INTRODUCTION

1. The Codex Committee on Fish and Fishery Products held its eighth session in Bergen, Norway from 1 - 5 October 1973 by courtesy of the Government of Norway. Dr. O.R. Braekkan, Norway, was in the chair.

2. Mr. K. Vartdal, Director-General of Fisheries of Norway, welcomed the participants on behalf of the Norwegian authorities.

3. The session was attended by government delegates from the following 34 countries:

   Argentina     Iceland     Spain
   Australia     Iran        South Africa
   Belgium       Ireland      (observer)
   Brazil        Italy        Sweden
   Canada        Japan        Switzerland
   Cuba          Morocco      Thailand
   Czechoslovakia Netherlands  Turkey
   Denmark       New Zealand  United Kingdom
   Finland       Norway       United States of America
   France        Peru         Venezuela
   Fed. Rep. of Germany Poland     Yugoslavia
   Ghana

Observers were present from the following three international organizations:

   Association des Industries de Poisson de la CEE (AIPCEE)
   Association of Official Analytical Chemists (AOAC)
   European Economic Community (EEC)

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

ELECTION OF RAPPORTEUR

4. On the proposal of the Chairman, the Committee appointed Mr. D.L. Orme (United Kingdom) as Rapporteur of the Session.

ADOPTION OF PROVISIONAL AGENDA

5. The Committee adopted the Provisional Agenda with one minor alteration to include a review of the work progress of the FAO Ad Hoc Consultation in elaboration of codes of practice for fish and fishery products.

MATTERS ARISING FROM SESSIONS OF THE COMMISSION AND VARIOUS CODEX COMMITTEES

Matters arising from the 9th Session of the Codex Alimentarius Commission (November 1972 - ALINORM 72/35)

6. The Secretariat informed the Committee that the Commission had advanced to Step 6 of the Procedure the Draft Standard for Canned Crab Meat and further pointed out that prior to reviewing this standard at Step 8 the Commission considered it important that the additives section be endorsed by the Codex Committee on Food Additives (ALINORM 72/35 para 255). The Committee was further informed that in relation to crab meat the Commission had agreed not to take any decision on the issue of contaminants but had recorded its concern about the matter.
7. With regard to the possibility of developing general or group standards for groups or classes of similar foods it was noted that the general consensus of the Commission had been that this question should be examined by the various Codex Commodity Committees (see also paras 26-30 of this Report).

Matters arising from the 9th Session of the Executive Committee of the Codex Alimentarius Commission (July 1973 - ALINORM 74/3)

8. The Committee noted the request of the Executive Committee to try to avoid including a provision in the section on Name of the Food which would permit the use of alternative names "in accordance with the law and custom of the country in which the food is sold, etc." to describe species listed in the standard. It was thought that such a provision was counter to international standardization. Moreover a country could accept a standard containing a provision of this kind without being required to indicate which alternatives would be acceptable in that country (ALINORM 74/3 - paras 72 and 73).

Matters arising from the 10th Session of the Codex Committee on Food Hygiene (May 1973 - ALINORM 74/13)

9. The Committee noted that the Committee on Food Hygiene had made an editorial amendment in the hygiene provisions of certain standards and had endorsed the hygiene provisions in the proposed Draft Standard for Quick Frozen Fillets of Hake. The Committee was informed that the Proposed Draft Code of Hygienic Practice for Molluscan Shellfish had been advanced to Step 3 of the Procedure and would be discussed again at the next session of the Hygiene Committee.

Matters arising from the 8th Session of the Codex Committee on Food Labelling (May 1973 - ALINORM 74/22)

10. The Committee was informed that, with one minor amendment, the labelling section in the Draft Standard for Canned Tuna and Bonito in Water or Oil had been endorsed by the Labelling Committee.

11. The Committee noted the decision of the Codex Committee on Food Labelling that the declaration of net contents was intended to be on the basis of "average contents" as determined from an adequate sample of containers (ALINORM 74/22 - para 75). It was further noted that at the 8th session (September 1973) of the Codex Committee on Methods of Analysis and Sampling this problem had also been discussed. It had been agreed that two possible mathematical approaches should be pursued. One of these implied taking a representative sample from a lot based on a 95 per cent probability and included allowances to ensure that only a certain proportion of the lot would fall short of the declared net content and only to such an extent as would be acceptable for the product concerned. This tolerance would depend on the nature of the food, i.e. the difficulty in accurately packing the food to a declared net content. As the report of the Codex Committee on Methods of Analysis and Sampling had not yet been issued the matter would be brought up again at the next session of this Committee (ALINORM 74/23, App. III).

