US specifications. In addition, a national survey at the market level showed that 99.6% of 1,464 samples were within the US recommendation for Staphylococcus aureus, that 99.1% contained less than 20/g and that 99.6% were less than M = 100. This latter data differed slightly in sampling and methodology to the above mentioned protocol.

181. The Canadian data showed that 394 lots of imported product and 1302 lots of domestic product complied with the recommended Staphylococcus aureus specification and that a lot of imported product failed to comply with the recommended Salmonella specification. All domestically produced lots complied. Mesophilic aerobes were not included in the Canadian data which were collected over the two year period September 1977 to August 1979 and analyzed by methodology which differed slightly from that suggested by the 13th Session of the Codex Committee on Fish and Fishery Products.

182. All other delegations of producing countries of the Working Group stated that microbiological data were available but not in a form consistent with the protocol and methodologies recommended at the 13th Session of the Codex Committee on Fish and Fishery Products. Thailand reported that their data related mainly to raw shrimp. Importing countries such as the Federal Republic of Germany, Norway and the United Kingdom had data but again in a form not necessarily compatible with the needs of the Working Group.

183. The Working Group noted that there appeared to be few food poisoning outbreaks directly attributed to frozen, cooked ready-to-eat shrimps and prawns. Members from Canada, the United Kingdom and the USA noted that their countries use internal microbiological guidelines/specifications/standards for the examination of these imported products. Several countries use specifications, including E. coli, for the rejection of cooked imported and domestic fish products. The Working Group agreed that "microbiological criteria" developed by the Expert Consultation should be used in an advisory manner in conjunction with the Code of Practice so that producing countries could maintain surveillance on the production.

184. The position of the United Kingdom is that numerical microbiological criteria are not cost-effective at the import level. It emphasized that they should be used at the level of production. This is a matter for industrial processors, and for this reason the United Kingdom does not consider that numerical microbiological criteria should be appended to this Code of Practice.

185. Because of the lack of comparable data the Working Group recommended that further data be compiled at the production level at plants which comply with the provisions of the Code of Practice for Shrimps and Prawns. **FAO/WHO were requested to circulate a letter** requesting Government participation in data collection using the protocol and methodologies already referred to and that precise instructions be included in the letter. All data should be forwarded for compilation, and summarization, to Mr. E.S. Garrett, Director, National Seafood Quality and Inspection Laboratory, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, P.O. Drawer 1207, Pascagoula, Miss., USA 39567, with a copy to Dr. Alex Koulikovskii of WHO. Canada, Iceland, Norway, Thailand and the USA indicated their willingness to participate in the survey and the Federal Republic of Germany and the United Kingdom would communicate their decisions on whether to participate later in view of the fact that they were importing countries and would not necessarily be aware if processing were performed according to good manufacturing practice as outlined in the Code of Practice.

186. The Working Group noted and fully supported the "General Principles for the Establishment of Microbiological Criteria for Foods" as amended by the Codex Committee on Food Hygiene. The Working Group did not wish to prejudge discussions on the desirability of elaborating microbiological criteria for any commodity. However, in its view the raw fish products mentioned in section 6.1(4) (fresh fish, frozen fish, shrimps and prawns, lobster and froglegs) of the Report of the Codex Committee on Food Hygiene do not at all represent priorities for the consideration of the need to establish such criteria. In this connection the Working Group recommended consideration of Chapter 11 of the Report of the Second FAO/WHO Expert Consultation on Microbiological Specifications for Foods, which in its view contained a more appropriate listing of commodities (specifically frozen cooked crab meat and frozen cooked lobster and related items) for such consideration.

187. The Working Group drew the attention of the Committee to the change in definitions of microbiological criteria contained in the Report of the 16th Session of the Food Hygiene Committee (Section 6.1 and amendments to Annex II, paragraphs 2.1, 2.1.1, 2.2, 2.2.1 and 2.2.2) as compared with the definitions in the Second Joint FAO/WHO Expert Consultation on Microbiological Specifications for Foods (EC/Microbiol/77/Report 2). The definitions contained in the former document should now be used.

188. The Committee agreed with the recommendations of the Working Group that Governments should collect data, in accordance with the protocol and methodologies used for frozen cooked ready-to-eat shrimps and prawns, for frozen cooked crab meat to be considered for possible inclusion in the Code of Practice for Crabs.

FEASIBILITY OF DEVELOPING A STANDARD FOR FROZEN BLOCKS OF WHOLE, HEADLESS AND GUTTED FISH

189. The Committee examined a background document which had been prepared on the above subject by Australia in collaboration with New Zealand, Peru, South Africa and the USA.

190. In introducing the document the delegation of the author country informed the Committee that the broad category covered by the study represented an extremely important commodity both in world production and in international trade and that the products were processed both individually and as whole frozen headless and gutted fish in blocks.

191. The document concluded that the development of a general standard for the products appeared feasible but that the Committee should consider whether the Standard should be restricted to fish for direct human consumption or should extend to cover all products irrespective of end use.

192. An appendix proposing common provisions in a Standard for Frozen Whole, Headless and Gutted Fish was attached.

193. In the discussion that followed some delegations questioned the wisdom of developing a standard which, because of the wide and increasing variety of species involved, might result in the restriction rather than the promotion of international trade.

194. The Committee noted, however, that some countries had already undertaken national standardization work for the products in view of increasing trade and the need for consumer protection. In spite of the difficulties which the Committee recognized might be encountered in attempting to cover many different species in a common standard, it decided that there were strong reasons for continuing to examine the feasibility of elaborating this Standard and decided to give the matter further consideration at its next session. The background document is attached as Appendix VI.

FOOD GRADE FISH CONCENTRATES

195. The Committee noted that the above had been discussed at the 13th Session of the Commission (see ALINORM 79/38, para 367 and para 33 of this Report) but there had been insufficient time for the preparation of a background document on which the Committee could base consideration of the need for a Code of Practice for Food Grade Concentrates.

196. The delegation of Thailand informed the Committee that such products were used as food in its country and that it was hoped to undertake production on an industrial scale since an important quantity of small fish, which in total amounted to 40% of Thailand's annual catch of 2.2 million metric tons, was hoped to be of adequate quality for processing into food grade protein concentrate.

197. Some work on the acceptability of products conforming to F.P.C. Type B as defined by the PAG (Protein Advisory Group) Guideline No. 9 had been carried out in Thailand in cooperation with the USA. Testing investigated the following possible uses:

1. As a main ingredient in food preparation
2. As a protein supplement
3. As raw material for the production of fish sauce.

198. The results clearly indicated that FPC Type B was totally accepted when prepared as main dishes in school lunch programmes, that use as a protein supplement was restricted in certain foods because of incompatible organoleptic qualities but its incorporation in the 2-10% range was possible. As a raw material for fish sauce, FPC could be used with minor modification of the original process.

199. The delegation of Thailand was of the opinion that FPC Type B had wide potential use in Thailand and neighbouring countries and further studies were in progress, Because of the necessity to safeguard the health of consumers the Committee was asked to consider the elaboration of a Code of Practice.

200. The Observer of the IAFMM informed the Committee that because of promising acceptability tests, the Norwegian Government had initiated regulations to control hygiene requirements and good manufacturing practice and that FPC products had been covered by regulations and a Code of Practice based on the PAG Guideline No. 9 since 1972. Other countries were now expressing interest in regulations to guard against sub-standard products and FAO had agreed that the IAFMM scientific group should look into the matter and it was expected that a background document covering the hygienic and nutritional aspects of FPC products would be prepared for a Joint FAO/IAFMM Working Group meeting which would take place in October 1980.

201. The Committee recognized that although current production of FPC was limited the potential uses of the product were considerable. The delegation of Thailand agreed to collaborate with the IAFMM in the preparation of a document which in addition to the hygienic and nutritional aspects of FPC would also cover production, trade and consumption.

202. The Committee agreed to defer consideration of the need for a Codex Code of Practice until its next session when the background document would be available for examination.

OTHER BUSINESS

Arsenic in Fish and Fishery Products

203. The Committee was informed by the delegation of Norway of recent findings concerning the Arsenic content of a variety of products examined by the Government Vitamin Institute, Bergen.

204. The Committee noted that many countries had regulations for maximum tolerance levels for arsenic in fish and fishery products in the 0.5-2.0 mg/kg range and that a number of the products examined considerably exceeded these levels. The element was, however, present in a form which was readily excreted and did not therefore present a toxicological hazard.

205. The Committee also noted that the United Kingdom was currently gathering data for a review of its arsenic in food regulations and a report would eventually be issued.

Working Group on Proposed Procedure for the inclusion of new Species into Step 9 Standards

206. The Committee noted the discussions which had taken place on the subject at its last session (see ALINORM 79/18, paras 111 and para 27 of this Report) and that at its 13th Session the Commission had agreed to the adoption of the proposed procedure (ALINORM 79/38, paras 337-339).

207. The Committee recognized that research into the exploitation of new fishing resources would not only lead to an increasing number of requests for the inclusion of related species into existing standards, but would also require research into establishing criteria for the assessment of common organoleptic qualities before species which were taxonomically close were proposed for inclusion into Step 9 Standards, and had agreed to appoint a Working Group on the subject at a future date.

208. The delegation of the USA informed the Committee that since its last session considerable progress had been made in its country in the methodology and scoring systems to be used by laboratories nominated by the Committee to evaluate new species and it was now appropriate for the Working Group to meet to establish the incorporation procedure for Codex purposes. The Government of the USA was willing to host such a Working Group and further details as to arrangements would be made later.

Economic Commission for Europe

Consultation of Experts on Standardization of Fresh and Chilled Saltwater Fish

209. The Committee was informed that the Working Party on the Standardization of Perishable Products would convene a meeting of experts to discuss standardization of the above products, to be held in the Palais des Nations, Geneva, 30 June 1980.

210. The Consultation already had available background documentation on the work of this Committee.

Future Work

211. The Committee noted that it already had a full programme of work for its next session: there were no proposals for additional work.

Date and Place of Next Session

212. The Committee noted that the next meeting of the Committee would take place in early 1982. The exact time and place of the meeting would be agreed between the Codex Alimentarius Commission and the Norwegian Government.