FAO SPECIES IDENTIFICATION SHEETS

12. The Committee was informed that the FAO Fisheries Department was elaborating, on a regional basis, species identification sheets. These were intended as a practical tool in identifying easily certain aquatic species and in providing basic information on the names of these species, habits and fishery. The programme would comprise an initial listing of species of commercial importance in various fishing areas of the world. These identification sheets would be of great help to the work of this Committee.

REVIEW OF THE PROGRESS OF WORK OF THE FAO AD HOC CONSULTATION IN ELABORATION OF CODES OF PRACTICE FOR FISH AND FISHERY PRODUCTS

13. In the past year the FAO Department of Fisheries completed the revision of the Codes of Practice for Fresh Fish and for Canned Fishery Products by combining the FAO technological codes with the hygienic requirements as were proposed by the Codex Committee on Food Hygiene. Both drafts were submitted to the Codex Committee on Fish and Fishery Products for consideration at Step 2 at this session. The revision of the Code of Practice for Frozen Fish Products is in progress, and would be completed by the end of February 1974. During 1973, the Department of Fisheries had been able to develop and, with the help of an Ad Hoc Consultation, had considered in detail two new drafts of Codes of Practice for Smoked Fish and for Shrimps and Prawns respectively.
14. Both drafts would be completed and ready for submission to this Committee by the middle of 1974. During the recent meeting (26-28 September 1973) of the Ad Hoc Consultation, the following programme for the future development of further codes had been suggested:

1) Draft Code of Practice for Salted White and Fatty Fish, and

2) Draft Code of Practice for Lobster and Crawfish.

This work should be completed in 1974. In addition, the Consultation had proposed that background papers should be prepared to explore the possibility of elaborating codes of practice for comminuted fish and for retail marketing of fishery products.

15. The Committee agreed to consider in due time the various codes proposed.

REVIEW OF SOME WHO ACTIVITIES RELATED TO THE WORK OF THE CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

16. Recent work of WHO relating to fish and shellfish hygiene followed the lines indicated in the Report of last year's Session of the Codex Committee on Fish and Fishery Products (ALINORM 74/18).

17. The main activity in this respect was the meeting of the WHO Expert Committee on Food Hygiene (Fish and Shellfish Hygiene) in co-operation with FAO, held in Geneva in September 1973. The aim of this Committee was to review recent advances and practices related to the hygiene and public health requirements in the production, processing and distribution of fish and shellfish. Special attention was given to fish and shellfish-borne diseases, to factors which have contributed to their increase in the past few years, and to their prevention. The Committee dealt mainly with the broad principles of fish and shellfish hygiene related to public health, the aim being to offer guidelines for the development and operation of fish and shellfish hygiene programmes and measures. The Committee gave consideration primarily to disease agents of biological origin; other public health problems, such as those caused by aquatic pollution with chemical and radionuclides, were discussed only in a general manner and with appropriate reference to work of other bodies.

18. During the Geneva meeting it was recommended that WHO and FAO should develop their capability to advise countries in all matters related to fish and shellfish hygiene. The importance of developing internationally acceptable microbiological standards for fish and shellfish was particularly stressed. It was agreed that the research in this area should aim at clarifying the basic principles and the practical effects of handling techniques in warm climates. Further research was also required on the ecology and epidemiology of Vibrio parahaemolyticus and Clostridium botulinum in foods derived from species of aquatic animals as well as on the hazards due to biotoxins in fish.

19. Another relevant meeting was the WHO Study Group on Methods for Sampling and Examination of Food and Food Products for Surveillance of Food-borne Outbreaks held in July 1973. The Study Group was concerned primarily with the development and application of microbiological and related methodologies in food hygiene programmes. The group discussions included: (a) the delineation of principles and objectives underlying the development of methods for the sampling and examination of foods, and interpretation of results, and (b) the review of present efforts and accomplishments in the development of such methods. The Study Group also touched upon the economic and operational constraints and feasibility of laboratory methods; consideration of the need for simplified techniques in laboratory methods of food examination; systematic approaches to data collection and dissemination; and suggested specific uses of these methods in public health practices, in food control work, in food industry and by others concerned. The Study Group recommended continuation of efforts to develop and apply principles and methods for sampling of food on a statistical basis and standard laboratory tests in food microbiology to provide a basis for the judgment of the hygienic quality of foods. It emphasized the need for continued collaborative research and development on a national and international basis to develop and standardize the mentioned methodology.
20. The Study Group further recommended that the work of collaborative research and development should be co-ordinated by WHO. These collaborative efforts should be considered at regular intervals by WHO meetings of scientists to review progress and to provide background information and recommendations for the future. The Study Group took note of the collaborative work carried out by the International Commission on Microbiological Specifications for Food and of the fact that this Commission had completed a manuscript of the book "Microorganisms in Foods II. Sampling for Microbiological Analysis: Principles and Specific Applications", in which a chapter dealt with "Sampling Plans for Fish and Fishery Products" and another chapter with "Microbiological Evaluation of Fresh or Frozen Shellfish".

21. As a further step to develop the WHO Food Virology Programme, the Fifth Informal Consultation was held in Geneva. At this consultation a data retrieval system using edge notched cards was designed and adopted for use by the Programme. This procedure is expected to be ready for use early in 1974. The international collection of data on viruses in foods and of their public health importance is intended to make existing information available as widely as possible to institutes and officials concerned with food hygiene. For this purpose, specific information request forms will be provided.

22. Since the last Session of the Fish and Fishery Products Committee, WHO had endeavoured to intensify its participation in the FAO/WHO Food Standards Programme.

23. WHO had also, together with FAO, prepared joint proposals following the resolutions of the UN Conference on the Human Environment held in Stockholm in 1972 and the World Health Assemblies in 1971 and 1972. These proposals included a description of an internationally co-ordinated programme of research and monitoring of food including fish and shellfish contamination by chemicals and biological agents.

24. Future activities in the field of food hygiene will include an Inter-Regional Conference on the Control of Food-borne Diseases, Principles of Food Hygiene Practice and Food Standardization, to be held in Singapore in November 1973 to review recent advances in the epidemiology surveillance and control of food-borne diseases prevalent in the Eastern Mediterranean, South-East Asian and Western Pacific Regions, together with the application of control measures practicable under local conditions.

25. Another meeting of interest might be the Third Joint FAO/WHO Conference on Food Additives and Contaminants to be convened in Geneva in October 1973 at which questions concerning fish and shellfish would be discussed.

PROPOSAL REGARDING THE ELABORATION OF GENERAL OR GROUP COMMODITY STANDARDS

26. Following the request by the Commission, the Committee reconsidered the proposal of the French delegation to develop general or group commodity standards for groups or classes of fishery products (CX/FFP 72/13 and ALINORM 72/35-para 326).

27. The Committee discussed the proposal in the light of Government comments received (CX/FFP 73/5). The delegation of France explained that the introduction of group standards did not imply that the work done so far by the Committee would be of no use, but that on the contrary after regrouping it would form the basis for the group standards. The group standard would be a sort of listing of definitions, presentations, styles of packing, etc. used in the world for the various entities which form the group. Specific standards would be drawn up to give the details of each of the entities for which this might be considered necessary.

28. It appeared that the majority of the Committee was in favour of drawing up the group standards where appropriate and that no delegation was fundamentally opposed to the principle of the proposal although, because of the implications and realities of trade, fears were expressed that it could lead to regional standards. It was explained that the regional aspects of any such group standard would be restricted to the elaboration of provisions relating to species caught in only a particular area of the world which would, however, be subject to agreement within the Committee on a world-wide basis.
29. A further reservation was raised with regard to the proposal that the labelling provisions of group standards might not be capable of effectively identifying the product to the consumer or trader, thus failing to achieve a vital aim of the Codex Alimentarius. It was explained that the provisions concerning labelling could be set out in the specific standards.

30. After a full discussion, the Committee agreed that group standards could be elaborated when they were felt to be appropriate. In the evaluation of the desirability of applying a group standard to a particular problem, three main factors would need careful consideration:

- a) whether there was a need for a world-wide standard;
- b) whether technological provisions should be included along with end-product requirements;
- c) whether meaningful labelling provisions could be elaborated.

CONSIDERATION AT STEP 7 OF THE DRAFT GENERAL STANDARD FOR QUICK FROZEN FILLETS OF FLAT FISH

31. The Committee reconsidered the above draft standard (Document ALINORM 74/18-Appendix IV) in the light of Government Comments received (CX/FFP 73/6). In accordance with the decision taken at the last session the Committee limited the discussion to the defect tables and related provisions in the Draft Standard (ALINORM 74/18 - para 86) and to the points raised by the Labelling Committee with regard to the labelling section of the standard.