ALINORM 81/18
APPENDIX I

LIST OF PARTICIPANTS
LISTE DES PARTICIPANTS
LISTA DE PARTICIPANTES

ARGENTINA
ARGENTINE

E.Sisti
JEFA. Departamento control de Calidad
Subsecretaria de Pesca
Ministerio Economia
Calle F - Frente Banquina
Puerto Mar del Plata

AUSTRALIA
AUSTRALIE
J.H.Dean
Director of Fish Exports Standards
Fisheries Division
Department of Primary Industry
Canberra, A.C.T. 2600

BELGIUM
BELGIQUE
BELGICA

Dr. W. Vyncke
Division Head
Fisheries Research Station
Ankerstraat 1
B-8400 Oostende

BRAZIL
BRESIL
BRASIL

E.P.do Valle Zogbi
Veterinarian
Division of Inspection of
Fish and Fishery Products
DIPOA-Ministry of Agriculture
Ed.Venancio 2.000
Bloco 60-3^{O} Andar
Brasilia-DF

CANADA

R.M.Bond
A/ Director
Inspection and Technology
Branch
Fisheries and Oceans Canada
Department of Fisheries and Oceans
Ottawa, K1A 0E6

CANADA (contd.)

R.J. Bourgue
Chief, Inspection Division
Maritimes Region
Department of Fisheries and
Oceans
P.O.Box 550
Halifax N.S.

B.J. Emberley
Chief, Inspection, Coordination
and Enforcement,
Inspection and Technology Branch
Department of Fisheries and Oceans
Ottawa K1A 0E6

W.G.Gushue
Product Inspection Supervisor
Inspection Branch
Department of Fisheries and
Oceans
301-326 Howe Street
Vancouver, B.C. V6C 2A5

J.Lightfoot
Supervisor, Quality Assurance
National Sea Products Ltd.
Lunenburg, Nova Scotia

D.R.L.White
Chief, Inspection and Tech-
nology Branch
Newfoundland Region
Department of Fisheries and
Oceans
P.O.Box 5667
St.John's
Newfoundland AIC 5X1

CUBA

M.Blanco
Director de Normalizacion
Ministerio de la Industria
Pesquera
Ensenada de Pote y Atares
La Habana

DENMARK
DANEMARK
DINAMARCA

P.F.Jensen
Director, Inspection Service
for Fish Products
Fiskeriministeriets Industritilsyn
Dronningens Tvaergade 21
DK-1302 Copenhagen K.

A.Birch, Civil engineer,
Inspection Service for Fish
Products
Fiskeriministeriets Industritilsyn
Dronningens Tværgade 21
DK-1302 Copenhagen K.

J.Sieverts
Civilengineer
Bornholms Konservesfabrik A/S
Sigurdsgade 37-39
DK-2200 Copenhagen K.

E.Sørensen, Civil engineer
Den Kongelige Groenlandske
Handel
Strandgade 100
DK-1004 Copenhagen K

FINLAND
FINLANDE
FINLANDIA

Dr. K. Salminen
Head of Food Bureau
National Board of Trade
and Consumer Interests
Haapaniemenkatu 4 B
00530 Helsinki 53.

Eeva Eklund
Head of Biochemical Section
Finnish Customs Laboratory
Tekniikantie 13
02150 Espoo 15

Dr. M. Kiesvaara
Research Officer
Research Center of Finland
Biologinkuja 1
02150 Espoo 15

P. Valkeisenmäki
M. Sc.
Valio
P.O.Box 390
00101 Helsinki 10.

FRANCE
FRANCIA

Dr. F. Soudan
Chef de Service et Technologie
et des Contrôles
Institut Scientifique et
Technique des Pêches Maritimes
B.P. 1049
44037 Nantes.

Y.Lagoin
Inspecteur Vétérinaire en Chef
44 boulevard de Grenelle
75732 Paris Cedex 15

GERMANY Fed.Rep.of
ALLEMAGNE, Rep.f.d'
ALEMANIA, Rep. Fed. de

H.Hesse
Diplom Volkswirt
Bundesministerium für Ernährung
Landwirtschaft und Forsten
Postfach
D-5300 Bonn.

Dr. N. Antonacopoulos
Wissenschaftlicher Direktor
Bundesforschungsanstalt für
Fischerei/Federal Research
Center for Fisheries
Palmaille 9
D-200 Hamburg 50

Dr. K.Gerigk
Director and Professor
Federal Health Office
Postbox
D-1000 Berlin 33

Dr. W. Krane
Chef-Chemiker
"Nordsee" Deutsche Hochsee-
fischerei GmbH
Klussmannstr. 3
D-2850 Bremerhaven 1.

ICELAND
ISLANDE
ISLANDIA

Dr. Grimur Valdimarsson
Chief of Microbiological Division
Icelandic Fisheries Laboratories
Skulegata 4, Reykjavik

H. Thorsteinsson
Chief Quality Control
Samband of Iceland
Fish Products Division
Sambandshus
Reykjavik.

ICELAND (contd.)

S. Dadason
Chief of Production Technical
Division Icelandic Freezing
Plants Co.
Adalstreati 6
Reykjavik.

INDIA
INDE

J.Ambat
Deputy Chief Executive
Export Inspection Agency
MADRAS, PIN 600006

IRELAND
IRLANDE
IRLANDA

C.J.McGrath
Inspector of Fisheries and
Fisheries Engineer
Department of Fisheries and
Forestry
Agriculture House 6E
Kildare Street
Dublin 2.

JAPAN
JAPON

N. Itok
Technical Official
Fishery Marketing Division
Fishery Agency
1-Chome Kasumigashaki
Chiyodaku
Tokyo

A.Murata
Technical Adviser
Japan Exporting Frozen Marine
Products Association
New Marunouchi Building 6F
1-5-1 Marunouchi Chiyoda-ku
Tokyo

S.Yokoyama
Techical Advisor
Japan Frozen Foods Inspection
Corporation
6-4-2 Chome Shiba Daimon
Minto-Ku
Tokyo

NETHERLANDS
PAYS-BAS
PAISES BAJOS

K.Büchli
Public Health Officer
Ministry of Public Health and
Environmental Hygiene
Dr. Reyerstr. 10
2265 BA Leidschendam

J.M.M.Alofs
Commission for the Dutch Food
and Agricultural Industry
Postbus 760
Rotterdam

H.Houwing
Chief Institute for Fishery-
products, TNO
Dokweg 137
Ymuiden

D.Tielenius Kruythoff
Economic officer
Ministry of Agriculture and
Fisheries
P.O.Box 20401
2500 EK den Haag

NEW-ZEALAND
NOUVELLE-ZELANDE
NUEVA ZELANDIA

J.B.Hammond
Assistant Manager (Processing)
New Zealand Fishing Industry
Board
Private Bag
Manners St.
Wellington

A.J.McKenzie
Attaché (Veterinary)
New Zealand High Commission
New Zealand House
Haymarket
London SWIY 4TQ, UK

NORWAY
NORVEGE
NORUEGA

Dr. O.R. Braekkan *
Government Vitamin Laboratory
Norwegian Fisheries Research
Institute
P.O.Box 4285
N-5013 Nygårdstangen Bergen

* Chairman, Président, Presidente

NORWAY (contd.)

S.Skilbrei
Director
Norwegian Government Quality
Control Service for Fish and
Fishery Products
Directorate of Fisheries
P.O.Box 185
N-5001 Bergen

H.Blokhus
Chief Inspector
Directorate of Fisheries
P.O.Box 185
N-5001 Bergen

Brita Brandtzæg
Chief of Section
Norwegian Codex Alimentarius
Committee
P.O.Box 8139
Dep. Oslo 1

H.Pedersen
Managing Director
The Norwegian Canner's Association
P.O.Box 327
4001 Stavanger

Jan Fredriksen
Laboratoriesjef
Hyggeveien 4
9600 Hammerfest

K.Friis
Consultant
Director of Fisheries
P.O.Box 185-186
5001 Bergen

J.Gjerde
Chief of Section
Central Laboratory
Directorate of Fisheries
P.O.Box 185
N-5001 Bergen

P.Haram
Counsellor
The Royal Ministry of Fisheries
Oslo-Dep.
Oslo 1

P.D.Iversen
Consultant
Directorate of Fisheries
P.O.Box 185
N-5001 Bergen

NORWAY (contd.)

J.Muri
Director
P.O.Box 348
N-6001 Ålesund

T.Kvande-Pettersen
Manager
Industrilaboratoriet A/S
Storkaia 4
N-6500 Kristiansund N.

Stener Størkson
Consultant
Directorate of Fisheries
P.O.Box 185-186
N-5001 Bergen

O.Chr.Sunsvold
Director
The official Norwegian Quality
Control
Institute for Canned Fishery
Products
P.O.Box 324
4001 Stavanger

B.Aalvik
City Veterinary
Health Council
Engen 39
5000 Bergen

PERU
PEROU

G.Burga
General Manager
CERPER
P.O.Box 271
Callao (4)

POLAND
POLOGNE
POLONIA

E.Kordyl
Fish Processing Technologist
Sea Fisheries Institute
Gdynia

PORTUGAL

L.Torres
Director
Instituto Portugues de Conservas
de Peixe
Avenida 24 de Julho 76
1200 Lisboa

A.Oliveira
Tecnico, Veterinary
Instituto Portugues Conservas
de Peixe
Av. 24 de Julho 76
1200 Lisboa

SPAIN
ESPAGNE
ESPANA

P.Garcia Gonzalez
Jefe de la Seccion de Control
de Productos Alimenticios y
Alimentarios
Ministerio de Sanidad y
Seguridad Social
Paseo del Prado, 18-79 Planta
Madrid

J.Fernandez Espinosa
Jefe Servicio Inspection-y-
Normalization
Ministerio de Comercio
Paseo Castellana 16
Madrid 1

SWEDEN
SUEDE
SUECIA

Ph.D.Arne Sjøqvist
The National Food Admini-
stration,
Box 622
S-751 26 Uppsala

SWITZERLAND
SUISSE
SUIZA

P.Rossier
Head of Codex Alimentarius
Bundesamt für Gesundheitswesen
c/o Lebensmittelkontrolle
Haslerstrasse 16
CH 3008 Berne

Dr. G.F. Schubiger
Case Postale 88
CH-1814 La Tour de Peilz

THAILAND
THAILANDE
THAILANDIA

Bung-orn Saisithi
Director Fishery Technological
Development Division
Department of Fisheries
Rajadammeon Ave.,
Bangkok

UNITED KINGDOM
ROYAUME-UNI
REINO UNIDO

C.F.Phipps
Senior Executive Officer
Ministry of Agriculture
Fisheries & Food
Great Westminster House
Horseferry Road
London SW1 P2AE

I.M.V.Adams
Principal Scientific Officer
Food Science Division MAFF
Great Westminster House
Horseferry Road
London SW1P 2AE

R.L.Alderton
Higher Executive Officer
Ministry of Agriculture
Fisheries and Food
Great Westminster House
Horseferry Road
London SW1

A.E.Bishop
Fish Supplies Manager
U.K.A.F.F.P.
Birds Eye Foods Ltd.
Station Avenue
Walton-on-Thames
Surrey KT12 INT

R.Sawyer
Superintendent, Food and
Nutrition
Laboratory of the Government
Chemist
Cornwall House
Stamford St.
London SE1 9NQ

Dr. R. Alderslade
Medical Officer
Department of Health and
Social Security
Alexander Fleming House
London, S.E.1.

UNITED STATES OF AMERICA
ETATS UNIS D'AMERIQUE
ESTADOS UNIDOS DE AMERICA

J.R.Brooker
Seafood Quality and Inspection
Division, National Marine
Fisheries Service
US Department of Commerce
Washington DC 20235

L.M.Beacham
National Food Processors
Association
1133 20th St. N.W.
Washington DC 20036

Dr. W.Henry
Castle and Cook
50 California Street
San Francisco, California

P.Heggelund
National Food Processor Aswan
1600 South Jackson Street
Seattle,Washington 98144

F.Jermann
Staff Sea Food Consultant
Bumble Sea Foods
P.O.Box 60
Astoria, Oregon 97103

R.Kershaw
Assistant Director, Quality
Control
The Gorton Group
327 Main St.
Gloucester, Mass. 01930

Dr. F.J.King
Northeast Fisheries Center
National Marine Fisheries &
Service
Emerson Avenue
Gloucester, Mass. 01930

E.S.Garrett
Director
National Seafood Quality &
Inspection Laboratory
P.O.Drawer 1207
Pascagouia, Miss. 39553

UNITED STATES OF AMERICA (contd.)

R.V.Cano
Food Technologist
Division of Food Technology
Bureau of Foods
Food and Drug Administration
200 "C" Street, S.W.
Washington DC 20204

URUGUAY

J.Rivero
Chief of Industrial Technology
Department
National Fisheries Institute
Instituto Nacional de Pesca
Casilla de Correo 1612
Montevideo

OBSERVER COUNTRIES
PAYS OBSERVATEURS
PAISES OBSERVADORES

SOUTH AFRICA
AFRIQUE DE SUD
SUDAFRICA

S.P.Malherbe
Director
Biological Sciences Department
South African Bureau of
Standards
Private Bag X191
Pretoria 0001

A.M.Lewis
Group Technical Manager
Irvin & Johnson Ltd.
P.O.Box 1628
Cape Town 8000

Mc Gregor
Technical Development Manager
Sea Harvest Corporation
P.O.Box 52
Saldanha 7395

INTERNATIONAL ORGANIZATIONS
ORGANISATIONS INTERNATIONALES
ORGANIZACIONES INTERNACIONALES

A.I.P.C.E.E.

Dr. W.Krane
Chef-Chemiker
"Nordsee" Deutsche Hochseefischerei
GmbH
Klussmannstr. 3
D 2850 Bremerhaven 1
(Fed. Rep. of Germany)

APPENDIX I

INTERNATIONAL ORGANIZATIONS (contd.)

A.O.A.C.

R.V.Cano
P.O.Box 540
Benjamin Franklin Station
Washington DC, 20024, USA

I.A.F.F.M.

G. Sand
Director SSF
N5001 Bergen, NORWAY

I.I.R.

E.Heen
Director
Central Laboratory
P.O.Box 185
N-5001 Bergen NORWAY

O.F.C.A.

D.W.Booth
Hercules Powder Co. Ltd.
20, Red Lion St.
London WC IR 4PB
UNITED KINGDOM

MARINALG INTERNATIONAL

P.Deville
Secrétaire Général
46 rue Jacques Dulud
92202 Neuilly Sur Seine
FRANCE

SECRETARIAT
SECRETARIA

FAO

J.M. Hutchinson
Food Standards Officer
Joint FAO/WHO Food Standards Programme
FAO
Via delle Terme di Caracalla
00100 Rome, ITALY

Z.S. Karnicki
Fishery Industry Officer
Fishery Industries Division
FAO
Via delle Terme di Caracalla
00100 Rome, ITALY

SECRETARIAT (contd.)

Dr. N. Rao Maturu
Food Standards Officer
Joint FAO/WHO Food Standards Programme
FAO
Via delle Terme di Caracalla
00100 Rome, ITALY

WHO

Dr. A. Koulikovskii
Food Hygienist
Veterinary Public Health
Division of Communicable Diseases
World Health Organization
1211 Geneva 27, SWITZERLAND

PROPOSED REVISION

RECOMMENDED INTERNATIONAL STANDARD FOR CANNED PACIFIC SALMON

(CAC/RS 3-1969, Rev. 1)
(Advanced to Step 5)
(Sidelined portions indicate revised text)

1. SCOPE

This standard applies to Canned Pacific Salmon in its own juice with or without added salmon oil. It does not apply to speciality products where salmon constitutes only a portion of the edible contents.

2. DESCRIPTION

2.1 Product Definition

Canned Pacific Salmon is the product:

- prepared from the following species: Oncorhynchus nerka
  Oncorhynchus kisutch
  Oncorhynchus tschawytscha
  Oncorhynchus gorbuscha
  Oncorhynchus keta
  Oncorhynchus masou
- packed in hermetically sealed containers; and
- processed by heat so as to prevent spoilage and to soften bones.

2.2 Presentation

The product shall be presented in one of the following styles and forms of pack.

2.2.1 Style of Pack

2.2.1.1 Regular Style consists of canned salmon to which salt has been added.

2.2.1.2 No Added Salt consists of canned salmon to which no salt has been added.

2.2.2 Forms of Pack

2.2.2.1 Regular Pack - sections which are cut transversely from the fish and which are filled vertically into the can. The sections shall be packed so that the cut surfaces are approximately parallel with the ends of the container.

2.2.2.2 Skinless and Boned Salmon - regular pack canned salmon from which the skin and vertebrae have been substantially removed.

2.2.2.3 Minced Salmon - salmon which has been minced or ground.

2.2.2.4 Salmon Tips or Tidbits - small pieces of salmon.

2.2.3 Other Presentations

Any other presentation shall be permitted provided that it:

(i) is sufficiently distinctive from other forms of presentation laid down in this standard;
(ii) meets all the other requirements of this standard;
(iii) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

The product shall be prepared from clean, wholesome and sound fish belonging to one of the species listed under sub-section 2.1 and may be fresh or frozen and shall be of a quality suitable for human consumption.

3.2 Optional Ingredients

3.2.1 Salt

3.2.2 Oil - edible salmon oil comparable in colour, viscosity and flavour to the oil which would naturally occur in the product.

3.3 Processing

- The fish shall have heads (including gills), tails, fins, loose scales, viscera, including eggs, milt and blood removed; damaged or discoloured flesh associated with bruises or small wounds shall be cut away.

- The fish shall be well washed; the body cavity thoroughly cleaned to remove blood and viscera.

- The fish shall be well packed in accordance with the form of pack desired, in clean containers which are free from dents, rust or defective seams.

- The containers shall be sealed under vacuum and shall be heat processed and cooled.

3.4 Final Product

3.4.1 Appearance

(i) The can shall be well filled with fish.
(ii) The product in a can shall comprise fish of an appearance and colour characteristic of the species processed and packed in the manner indicated in section 2.2.2.
(iii) The oil and liquid released during processing shall be normal and characteristic of the species packed.
(iv) The product shall be practically free from bruises, bleed spots, honeycombing,

abnormal colours or viscera and reasonably free from pieces of detached or loose skin and scales.

(v) In the case of regular packs, the sections of fish shall be arranged so that the cut surfaces are approximately parallel to the opened end and the skin side parallel to the walls of the can. Regular packs shall be reasonably free from cross packs and pieces or sections of vertebrae across the top of the can.

3.4.2 Odour and Flavour

The product shall have an odour and flavour characteristic of the species and be free from objectionable odours and flavours of any kind.

3.4.3 Texture

The fish shall have a texture characteristic of the species.

3.4.4 Bones

Bones when present shall be soft (see also 2.2.2.2).

3.4.5 Foreign Matter

The product shall be free from foreign material.

3.5 Defects and Tolerances

A can which does not comply with the definition and quality factors as set forth in this standard subject to the tolerance allowances as defined in Annex A shall be considered defective.

4. HYGIENE

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

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

a. shall be free from micro-organisms capable of development under normal conditions of storage; and
b. shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

4.3 Products with an equilibrium pH above 4.6 shall have received a processing treatment sufficient to destroy all spores of Clostridium botulinum.

4.4 In order to achieve the above requirements, it is recommended that the products 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);

(ii) the Recommended International Code of Practice for Canned Fish (CAC/RCP 10-1976);
(iii) the Draft Code of Hygienic Practice for Low Acid Canned Foods.

5. LABELLING

In addition to Sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following specific provisions apply [subject to endorsement by the Codex Committee on Food Labelling]:

5.1 The Name of the Food

5.1.1 The name of the product as declared on the label shall be the designation appropriate to the species of the fish packed as shown below:

Species	Designation
Oncorhynchus nerka	Sokeye 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 Pack 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 on the label in descending order of proportion; sub-sections 3.2(b) and (c)* of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969) are applicable.

5.3 Net Contents

The total net contents shall be declared by weight in either the metric system ("Système international" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold.

* Note by the Secretariat: Reference to sub-section 3.2(c) does not seem necessary.

5.4 Name and Address

The name and address of the manufacturer, packer, distributer, importer, exporter or vender of the product shall be declared.

5.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

5.6 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or in clear to identify the producing factory and the lot.