Country of Origin

32. As requested by the Labelling Committee, the Committee considered the need for the second subsection, dealing with processing in a second country changing the nature of the products. The text had been taken from the General Standard for the Labelling of Prepackaged Foods. The Committee agreed to delete the second subsection and to replace the word "food" by the word "product" in the first subsection.

Lot Identification

33. In line with the decision taken by the Labelling Committee that clear distinction should be made between date marking and lot identification, the Committee decided to reword the provision on date marking and identification — to read:

**Lot Identification**

Each container shall be permanently marked in code or in clear to identify the producing factory and the date of production, that is, the date the final product was packaged for final sale.

34. The Committee was informed that at the request of the Labelling Committee, Canada would prepare draft guidelines for date marking. It was pointed out that in certain other standards for quick frozen foods there was a provision for date marking. The Committee was of the opinion, however, that for the time being no special provision for date marking was needed in this particular standard.

Additional Requirements

35. Consideration was given to the possible inclusion of the phrase used in some other standards i.e. "Information for keeping and cooking of the product should be given on retail packs". Some delegations were in favour of including such a provision in the standard. Others, however, held the view that this was descriptive labelling which need not be dealt with on a mandatory basis in a world-wide standard, particularly since its practical application could lead to unnecessary barriers to trade.
36. It was pointed out that the Recommended International General Standard for the Labelling of Prepackaged Foods allowed for additional information provided that it was not in conflict with the mandatory requirements and would not mislead or deceive the consumer. The Committee finally decided not to include a provision for such additional information in the draft standard.

**Methods of Sampling, Examination and Analysis**

37. The delegation of the Netherlands proposed to include in the standard a reference to a reliable and practical method of electrophoresis to distinguish between various species*). This method, though a refereee method for use in case of dispute, could also be used as a regulatory tool. The Committee agreed that a method of identification of fish species which would be universally acceptable would take considerable time to develop and should not therefore be included in the standard for the present. It was realised, however, that it would be useful to test this and other similar methods and it was agreed to request governments to send to the Norwegian Secretariat of the Committee details of methods in use in their countries. This matter would then be reconsidered by the Committee.

**Recommended Defect Table - Quick Frozen Fillets of Flat Fish**

38. At the last session of the Committee it had been agreed to attach to the draft standard a defect table as proposed by the United States as an alternative to the present table. A number of delegations informed the Committee that they had tested both tables and had no strong preference for either. There was no consensus of opinion on which table should be chosen and, in order to take advantage of the tests made, the Committee agreed to set up a small working party consisting of representatives from Canada, Denmark, the Netherlands, UK and USA to study the matter in detail and to recommend a form of defect table or separate defect tables if this proved necessary.

39. On the recommendation of the working party the Committee agreed to list definitions of defects and to use the single defect table proposed by the U.S.A., as amended by the working party.

With regard to bones in fillets not designated as boneless, a distinction was made between large fillets, i.e. those with an average count of less than 15/kg, and small fillets. In the larger fillets, allowance was made for larger single bones. Provision was also made for clusters of bones in both large and small fillets.

For fillets designated as boneless, no distinction was made between fillets of different sizes. The provision relating to skin for fillets designated skinless or skin on light side only was tightened as was the belly wall (black membrane) provision.

**Status of the Standard**

40. The Committee agreed to retain the Standard at Step 7 of the Procedure so that experience could be gained with the revised defect table. It was agreed that at the next session only this part of the standard and the question of the net contents of glazed products would be considered. The revised defect provisions are included in Appendix II to this Report.

**CONSIDERATION AT STEP 4 OF THE PROPOSED DRAFT STANDARD FOR QUICK FROZEN SHRIMPS OR PRAWNS**

41. The Committee considered the above Proposed Draft Standard (ALINORM 74/18 - Appendix VI) in the light of Government comments received (CX/FPF 73/7).

**Scope**

42. The Committee amended the section by transferring the reference to further processing from the first to the second sentence which was amended to read "It does not apply to products indicated as intended for further processing or speciality products . . . ."

**Process Definition**

43. The Committee agreed that the definitions of the degree of cooking of the product should be included in this subsection as a new paragraph 2.2.1 and should be excluded from the labelling section. The amended text is contained in Appendix III.

Presentation

44. The Committee completely revised this subsection with regard to the definitions of the various styles. The amended text is contained in the revised standard as appended. Some delegations considered mandatory provisions too restrictive, although they were prepared to accept that the definition of the various styles should apply whenever a style name was used. Other delegations considered that the provisions should be mandatory, but should cover all forms of presentation in use. The Committee agreed to request Governments to comment specifically on this matter and to propose additional forms of presentation in case the mandatory version was decided upon.

Optional Ingredients

45. The Committee agreed to delete dried glucose syrup, alginates and mono-sodium glutamate from the list of optional ingredients.

Final Product – Appearance

46. The first sentence was revised to read: "Clean, generally uniform in size within any count category where appropriate, and easily separated when labelled as individually frozen". The last sentence was amended to read: "Free from foreign material and practically free from: dehydration; blackening or other abnormal colouration; legs, loose shell, antennae, heads, parts of heads or veins as appropriate for the style of presentation, and free from torn, damaged or otherwise unacceptable shrimps or prawns."

The Committee agreed to move the provision contained in 6.2.2 to this sub-section.

Final Product – Texture

47. The Committee agreed that the evaluation of the texture of the product should be made on the product after thawing and, where applicable after cooking, and amended the provision accordingly.

Final Product – Glazing

48. It was pointed out that during glazing it would not always be possible to cover the shrimps or prawns totally with the glazing medium. The Committee agreed to delete the word "totally". The Committee further agreed that the third sentence should read "The water used in glazing shall be of potable quality", and deleted the reference to the year of publication of the WHO water standards in the following sentence. The final sentence of this sub-section was revised to read: "Any other ingredient or additive as listed in 3.2 and 4 respectively, used for glazing shall fulfill the hygiene requirements of section 5".

Final Product – Size Classification

49. The Committee agreed to clarify this provision by stating that the average number of shrimps or prawns should relate to a standard weight or mass expressed in one of the accepted systems of measurement.

Food Additives

50. Some delegations questioned the need for the use of colours in shrimps and prawns. A number of producing countries indicated that the use of colouring substances was a necessity as the natural colour of the product disappeared during the peeling process. It was stated that either Canthaxanthine or a combination of Erythrosine and Ponceau 4R was used. The level of use did not normally exceed 15 mg/kg but sometimes more was necessary. The Committee agreed to retain the provision in the standard.

51. The need for the use of phosphates was also questioned. The delegation of the United States of America indicated that in its view the use of sodium tripolyphosphates was justified to minimise drip loss. The delegation of the UK stated that all the phosphates listed were used. The delegation of Argentina expressed itself against the use of additives. Some other delegations expressed concern with regard to the use of phosphates and thought that the use should be well argued.
52. The Committee discussed at great length the use of sulphites. A number of producing countries stated that the use of sulphites was a technological necessity. There was, however, no agreement about the maximum level of use and consequently about the upper limit in the final product after it was cooked. The delegation of Japan considered that attention should be drawn to the differences between codes of practice and the mandatory requirements of standards. Account should also be taken of the standpoint of most other producing countries which expressed views. The delegations of Brazil, Cuba and Japan indicated that they required between 100 and 200 ppm. The delegation of Australia held the view that 30 ppm would be sufficient provided the sulphite was applied immediately after catch. It further stated that ascorbic acid was equally effective when used together with refrigerated sea water.

53. The Committee agreed that further research was necessary and requested Governments to provide detailed information on levels of use of sulphites indicating the method of storage of the shrimp, i.e. in refrigerated sea water or on ice, and the levels of sulphur dioxide found in various parts of the body of shrimps or prawns.

54. It was stressed that the analysis should be carried out on the product as consumed which would normally be the peeled and cooked meat and the maximum concentration allowance should be set on this basis. The delegation of Japan quoted results of research to support use of higher levels of sulphites. However, the Australian delegation pointed out that these results did not show levels in the meat to be substantially above 30 ppm. It could be expected that in the cooked product the levels would be considerably lower and therefore levels below 30 ppm in the raw meat should be sufficient. (Sulphite expressed as SO2)

55. It was proposed that the use of natural and synthetic hydrophilic colloids should be allowed in the glazing medium. The Committee agreed to request Governments to indicate which particular substances were employed and also to state the maximum level of use.