6. METHODS OF SAMPLING AND ANALYSIS

The methods of sampling and analysis described hereunder are international referee methods.

6.1 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).

6.1.1 Organoleptic Assessment

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

6.2 Determination of Net Contents

Net contents shall be determined by averaging the results from all containers of sample representing a lot, provided there is no unreasonable shortage in any individual container.

Procedure

(1) Weigh the unopened container.

(2) Open the container and remove the contents, wash the container and cover and dry with absorbent paper or cloth.

(3) Weigh the empty container, including the top.

(4) Subtract the mass of the empty container from the mass of the unopened container. The resultant figure shall be considered to be the net content.

7. CLASSIFICATION OF DEFECTIVES

A container which fails to meet the end product requirements specified in sub-section 3.5 shall be considered a "defective".

8. LOT ACCEPTANCE

A lot will be considered as meeting the requirements for essential composition and quality factors and net contents of this standard when the total number of "defectives" does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (CAC/RM 42-1969) and when the average net contents of all containers examined is not less than the declared net contents.

ANNEX A

DEFECTS TABLE FOR CANNED PACIFIC SALMON

I. DEFECT DESCRIPTION	Serious	Major	Minor
A - PARTS OF HEAD, TAILS OR FINS	-	-	1
PART OF VISCERA	-	2	-
B - DISCOLOURATION OF SKIN -			
SEVERE WATER MARKED	-	2	-
SLIGHT WATER MARKED	-	-	1
C - ODOUR AND FLAVOUR			
DISTINCTLY OBJECTIONABLE ODOUR AND FLAVOUR	defective	-	-
D - TEXTURE			
SOFT FISH FLESH	-	-	1
HONEYCOMBING FLESH	-	2	-
E - COLOUR OF FLESH			
MIXED SPECIES IN A SINGLE CAN	-	-	1
F - FOREIGN MATERIAL	defective	-	-
G - WORKMANSHIP - CROSSFILL	-	-	1
RAGGED APPEARANCE			1
H -FILL			1

Defective unit

A Sample unit shall be considered a defective unit if it has

Points classified as:

Serious:	defective
Major:	6
Major + minor	8

PROPOSED DRAFT STANDARD FOR QUICK FROZEN BLOCKS OF FISH FILLET, MINCED FISH FLESH AND MIXTURES OF FILLETS AND MINCED FISH FLESH *

(Returned to Step 3)

1. SCOPE

This standard shall apply 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 and pieces of such fillets or minced fish or a mixture of fillets and minced fish flesh prepared from:

(i) a single species, or
(ii) a mixture of species.

(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 sections of such fillets cut so as to facilitate packing.

(c) Minced fish flesh used in the manufacture of blocks shall be 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

The product shall be presented in fish blocks comprising

(1)	Fillets	(i) Skin-on (ii) Skinless (iii) Skinless and boneless
(2)	Fillets and minced fish flesh	(i) In natural proportions, not to exceed(30%) m/m minced fish flesh uniformly distributed in the block (ii) Other proportions containing more than (30%) m/m minced fish flesh.
(3)	Minced fish flesh	

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

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

3.2 Optional Ingredients

Sodium chloride may be present at a level not exceeding 1.0% m/m.

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* See sub-section 2.1 (c).

3.3 Final Product

3.3.1 The blocks shall be reasonably regular in shape and have a reasonably uniform colour characteristic of the species or mixture of species and be free from foreign matter; and, shall be reasonably free from viscera, fins or parts of fins, significantly discoloured flesh, bruises, blood clots, membrane (belly wall), parasites, bones, scales and where appropriate skin (see Annexes B, C and D).

3.3.2 The blocks shall be free from a deep dehydration condition which masks the normal colour, cannot be easily removed by scraping, and covers more than 5% of the surface area of a block.

3.3.3 After cooking by steaming, baking or boiling as set out in Annex A, the product:

(a) shall have a flavour and odour characteristic of the species or mixture of species and be free from any objectionable flavour and odour, and

(b) shall have a texture characteristic of the species or mixture of species packed and shall not be spongy or rubbery or mushy or gelatinous or tough or gritty (see Annexes B, C and D).

3.3.4 The percentage of minced fish in a block as declared in paragraph 6.1.5 and as determined in paragraph 7.2.6 shall be accurate to within 5% m/m of the net fish content (see Annex I).

		Maximum level in the final product
4.	FOOD ADDITIVES	
4.1	Water-binding agents (drip-loss prevention)	
4.1.1	Monophosphate, monosodium, or monopotassium (Na or K orthophosphate)	5 g/kg expressed as P_2O_5, singly or in 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)	
4.2	Antioxidant	
4.2.1	Ascorbate, sodium or potassium salts	1 g/kg expressed as ascorbic acid
4.3	In addition, for Minced Fish Flesh Blocks only:	
4.3.1	Sodium alginate	5 g/kg
4.3.2	Ethyl and propyl gallate	0.01 g/kg
4.3.3	Citric acid and Na or K salts	1 g/kg
4.3.4	Na Iso-ascorbate (erythorbate)	3 g/kg
4.3.5	Guar gum	5 g/kg
4.3.6	Carob bean (locust bean) gum	
4.3.7	Pectin	
4.3.8	Carboxymethyl cellulose, sodium salt	
4.3.9	Xanthan gum	

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;

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 1-1969) and the Recommended Code of Practice for Frozen Fish (CAC/RCP 16-1978) and the Recommended Code of Practice for Minced Fish (CX/FFP 79/4, Rev. 1, being developed).

6. LABELLING

In addition to Sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969) the following specific provisions apply subject to endorsement by the Codex Committee on Food Labelling.

6.1 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 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 (filleted, minced, filleted plus minced). Where more than one species is used in a block the names of the species may, as an alternative, appear in close proximity to the name of the food.

6.1.2 Blocks prepared from skinless and/or boneless fillets may be designated as such.

6.1.3 Blocks prepared from "skin-on" fillets shall be designated on the master carton as "skin-on" and may be designated as boneless when boning is completed.

6.1.4 In addition, the labelling on the master carton 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 Section 2.2.

6.1.5 For products referred to in 2.3(2)(ii) the label shall show the relative proportions of minced or filleted fish incorporated in the block.

6.2 List of Ingredients

6.2.1 A complete list of ingredients shall be declared on the master carton in descending order of proportion. The provisions of sub-sections 3.2(b) and 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969) shall also apply.

6.3 Net Contents

6.3.1 The net contents shall be declared by weight on the master carton in either the metric system ("Système international" units) or avoirdupois or both systems as required by the country in which the food is distributed.

6.3.2 Where products have been glazed the declaration of the net contents of the product shall be exclusive of the glaze.

6.4 Name and Address

The name and address of the manufacturer, packer, distributor, importer, exporter or vendor of the food shall be declared on the master carton.

6.5 Country of Origin

6.5.1 The country of origin shall be declared if its omission would mislead or deceive the consumer.

6.5.2 When a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling.

6.6 Lot Identification

Each master carton shall be permanently marked in code or in clear to identify the producing factory and the lot.

6.7 Storage Instructions

The outer containers shall bear clear directions for storage.

7. METHODS OF SAMPLING, EXAMINATION AND ANALYSIS

The methods of sampling, examination and analysis described hereunder are international referee methods.

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 42-1969).

7.2 Organoleptic and Physical Examination

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

7.2.1 Weight

The net weight (exclusive of packing material or protective coating) of each sample block shall be determined in the frozen state.

7.2.2 Determination of Net Contents of Products Covered by Glaze

(Method to be developed)

7.2.3 Dehydration (freezerburn) - Each sample block shall be examined for compliance with Section 3.3.2.

7.2.4 Physical defects (thawed state) - A sample unit weighing 1 kg (or 2 lbs) shall be removed from each sample block. For minced blocks, the sample unit shall be removed by taking at least four core samples from different locations of the block to make up the 1 kg sample. The sample unit shall be thawed by enclosing it in a film-type bag and immersing in an agitating water bath held at maximum of 21°C (70°F). The complete thawing of the product is determined by gently squeezing the bag until no hardcore or ice crystals are felt, taking care not to damage the texture of the fish. The thawed sample unit should be examined for compliance with Section 3.3.2 (see Annexes B, C and D). Minced flesh shall be spread evenly on a level tray to a depth of 1 cm and the visible defects counted on the surface without disturbing the individual pieces of flesh.

7.2.5 Sensory evaluation - Examination for odour, flavour and texture shall be made on a cooked sub-sample of at least 100 g (or 4 oz.) from each sample block; the sub-sample shall be cooked by a method set out in Annex A.

7.2.6 The proportion of minced flesh in blocks prepared from mixtures of fillets and minced flesh shall be determined by thawing the whole block (as in 7.2.4), separating the fillets from the mince and weighing each separately.

8. CLASSIFICATION OF DEFECTIVES

A block which fails to meet the requirements of Section 3.3.1 or 3.3.2, 3.3.3 or 3.3.4 shall be considered "defective".

9. LOT ACCEPTANCE FOR QUALITY

A lot will be considered as meeting the Final Product requirements of this standard when the total number of "defectives" in a sample does not exceed the acceptance number specified in the sampling plan.

ANNEX "A"

COOKING METHODS

Following procedures are based on heating product to internal temperature $\geq 70^{\circ}C$ ($160^{\circ}F$). 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.

Cut 3 portions, each about 10 x 7.5 x 1.2 cm (4 x 3 x 0.5 in.) from sample.

(a) Baking procedure - Wrap product in aluminium foil and distribute evenly on flat cookie sheet or shallow flat pan. Heat in ventilated oven, preheated to $204^{\circ}C$ ($400^{\circ}F$), until internal temperature of product reaches $\geq 70^{\circ}C$ ($160^{\circ}F$).

(b) Steaming procedure - Wrap product in aluminium foil and place on wire rack suspended over boiling H_2O in covered container. Heat until internal temperature of product reaches $\geq 70^{\circ}C$ ($160^{\circ}F$).

(c) 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 $\geq 70^{\circ}C$ ($160^{\circ}F$).

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ANNEX "B"

DEFINITION OF DEFECTS IN QUICK FROZEN BLOCKS OF FISH FILLETS AND MINCED FISH FLESH

Dehydration (Freezerburn)

(A) Deep dehydration

An excessive loss of moisture from the surface of the block which shows clearly on the surface of the product, penetrates below the surface and cannot be easily removed by scraping.

(B) Moderate dehydration

A loss of moisture from the surface of the block which is colour masking, but does not penetrate the surface and can be easily removed by scraping.

Block Irregularity

Ice pockets, ragged edges, damage, poor angles or non-uniformity of shape which would result in product loss after cutting is estimated by determining the number of 25 g (1 oz.) units which could be adversely affected. For the purpose of estimating product loss, the 25 g (1 oz.) unit shall have the dimensions 10 x 2.5 x 1.6 cm (4 x 1 x $\frac{5}{8}$ in.).

Bones

Any bones exceeding the sizes specified in Annex "C" and Annex "D".
Any bone whose maximum profile can be fitted within a rectangle measuring [10 x 3] mm is not regarded as a bone for the purpose of being classified as a defect.

Any bone whose maximum profile lies outside a rectangle measuring [40 x 10] mm is regarded as a "critical bone".

Any bone whose maximum profile cannot be fitted within a rectangle measuring [10 x 3] mm, but which can be fitted into a rectangle measuring [40 x 10] mm is rated as a bone defect.

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APPENDIX III

ANNEX "B" (contd.)

Blood Clots and Discolouration

A. Fillet Blocks

(i) Any lump or mass of clotted blood **greater than 5 mm in any dimension.**

(ii) Any significant discolouration, including bruises, browning, yellowing and melanin sooting which is greater than 3 cm^2 up to and including 10 cm^2 and each additional complete 5 cm^2 thereafter.

B. Minced Blocks

Any readily noticeable lump or mass of clotted blood or any readily noticeable discoloured area not characteristic of the species used.

Fins or Part Fins

A. Fillet Blocks

Any fin or part fin **(two or more rays connected by membrane).**

B. Minced Blocks

Not applicable - shows as bone and/or membrane.

Skin, Membrane (Belly Lining), Scales and Spinal Cord

A. Fillet Blocks

(i) In the case of skinless fillet blocks each peace of skin greater than 3 cm^2 up to and including 10 cm^2 and every additional complete 5 cm^2 thereafter.

(ii) In the case of skin-on or skinless fillet blocks each piece of block membrane (belly lining) greater than 5 cm^2 up to and including 10 cm^2 and every additional complete 5 cm^2 thereafter.

B. Minced Blocks

Any readily noticeable piece of skin, membrane (black or white) scale or spinal cord.

Parasites

Each parasite with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 1 cm in length, or **other parasitic infestation which is easily recognised on inspection, e.g. by virtue of its dark colour.**

Scales

A. Skin-on Fillets

(i) Each area of scales over 3 cm^2 up to and including 10 cm^2 and every additional complete 5 cm^2 thereafter.

(ii) Each complete unit of 5 loose scales.

B. Skinless fillets

Each complete unit of 5 loose scales.

Odour and Flavour

Any flavour or odour which after cooking is distinctly objectionable e.g. rancid or tainted.

Texture

Any texture which after cooking is distinctly objectionable e.g. spongy, or rubbery, or mushy, or gelatinous, or gritty or tough.

Viscera

Any portion of the internal organs.

Foreign Matter

Any material not derived from fish **or not permitted by the Standard.**

Proportion of Minced Fish

The declared percentage of minced fish in a block, as required in paragraph 6.1.6 and as determined in paragraph 7.2.5 shall be accurate to within [ ] % of the net fish content.

ANNEX "C"

PROPOSED DRAFT DEFECT TABLE FOR FROZEN BLOCKS OF FISH FILLETS /AND MIXTURES OF FILLETS AND MINCED FISH FLESH/

Defect Description	Classification		
	Serious	Major	Minor
FROZEN STATE (Sample Block)			
1. Dehydration			
(a) Deep			
(i) > 5% of area	6	-	-
(ii) < 5% of area	-	4	-
(b) Moderate, > 5% of area	-	-	1
2. Block Irregularity			
(a) 2-5% loss - by weight or minimum number of units affected	-	-	1
(b) 5-10% loss - by weight or minimum number of units affected	-	2	-
(c) each additional 10% loss - by weight or minimum number of units affected	-	2	-
THAWED STATE (1 kg (2 lbs.) sample unit or blocks under 10 kg) (2 kg sample unit for blocks over 10 kg)			
3. Colour			
(a) abnormally dark	6	-	-
(b) darker than characteristic colour	-	2	-
4. Bones			
(a) Blocks not designated boneless - each single bone, other than pin bones, > 5 mm in any dimension or each cluster of such bones within an area of 3 cm^2	-	2	-
(b) Blocks designated boneless - each single bone > 5 mm in any dimension	2	-	-
or as an alternative:			
(a) Blocks not designated boneless - each single bone, other than pin bones, > 15 mm in length or > 1/3 mm in diameter or each cluster of such bones within an area of 3 cm^2	-	2	-
(b) Blocks designated boneless - each single bone > 15 mm in length or > 1/3 mm in diameter	2	-	-
5. Blood Clots and Discolouration			
(a) Each clot > 5 mm in any dimension	-	2	-
(b) Each significant discolouration 3-10 cm^2	-	-	1
(c) Over 10 cm^2, each additional complete 5 cm^2	-	-	1
6. Fins or Part Fins, each instance	-	2	-
7. Skin and Membrane			
(a) Skinless blocks			
(i) Each piece of skin > 3 cm^2 ≤ 10 cm^2, or each piece of black membrane > 5 cm^2 to 10 cm^2	-	1	-
(ii) Over 10 cm^2, each additional complete 5 cm^2	-	-	1
(b) Skin-on Blocks			
(i) Each piece of black membrane > 5 cm^2 ≤ 10 cm^2	-	1	-
(ii) Over 10 cm^2, each additional complete 5 cm^2	-	-	1

ANNEX "C" (contd.)

	Classification		
	Serious	Major	Minor
8. Scales			
(a) Skin-on fillets scaled			
(i) Each area of scale $> 3\ cm^2 - \leq 10\ cm^2$	-	-	1
(ii) Over $10\ cm^2$ scale, every additional complete $5\ cm^2$	-	-	1
(b) Skinless fillets			
Each complete unit of 5 loose scales	-	-	1
9. Viscera - each instance	2	-	-
10. Parasites - each instance	-	2	-
11. Foreign Matter - each instance	6	-	-
12. Packaging Material	2	-	-
COOKED STATE (100.g (4 oz.) sub-sample)			
13. Odour or flavour distinctly objectionable	6	-	-
14. Texture			
(a) The flesh is definitely spongy, or rubbery, or mushy, or gelatinous, or tough	6	-	-
(b) The flesh is moderately spongy, or rubbery, or soft, or tough	4	-	-

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ANNEX "D"

PROPOSED DRAFT DEFECT TABLE FOR FROZEN BLOCKS OF MINCED FISH FLESH

Defect Description	Classification		
	Serious	Major	Minor
FROZEN STATE (Sample Block)			
1. Dehydration			
(a) Deep			
(i) over 5% of area	Defective	-	-
(ii) less than 5% of area	-	4	-
(b) Moderate, over 5% of area	-	-	1
2. Block Irregularity			
(a) 2-5% loss - by weight or **minimum number of units affected**	-	-	1
(b) 5-10% loss - by weight or **minimum number of units affected**	-	2	-
(c) each additional 10% loss - by weight or **minimum number of units affected**	-	2	-
THAWED STATE (1 kg (2 lbs.) sample unit or blocks under 10 kg) (2 kg sample unit for blocks over 10 kg)			
3. Colour			
(a) abnormally dark	Defective	-	-
(b) darker than characteristic colour	-	2	-
4. Bones			
Each bone greater than 5 mm, or as an alternative: (each bone greater than 15 mm in length or greater than 0.5 mm in diameter)	2	-	-
5. Blood clots, discolouration, skin, membrane, scale, spinal cord			
(a) 10-25 instances	-	-	1
(b) 26-30 instances	-	2	-
(c) over 40, each additional 15	-	2	-
6. Parasites - each instance	-	2	-
7. Foreign Matter - each instance	Defective	-	-
8. **Packaging Material**	2	-	-
COOKED STATE (100 g (4 oz.) sub-sample)			
9. Odour or flavour distinctly objectionable	Defective	-	-
10. Texture			
The flesh is distinctly objectionable	Defective	-	-

Maximum Allowable Tolerances for Defects

Points Classification	Blocks made from Fillets, Fillet Pieces and Minced Fish	Blocks made from Minced Fish	Blocks made from Fillets and Fillet Pieces
Serious + Major	4	4	4
Serious + Major	10	10	10
Serious + Major + Minor	14	14	12

ANNEX "E"

Determination of proportions of Fillets and Minced Flesh in Quick Frozen Blocks

Pre-weigh the sample in quick frozen condition, after stripping the coating if present. Transfer it (e.g. a portion of 100 g or 5 fish stick cores of 20 g each) in a suitable sized watertight plastic bag. Thawing is carried out by immersing into a gently agitated water bath of ca 20°C (max. 25°C). Needed time: 10-30 min., depending on surface resp. size of sample.

After draining the exuded fluid 2 min., using a pre-weighed circular sieve, the weight of the flesh is recorded. The separation of the mince is carried out on a plate by means of a soft plastic spatula. The weights of the fillet and mince shares are recorded. The fluid is counted to the two shares proportionally. This procedure seems practicable because the N-content of the fluid normally decreases the fish-N not more than 15% (e.g. in a fillet block with 25% mince N = 1.07: 1.26).

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

(returned to Step 3)

1. SCOPE

This standard applies to quick frozen fish sticks (fish fingers) and fish portions 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.

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 fingers.

2.2 Minimum Requirements for Proportions of Fish Flesh Core

		% of declared weight of final product
(i)	Raw breaded fish sticks (fingers)	60
(ii)	Raw breaded fish portions	60
(iii)	Partially cooked breaded fish sticks (fingers)	50
(iv)	Partially cooked breaded fish portions	50
(v)	Battered fish sticks (fingers) partially cooked	50
(vi)	Battered fish portions partially cooked	50
(vii)	Other presentations	50

2.3 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 also CX/FFP 79/8. Code of Practice for Frozen Battered and/or Breaded Fishery Products). 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.