56. The Committee also agreed to include in the list of Food Additives monosodium glutamate which had been deleted from the list of optional ingredients.

Hygiene

57. The Committee agreed that the products covered by the provisions of the standard would be prepared not only in accordance with the General Principles of Food Hygiene, but also in accordance with the Code of Practice for Quick Frozen Shrimps and Prawns (under elaboration). The Committee further agreed to amend subsection 5.3(b) in accordance with a decision of the Codex Committee on Food Hygiene (ALINORM 74/13, para 11) by substituting the words "which may represent a hazard to health" for "which may be toxic".

Name of the Food

58. The Committee noted the concern of the Executive Committee and the Labelling Committee with regard to the provision permitting the use of alternative names in accordance with the law and custom of the country in which the food was sold to describe species in the standard (ALINORM 74/3, paras 72 and 73). Several delegations favoured amending the subsection to remove this particular provision so that the governments, when accepting the standard, would have to indicate the terminology which would be acceptable; with the present text this would not be required. Other delegations pointed out that the terminology depended on the destination of the product which was not always known at the time of packing. The freedom to use additional identification overcame this problem and was, therefore, vital. The Committee agreed to put the provisional clause in square brackets and to request specific comments on this point.

59. Subsection 6.1.2 dealing with the labelling designation was revised in the light of the decisions taken with regard to presentation.

60. The definitions appearing in subsection 6.1.3 were moved to the Process Definition (subsection 2.2.1).
Size Classification

61. The Committee agreed to include subsection 6.2.2 in the subsection 3.3 - Appearance. It was proposed that if the product was ungraded it should be so labelled. A number of delegations considered this unnecessary and, in addition, dangerous since they regarded this tantamount to a decision in favour of mandatory size grading. The Committee agreed to put the provision in square brackets in the standard and to request comments.

Country of Origin

62. As requested by the Codex Committee on Food Labelling the Committee discussed the desirability of maintaining in the standard the provision dealing with foods undergoing processing in a second country whereby the nature of the food is changed. It was agreed that for shrimps, which could be imported raw and subsequently cooked, this provision should be maintained.

Lot Identification

63. In line with the decision taken by the Food Labelling Committee this provision was amended (ALINORM 74/22 paras 7 and 17).

Methods of Analysis, Sampling and Examination

64. The Committee agreed to request the Commission to waive the requirement of presenting to the Codex Committee on Methods of Analysis and Sampling the methods listed in the standard as it considered that these methods were particular to the product.

Determination of Net Contents of Products Covered by Glaze

65. The Committee decided that the procedure for the determination of net contents of raw and cooked products covered by glaze need not be listed separately but should be merged indicating those aspects of the methods that are different for cooked and raw.

Defect Table (Annex C)

66. The delegate of the USA proposed to reduce the tolerance for black spot from 8% to 6% in the meat from the large shrimp (under 440/kg). The Committee agreed not to make any amendments at this stage but to await the results of the investigation of the use of sulphites and testing of the defect table.

67. It was proposed, and the Committee agreed, to amend slightly the defect table for small shrimp (over 440/kg) by deleting the reference to antennae as it was considered that these were not of great importance. The defect was amended to read "Legs and loose shell". One instance would constitute 20 by number and each further 5 one additional instance. It was further agreed to request Governments of producing as well as importing countries to provide information with regard to their experience with the defect tables.

Size Classification (Annex D)

68. The Committee agreed to place the alternative method for size classification in the Annex in square brackets.

Status of the Standard

69. The Committee agreed to submit the amended proposed draft standard to the Commission at Step 5 of the Procedure. The amended standard is attached as Appendix III to this Report.

CONSIDERATION AT STEP 4 OF THE PROPOSED DRAFT STANDARD FOR QUICK FROZEN LOBSTERS, ROCK LOBSTERS AND SPINY LOBSTERS

70. The Committee considered the above Proposed Draft Standard (Document ALINORM 74/18, Appendix III) in the light of Government Comments received (CX/FFP 73/8).
Title

71. The Committee agreed that the standard should also cover slipper lobsters and amended the title accordingly.

Scope

72. The Committee decided to revise the scope section so that it would also cover tails, claws and meat. The first sentence was amended to read: "This standard applies to quick frozen raw or cooked (steamed or boiled) lobsters, rock lobsters, spiny lobsters and slipper lobsters and to tails, claws and meat therefrom, offered for direct consumption".