2.4 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

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

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 flesh 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 materials fit for human consumption.

3.1.3 Frying fat (oil)

A fat (oil) used in the cooking operation shall be a refined deodorized food grade oil.

3.2 Final Product

3.2.1 On opening, the pack shall be reasonably free from loose coating and shall comprise fish sticks (fish fingers) or fish portions which are:

(a) reasonably uniform in size (unless an indication of mixed sizes is given on the label);
(b) easily separated into individual units;
(c) free from foreign matter;
(d) free from excessive dehydration (freezer burn);
(e) reasonably free from broken or cracked or damaged units;
(f) reasonably free from discolouration;
(g) reasonably free from excess fat (oil).

3.2.2 The coating shall be reasonably complete and reasonably uniform in colour.

3.2.3 The fish content of the product shall be:

(a) reasonably free from any parts of the internal organs
(b) reasonably free from bones, fins or parts of fins
(c) reasonably free from discoloured flesh, blood clots, black membrane, parasites, skin and scales.

/ Note: The wording of Section 3.2.3 should remain in harmony with the proposed draft standard for quick frozen fish blocks. /

3.2.4 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.

3.2.5 The products in the various forms of presentation shall comply with the definitions and essential quality factors as set forth in this standard subject to tolerance allowances as set forth in Annex C.

3.2.6 Optional ingredients

Spices, herbs, vegetable seasonings, spice oils. The ingredients shall be suitable for human consumption and shall be free from abnormal taste, flavour or odour.

4. FOOD ADDITIVES

The maximum level in the final product is in proportion to the requirements given in 2.2.

4.1	Additives in Fish Flesh	Maximum level in the core
4.2	Water-binding agents (drip loss prevention)	
4.1.1	Monophosphate, monosodium or monopotassium (Na or K orthophosphate)	5 g/kg, total expressed as P_2O_5 singly or in combination
4.1.2	Diphosphate, tetrasodium or tetra potassium (Na or K pyrophosphate)	
4.1.3	Triphosphate, pentasodium or penta potassium or calcium (Na, K or Ca tripolyphosphate)	
4.1.4	Polyphosphate, sodium (Na hexametaphosphate)	
4.2	Antioxidants	
4.2.1	Ascorbate, sodium or potassium salts	1 g/kg expressed as ascorbic acid
4.2.2	Ethyl and propylgallate	0.01 g/kg
4.3	Other additives (for Minced Fish only)	
4.3.1	Sodium alginate	5 g/kg
4.3.2	Citric acid and Na or K salts	1 g/kg
4.3.3	Thickening agents	
	- Pectin	5 g/kg
	- Carboxymethylcellulose, sodium salt	5 g/kg
	- Guar gum	5 g/kg
	- Carob (locust bean) bean gum	5 g/kg
	- Xanthan gum	5 g/kg
4.4	Food Additives for Bread or Batter	
4.5	Leavening agents	Maximum level in bread or batter
4.5.1	Monocalcium phosphate	Limited by G.M.P.
4.5.2	Dicalcium phosphate	
4.5.3	Sodium aluminium phosphate	
4.5.4	Sodium acid pyrophosphate	
4.6	Flavour enhancers	
4.6.1	Monosodium glutamate	Limited by G.M.P.
4.7	Acidifying agents	
4.7.1	Lactic acid	1 g/kg of the final product expressed as lactic or citric acid
4.7.2	Citric acid or their Na and K salts	
4.8	Colours	
4.8.1	Annatto 75120 and 75130	
4.8.2	Beta carotene	
4.8.3	Other carotenes	
4.8.4	Azogeratinine or Red 29 18050	
4.8.5	Caramel	
4.8.6	Yellow 5 (Tartrazine)	
4.8.7	Yellow 6 (Sunset yellow)	

4.8.8	Red 40	
4.8.9	Ponceau 4R 16255	
4.9	Thickeners	
4.9.1	Guar gum	
4.9.2	Carob bean (Locust bean) gum	
4.9.3	Carrageenan	10 g/kg singly or in combination
4.9.4	Xanthangum	
4.9.5	Pectins	
4.9.6	Sodium alginate	25 g/kg
4.9.7	Hydroxypropyl cellulose	
4.9.8	Hydroxypropyl methyl cellulose	
4.9.9	Methylethylcellulose	5 g/kg
4.9.10	Sodium carboxymethylcellulose	
4.10	Emulsifying agents	
4.10.1	- Glyceryl monostearate or lactylate	5.0 g/kg of the final product
4.10.2	- Sodium steroyl 2 - lactylate or	
4.10.3	- Lecithin, mono and diglycerides	
4.11	Chemically Modified Starches	
4.11.1	- Acid treated starches (incl. white and yellow dextrins)	
4.11.2	- Alkali treated starches	
4.11.3	- Bleached starches	
4.11.4	- Distarch adipate, acetylated	
4.11.5	- Distarch glycerol	
4.11.6	- Distarch glycerol, acetylated	
4.11.7	- Distarch glycerol, hydroxypropyl	Limited by G.M.P.
4.11.8	- Distarch phosphate	
4.11.9	- Distarch phosphate, acetylated	
4.11.10	- Distarch phosphate, hydroxypropyl	
4.11.11	- Distarch phosphate, phosphated	
4.11.12	- Monostarch phosphate	
4.11.13	- Oxidized starch	
4.11.14	- Starch acetate	
4.11.15	- Starch, hydroxypropyl	
4.11.16	- Acetylated distarchphosphate	

5. HYGIENE AND HANDLING

5.1 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.

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

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)

(ii) the (Recommended) Code of Practice for Frozen Fish (CAC/RCP 16-1978).

6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969) the following provisions apply, subject to endorsement by the Codex Committee on Food Labelling.

6.1 Name of the Food

6.1.1 The name of the food 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.

6.1.2 The label [shall], 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 2.3.

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.

6.2 List of Ingredients

A complete list of ingredients, using generic terms where appropriate, shall be declared on the label in descending order of proportion. The provisions of sub-section 3.2(b) and 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969), shall also apply.

6.3 Net Contents

The net content shall be declared by weight in either the metric system ("Système international" units) or avoirdupois or both systems of measurement as required by the country in which the food is sold.

6.4 Name and Address

The name and address of the manufacturer, packer, distributor, importer, exporter or vendor of the food shall be declared.

6.5 Country of Origin

The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6 Lot Identification

Each container shall be permanently marked in code or in clear to identify the producing factory and the lot.

6.7 Storage Conditions and Date Marking

(This section will be elaborated in consultation with the Labelling Committee).

7. METHODS OF SAMPLING AND ANALYSIS

The methods of sampling and analysis described hereunder are international referee methods which are to be endorsed by the Codex Committee on Methods of Analysis and Sampling.

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. The frozen sample shall be cooked prior to organoleptic assessment according to the cooking instructions on the package. Where no such instructions are given, the frozen sample shall be cooked according to a method set out in Annex A.

7.3 Determination of Net Contents

The net weight (exclusive of packaging material) of each sample representing a lot shall be determined in the frozen state. Compliance with net contents declaration shall be determined by averaging the results from all containers of a sample representing a lot.

7.4 Estimation of Fish Flesh Core

The Fish flesh core is estimated according to A.O.A.C. method 18.002-

8. CLASSIFICATION OF DEFECTIVES

8.1 A sample unit of product which fails to meet the requirements of Section 3.2 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 C 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

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.B01 of the Association of Official Analytical Chemists. It is based on heating product to an internal temperature $\geq$ 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.

In the procedures given below, conversions between metric units and °F, 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 $\geq$ 70°C (160°F).

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

Bake Procedure

Distribute product evenly 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 section 2.1.1)

Shallow Frying

Place 60 g (2 oz.) of 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 25 cm (9") 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 50 g (1. 8 oz.) and not more than 70 g (2.5 oz.).

Shallow Frying

Place 115 g (4 oz.) of liquid or hydrogenated cooking oil into a 20 cm (8") diameter 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 25 cm (9") aluminium deep fat fryer with 5 cm (1 7/8") of oil (approximately 2 l. or 3 1/4 pints). Pre-heat the fat to 175°C (350°F) and cook the product for 5 minutes.

ANNEX "B"

DEFINITION OF DEFECTS IN QUICK FROZEN FISH STICKS (FISH FINGERS) AND FISH PORTIONS - BREADED OR IN BATTER

Presence of Surplus Loose Coating

An excessive amount of loose breading material in a package.

Excess Fat (Oil)

Perceptible amounts of oil which has stained the inside of and soaked through the package.

Ease of Separation

Upon removal from the container in the frozen state, units should separate easily by slight force exerted by hand without damage and without packaging material stuck to the surfaces. Coating which is damaged or product units which break as a result of separation by slight hand pressure are considered defective.

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Size Uniformity

Size irregularity applied to two types of presentation 2.2 (i) and 2.2 (iii) may be caused by improper or non-uniform cutting of a fish block. For fish sticks (fish fingers) size uniformity is measured by the difference in the combined length and width between the largest and the smallest stick (finger) in a sample unit. For fish sticks, size irregularity which refers to the two types of presentation 2.2.1 and 2.2.3 is the difference in the surface area between the largest and smallest portion in a sample unit.

Broken

Broken product has been separated into two or more pieces.

Cracked

A crack is a break in the coating greater than 10 mm which extends into the flesh.

Damaged (other than broken or cracked)

Damaged product has been squashed, mashed or otherwise mutilated to the extent that appearance is materially affected.

Discolouration of Coating

Colour of individual fish sticks (fish fingers) or fish portions whose appearance is significantly different from that of the majority.

Coating Defects (not as a result of ease of separation)

(i) Raw Breaded or partially cooked units - an individual unit which has more than 15% of the surface area devoid of coating.

(ii) Battered Units - an individual unit which has more than 2 square cm of surface area devoid of coating.

Odour and Flavour - (cooked state)

Any flavour or odour which is distinctly objectionable, e.g., rancid or tainted.

Texture - (cooked state)

Any texture of the fish flesh (fish core) which is distinctly objectionable e.g., spongy, or rubbery, or mushy, or gelatinous, or gritty or tough.

Foreign Matter

Foreign matter is any material, other than packaging material, not derived from fish or coating.

Discoloured Flesh-(cooked state)

Fish flesh colour not natural to the species of fish used, but does not include blood clots, black membrane, skin or scales which are assessed separately.

Bones

Any bones exceeding the sizes specified in Annex "C". Any bone whose maximum profile can be fitted within a rectangle measuring (10 x 3) mm is not regarded as a bone for the purpose of being classified as a defect. Any bone whose maximum profile lies outside a rectangle measuring (40 x 10) mm is regarded as a "critical bone". Any bone whose maximum profile cannot be fitted within a rectangle measuring (10 x 3) mm, but which can be fitted into a rectangle measuring (40 x 10) mm is rated as a bone defect.

Blood Clots

A blood clot greater than 5 mm in any dimension.

Black Membrane (belly wall)

A piece of black membrane (belly wall) greater than 1.5 mm in any dimension.

Parasites

Each parasite with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 1 cm in length, or a parasitic infestation which is objectionable by virtue of its colour or any other characteristic.

Skin (does not apply to skin-on forms of presentation)

A piece of skin greater than 1 square centimeter.

Scales

Each aggregate of scale(s) having an area greater than 1 square cm.

Viscera

Any portion of the internal organs.

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ANNEX "C"

DEFECTS TABLE FOR QUICK FROZEN BREADED FISH FINGERS (FISH STICKS) AND BREADED FISH PORTIONS

SAMPLE UNIT

If the weight of each fish stick (fish finger) or fish portion is:	A sample unit consists of this number of fish sticks (fish fingers) or portions
Less than 50 g (1.8 ox.)	10
Over 50 g (1.8 oz.)	5

Consult the sampling plan for prepackaged foods to determine the sample size.

(i) For packages containing less than 10 fish sticks (50 gm each or less), take multiple packs adequate to yield 10 sticks.

(ii) For packages containing less than 5 fish portions (50 gm each or greater), take multiple packs adequate to yield 5 portions.

Defect	Unit of Measurement 10 - sticks) or approriate 5 - portions) multiples of packs	Defect Categories Serious	Major	Minor
A. FINAL PACK -- Frozen State				
1. Presence of surplus loose coating	Over 0.75% of declared quantity of content -- each container	-	-	2
2. Excessive fat oil	Each container affected with staining or oil soaked through container	-	-	1
3. Ease of separation	More than 40% on the sticks (fingers) or portions in a container cannot be separated by hand.	defective	-	-
	20-40% of the fingers (sticks) or portions hand-separated with difficuly	4	-	-

Defect	Unit of Measurement 10 - sticks) or appropriate 5 - portions) multiples of packs	Defect Categories Serious	Major	Minor
4. Size Uniformity				
(a) Fish fingers (sticks)- the difference in the combined length and width between the largest and smallest stick (finger)	Over 20mm	-	-	2
	Over 10mm and up to 20mm	-	-	1
(b) Fish portions - the difference in surface area between the largest and the smallest portion	Over 20% of the difference in surface area.	-	-	2
	10-20% of the difference in surface area.	-	-	1
5. Broken				
- separated into two or more pieces	Over 20% of sticks (fingers) or over 40% portions	defective	-	-
- squashed or mashed	20-40% (portions) or 10-20% (sticks) (fingers)	4	-	-
6. Cracked				
- a break greater than 10mm which extends into the flesh	Over 20% of sticks (fingers) or 40% or portions	-	2	-
7. Damaged				
- misshapen or otherwise damaged or mutilated	10-20% (sticks) 20-40% (portions)	-	-	2
8. Discolouration (coating)				
- black or very dark brown	One or more sticks (fingers) or portions in the pack affected	defective	-	-
- colour of some sticks (fingers) or portions significantly different from that of the others	Over 20% of the sticks (fingers) or 40% portions in the pack discoloured	-	-	2
9. Coating Defects				
(a) Fish sticks breaded or partially cooked	Over 20% of sticks affected	[defective]	-	-
	10-20% affected	[4]	-	-
(b) Fish sticks battered	More than 2 cm^2 of the surface area of each stick	-	[2]	-
(c) Fish portions breaded or partially cooked	Over 40% of portions affected	[Defective]	-	-
	20-40% affected	[4]	-	-
(d) Fish portions battered	More than 2 cm^2 of the surface area of each portion	-	[4]	-

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Fish Content
B -- Cooked State (Combined 10 sticks or 5 portions -- coating removed)

			Serious	Major	Minor
1.	Odour/flavour	Any stick/portion distinctly objectionable	defective	-	-
2.	Texture	Any stick/portion definitely spongy, rubbery, mushy, tough	defective	-	-
		Any stick/portion moderately spongy, rubbery, tough, mushy	4	-	-
3.	Bones	10mm x 3 mm but less than 40mm x 10mm	-	[4]	-
	Critical bone	40mm x 10mm in any other dimension	defective	-	-
4.	Discoloured flesh (flesh not of a colour natural to the species)	Discolouration of more than 20% sticks 40% portions of the fish	defective	-	-
		10-20% (sticks) 20-40% (portions)	4	-	-
5.	Blood clots - greater than 5mm in any dimension	- each instance	-	2	-
6.	Black membrane (belly wall) - greater than 1.5mm in any dimension	- each instance	-	2	-
7.	Parasites Each parasite with a capsular diameter greater than 3mm or a parasite not encapsulated and greater than 1 cm in length, or a parasite which is objectionable by virtue of its color or any other characteristic	- each instance	4	-	-
8.	Skin pieces greater than 1 cm^2	- each instance	-	2	-

B -- Fish Content Cooked State	(Combined 10 sticks or 5 portions -- coating removed)		Serious	Major	Minor
9. Scales - aggregate areas of more than 1 cm^2	- each instance		-	2	-
10. Foreign matter (any material other than packaging material not derived from fish or coating, or not permitted by the standard)	- each instance		defective	-	-
packaging material	- each instance		-	4	-
11. Viscera (any portion of the internal organs)	- each instance		-	2	-

N.B. When two or more defects appear on a single stick or portion the most serious only shall apply.

DEFECTIVE UNIT

A pack shall be considered a defective if it has:

(a) more than 4 points for defects classified as serious; or
(b) more than 12 points for defects classified as major; or
(c) more than 14 points for defects in the combined classifications (including minor); or
(d) more than 12 points for defects classified as serious + major ; or
(e) more than 12 points for defects classified as serious + minor ; or
(f) more than 14 points for defects classified as minor ; or
(g) more than 14 points for defects classified as major + minor.

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APPENDIX V

PROPOSED DRAFT STANDARD FOR DRIED SALTED FISH (KLIPPFISH) OF THE GADOID FISH FAMILIES

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 families Gadidae and Merluccidae.

(b) which has been 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

Fish for salting and drying shall be subjected to one of the salting processes defined in 2.2.1 and one or both of the drying processes defined in 2.2.2. When the fish is split a cut is made in a straight line close to one side of the backbone from the neck to the caudal fin.

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.

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.

(b) Artifical drying - the fish is dried by heated air in a drier.

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 intact.

2.3.3 Fillets - split and divided longitudinally into two parts and with fins, fin bones, tail, earbones (collar bones), and the whole of the backbone removed.

2.3.4 Semi-boneless fillets - split and divided longitudinally into two parts, and with fins, fin bones, tail and all bones except the pin bones removed.

2.3.5 Boneless fillets - split and divided longitudinally into two parts, and with fins, fin bones, tail and all bones, including pin bones, removed.

2.3.6 Cuts - split fish or fillets cut up transversely into fairly regular pieces.

2.3.7 Other presentation. 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,

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

2.3.8 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

Dried salted fish shall be prepared from sound fish of the designated species which are of a quality such as to be fit to be sold fresh for human consumption.

3.2 Salt

Salt used to produce dried salted fish shall be clean and not previously used, 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 Annex A to this standard.

3.3 Final Product

3.3.1 Appearance

Dried salted fish shall not be completely cracked, ragged or broken, nor shall the belly wall have been decomposed by the action of liver, bile or gut contents. It shall not be completely pressed together, nor show severe signs of liver staining, severe burning during the drying process, pronounced evidence of halophilic mould (dun) nor visible evidence of red halophilic bacteria (pink).

3.3.2 Odour

Dried salted fish shall have an odour characteristic of the product and shall be free from any objectionable odour.

4. Food Additives

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

4.1 Preservatives	Maximum level
Sorbic acid and its calcium, sodium and potassium salts.	1 g/kg solution for surface treatment only. 0.6 mg/cm^2 surface of the product.

5. Hygiene and Handling

5.1 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 1-1969).

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

(iii) Recommended International Code of Practice for Salted Fish (under elaboration - ALINORM 78/18A, Appendix X).

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

5.3 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 toxic substances originating from micro-organismes in amounts which may represent a hazard to health.

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 onto the product any foreign odour, flavour, colour or other foreign characteristics.

7. Labelling

(Subject to endorsement by the Codex Committee on Food Labelling)

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (CAC/RS 1-1969) the following specific provisions apply.

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7.1 Name of the Food

7.1.1 The name of the product as declared on the label shall be "dried salted fish", or "klippfish" or other designation according to the law, custom or practice in the country in which the product is to be distributed. 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 subsections 2.3.2 to 2.3.6 as appropriate. If the product is produced in accordance with subsection 2.3.7, 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 Net contents

The total net contents shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold.

7.3 Name and address

The name and address of the manufacturer, packer, distributor, importer, exporter or vendor of the product shall be declared.

7.4 Country of origin

7.4.1 The country of origin shall be declared if its ommission would mislead or deceive the consumer.

7.4.2 When the product undergoes further processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

7.5 Lot identification

Each container shall be permanently marked in code or in clear to identify the producing factory and the lot.

8. Methods of sampling, examination and analysis

The methods of sampling, examination and analysis described hereunder are international referee methods.

8.1. Sampling

8.1.1 Sampling for visual and organoleptic defects

For those provisions detailed in section 3.3 of this standard, sampling shall be carried out in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (AQL 6.5 per cent) (CAC/RM 42-1969).

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 shall be considered as a "defective" when it fails to meet the requirements of sections 3.3.1 or 3.3.2.

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 plan in the Sampling Plans for Prepackaged Foods (AQL 6.5) (CAC/RM 42-1969), and

(b) the average net contents of the lot as determined by appropriate sampling plans for net contents is not less than the declared net contents (sampling plans for net contents to be elaborated).

Annex A

Specifications for Salt used in the Production of Dried Salted Fish of Gadidae Species.

1. Salt used in the production of dried salted fish shall comply with the "Codex Alimentarius Specifications for Food Grade Salt" (being developed by the Codex Committee on Food Additives).
Notwithstanding this, the additional or different provisions in sections 2 and 3 below shall apply to salt used in the production of dried salted fish of Gadidae species.

2. Composition

2.1 Total dry matter min. 96%.

2.2

Calcium	max. 3 g/kg expressed as Ca.
Magnesium	max. 1 g/kg expressed as Mg.

3. Contaminants

Copper	max. 0.1 mg/kg expressed as Cu.
Iron	max. 10 mg/kg expressed as Fe.

BACKGROUND DOCUMENT ON FEASIBILITY OF DEVELOPING A STANDARD FOR FROZEN BLOCKS OF WHOLE, HEADLESS AND GUTTED FISH

(Prepared by Australia in collaboration with New Zealand, Peru, South Africa and the U.S.A.)

BACKGROUND

1. At the 13th Session of the Codex Committee on Fish and Fishery Products held in May 1979, the delegation of Peru reported that there was increasing international trade in individually and block frozen whole, headless and gutted fish for direct sale to the consumer. The Australian delegation considered that it was important to develop standards which reflected the style and form of presentation of the final product rather than individual species and agreed to prepare a background document on the feasibility of developing a standard for such products. Several delegations offered their collaboration in this exercise and are listed above. (Refer paras 141 to 143, ALINORM 79/18).

PRODUCTION AND USE OF THE PRODUCT

2. The broad category of frozen whole, headless and gutted fish represents an extremely important commodity both in world production and international trade. Although a significant proportion of the product is intended for further processing, there is considerable export trade in retail packs ranging from 250g to 5kg size to bulk packs of 25kg, the individual fish of which could be offered for direct consumption in either the frozen or thawed state.

3. In general the end use of frozen whole, headless and gutted fish will depend greatly upon the species and the size of the fish in question. For example:

- Dressed fish ranging in weight from 250g to 750g are often sold directly to consumers (e.g. trout, pond raised salmon, eels, whiting, catfish, perch, smelts, milk fish, croaker and others).
- Larger fish may be steaked at processing establishments or at retail outlets and offered to consumers without further processing or preparation (e.g. salmon, halibut, large cod, large catfish and others).
- Species of various sizes may be further processed by canning (e.g. tuna, mackerel, sardines), pickling (e.g. herring) or smoking (e.g. salmon) or by filleting and/or mincing. The term "further processing" would normally include fish intended for institutional, catering or restaurant use.

Despite the above generalisations it must be stressed that, at the time of production, it may not be known whether the fish will go directly to the consumer or be subject to further processing.

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STANDARDISATION

4. The standardisation of frozen, whole headless and gutted fish could be achieved either by elaborating numerous standards, each dealing with individual species, or by establishing a general standard which would cover all species and reflect the style and presentation of the final product. Clearly the first option is impractical because of the amount of work entailed and the difficulties involved in satisfying the Codex work priorities criteria on a species by species basis. The second alternative can however be justified on a collective basis in terms of production volume, international trade and overall consumer protection.

5. A general standard for frozen whole, headless and gutted fish would cover many features which are common to all species and these are set out in Appendix I of this paper. In certain circumstances it will, however, be necessary to distinguish between the different characteristics of demersal fish and pelagic fish. For guidance in this regard, reference should be made to distinction given in the general grading scheme for frozen whole or beheaded fish developed by a Working Group of the West European Fish Technologists Association on Quality Assessment. (Refer EUROFISH REPORT, 27 Sept. 1978).

SCOPE OF DOCUMENT

6. Although the development of a general standard for the product in question appears feasible, the Committee will need to determine whether such a standard should be restricted to fish intended for direct human consumption in terms of Codex work priority criteria or, given difficulties involved in distinguishing between such fish and products destined for further processing, extended to cover all products irrespective of end use.

COMMON PROVISIONS IN A STANDARD FOR BLOCK FROZEN WHOLE, HEADLESS AND GUTTED FISH

PRESENTATION OF PRODUCT

Types: Frozen solid packs; glazed or unglazed.
Frozen individually; glazed or unglazed.

Styles: Whole
Dressed - eviscerated
Head-on or headless
With or without fins/tails
Skin-on scaled or unscaled;
semi-skinned (epidermis removed) or skinless
Other (as specified)

ESSENTIAL COMPOSITION AND QUALITY FACTORS

Raw Material: Freshness and soundness
Absence of parasites

Physical Defects:	Damage to protective coating Dehydration or freezer burn
Surface Defects:	Discolouration of skin and flesh Cuts, wounds and other skin breaks
Gutting and Cleaning Defects:	Gill and body cavity cuts Remains of viscera Improper washing Belly burn or loose belly bones Blood clots
Defects of Odour:	Indication of decomposition or contamination

Examination of, and tolerances for defects:

Note: A general grading scheme for frozen whole or beheaded fish has been developed by a Working Group of the West European Fish Technologists Association on Quality Assessment and its minimum requirements can be incorporated into the standard. The scheme makes an important distinction between pelagic and demersal species (e.g. belly burst)

FOOD ADDITIVES

(Where technologically justified)

HYGIENE AND HANDLING

The Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969) and the (Recommended) Code of Practice for Frozen Fish (CAC/RCP 16-1978) will apply.

LABELLING

Normal Labelling Provisions:	Name of the Food List of Ingredients (if necessary) Net Contents Name and Address Country of Origin Lot Identification Storage Instructions
Exemptions:	In line with Guidelines for the Labelling of Non-Retail Containers of Food (if appropriate)

METHODS OF SAMPLING, EXAMINATION AND ANALYSIS

(To some extent covered by the scheme developed by the West European Fish Technologists Association on Quality Assessment).

PROPOSAL FOR HARMONIZATION OF RECOMMENDED DEFECTS TABLES IN STANDARDS FOR QUICK FROZEN FILLETS OF COD/HADDOCK, OCEAN PERCH, FLAT FISH AND HAKE

DRAFT REPORT OF THE HARMONY WORKING GROUP

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS (1 kg sample unit)			
		COD/HADDOCK	OCEAN PERCH	FLAT FISH	HAKE
Dehydration (Freezerburn) (i) Deep dehydration An excessive loss of moisture from the surface of the sample unit which shows clearly on the surface of the product, penetrates below the surface and cannot be easily removed by scraping	>10 cm^2 <10 cm^2	Defective 4	Defective 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	>10 cm^2	2	2		
Foreign matter (i) Any material not derived from fish or not permitted by the standard except packaging	Each instance	Defective	Defective		
(ii) Packaging material	Each instance	2	2		
Viscera Any portion of the internal organs	Each instance	8	8		
Parasites Parasites or parasitic infestation detected by the candling procedure	Each instance	4	4		
Any parasite or parasitic infestation detectable on a 5 mm thick acryl sheet with 45% translucency, and candled with a light source giving 1500 lux 30 cm above the sheet	"	"	"		

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS (1 kg sample unit)			
		COD/HADDOCK	OCEAN PERCH	FLAT FISH	HAKE
Each parasite with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 10 mm in length (>3 mm or >10 mm in length		4	4		
Each parasite with a capsular diameter smaller than 3 mm or a parasite not encapsulated and smaller than 10 mm in length (≤3 mm or ≤10 mm in length		2	2		
<u>Bruises, blood spots</u>, melanin deposits, bile stains, liver stains etc. giving significant discolouration	Each instance >3 cm^2 - <10 cm^2	4	4		
	Each additional complete 5 cm^2	2	2		
<u>Discolouration</u>	Significantly intense general discolouration	Defective	Defective		
<u>Blood Clots</u> Any lump or mass of clotted blood	Each instance greater than 5 cm^2 up to and including 10 cm^2	4	4		
	Each additional complete instance 5 cm^2	2	2		
<u>Black Membrane</u> (belly lining)	Each instance greater than 5 cm^2 up to and including 10 cm^2	4	4		
	Each additional complete instance 5 cm	2	2		
<u>Bones</u> (including pin bones and single fin rays) - In boneless fillets Any bone - In other fillets Any bone except pin bones	Any bone whose maximum profile can be fitted within a rectangle measuring 10x3mm is not regarded as a bone for the purpose of being classified as a defect				

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS (1 kg sample unit)			
		COD/HADDOCK	OCEAN PERCH	FLAT FISH	HAKE
	Any bone whose maximum profile cannot be fitted within a rectangle measuring 10x3 mm, but which can be fitted into a rectangle measuring 40x10 mm is rated as a bone defect. Any bone whose maximum profile lies outside a rectangle measuring 40x10 mm is rated as a bone defect				
Scales	Skin on fillets - scaled Each area of scale >3 cm^2 - <10 cm^2 Over 10 cm^2 scale, every additional complete 5 cm^2	2 2	2 2		
	Skinless fillets Each complete unit 5 loose scales	2	2		
Objectionable odour in thawed state	An odour which is distinctly objectionable	Defective	Defective		
Objectionable odour or flavour in cooked state	An odour or flavour which after cooking is distinctly objectionable	Defective	Defective		
Texture Any texture which either in the thawed state or after cooking is not characteristic of the species	Definitely not characteristic of the species or is mushy, soft, gelatinous or tough	Defective	Defective		
Fins or Part Fins or Bone Clusters Any fin or part fins (part fins are two or more connected internal or external fin rays) or bone clusters.	Each fin or part fin <3 cm^2 Over 3 cm^2 each additional complete 3 cm^2	4 2	4 2		

DEFINITION OF DEFECTS	DEFECT DESCRIPTION	DEMERIT POINTS (1 kg sample unit)			
		COD/HADDOCK	OCEAN PERCH	FLAT FISH	HAKE
Skin (skinless fillets)	Each instance 3 cm^2 - 10 cm^2	4	4		
	Over 10 cm^2 each additional complete 5 cm^2	2	2		
Small Pieces (not applicable to fillets cut from blocks) A fillet piece weighing less than 30 g	Per pack Each piece in excess of two	4	4	Note: Small piece defined as under 25 g	