Product Definition

73. After a discussion on which species should be covered by the Standard the Committee agreed to include Scyllaridae but not to include Nephrops, Pleuronocodes or Cervimunida which had also been proposed. It was pointed out that the 1971 FAO Report on the Resources of the Ocean had recognized that the three genera, which the Committee had decided not to include, were traded in under the general name of lobster with appropriate qualifications. Several delegations thought that exclusion of the genera would not affect the marketing but would only result in not having internationally agreed upon minimum requirements. Other delegations expressed their concern and stressed the need for future clarification.

74. The Committee further decided to delete the first sentence in subsection 2.1.2 and to remove the square brackets around the second sentence because it was considered important that different varieties should not be packed together.

Process Definition

75. The Committee decided to revise the text of subsection 2.2.3 to read: "The product shall be quick frozen either in mass or in individual units. If individually quick frozen, the units shall be packed in such a way as to maintain their individual separation until the time of final sale."

Presentation

76. The Committee agreed to expand the definition "Whole split" to read: "Whole split Split into approximately equal halves down the centre line of the back. Clean with viscera removed". Subsection 2.3.5 was amended to read "Lobster meat - Meat. The meat, without shell, of any part of the lobster, rock lobster, spiny lobster or slipper lobster, not complying with 2.3.4".

Raw Material

77. Some delegations considered that the raw material requirement should specifically state that the quick frozen product should be prepared from live lobsters. In the ensuing discussion one delegate stated that some lobsters taken from deep water would normally be dead on reaching the surface. The Committee considered that the raw material should be live immediately prior to intermediate processing and amended the provision accordingly.

78. It was not considered useful to have a requirement in the standard specifying the time lobsters should be held alive without food prior to processing as normally this could not be verified. The Committee consequently deleted the sentence in square brackets in subsection 3.1.

Optional Ingredients

79. The provision was brought into line with the similar provision in the standard for shrimps or prawns. The introductory sentence was thus amended and references to alginates and hydrophylic colloids were deleted.
Final Product - Appearance

80. The Committee agreed to revise this subsection so that a distinction would be made between the characteristics of the raw product, the cooked product and the product with and without shell.

Final Product - Texture, Glazing, Defects and Tolerances

81. The same amendments were made as in the texture and glazing provisions of the standard for shrimps or prawns.

Food Additives

82. In their written comments several countries had asked for the inclusion of various food additives. The Committee agreed to list the proposed substances and also to include hydrophylic colloids and alginates which had been deleted from the list of optional ingredients. With regard to the maximum level of use, only a figure for phosphate was included. Governments were requested to comment on the various additives proposed and to give technological justification and provide maximum levels.

Hygiene

83. An amendment to subsection 5.3(b) was made in accordance with the proposal made by the Codex Committee on Food Hygiene.

Labelling

84. As it had been agreed earlier that the standard would also cover slipper lobsters, consequential amendments were made throughout this section.

Name of the Food

85. It was pointed out that the standard allowed the product to be declared as "crawfish". Some delegations considered the name "crawfish" to be unnecessary and could lead to confusion since some other species not covered by the standard were similarly labelled. It was stated, however, that crawfish also was a name commonly used in trade for some of the species within the standard and must therefore be permitted.

86. In view of the differing views on the species to be included in the standard and the fact that the term "lobster", qualified in some way, was widely used, it was suggested that further information was necessary. The delegation of Australia offered to prepare for the next session of the Committee a paper containing background information on trade and terminology used in relation to lobsters. The delegation of the USA agreed to cooperate in this work. The Committee accepted this offer and asked Governments to comment on these points.

87. The Committee decided to make provision in subsection 6.1.2 for meat and claws and to delete subsection 6.1.6.

Country of Origin

88. As requested by the Codex Committee on Food Labelling, the Committee considered the need for subsection 6.6.2 and agreed to retain this provision as the product might well undergo processing in a second country.

Lot Identification

89. This provision was revised as proposed by the Codex Committee on Food Labelling.

Examination of Physical Defects

90. The text was amended to read: "The tolerances allowable, on examination, for the defects set out in Annex A, should be the corresponding allowances set out in Annex B."
Defects and Sample Acceptance (Annexes A and B)

91. Both annexes were revised along the lines agreed for the standard on shrimps or prawns taking into account all the styles covered by the standard.

Status of the Standard

92. The Committee agreed to return the proposed draft standard to Step 3 of the Procedure in view of the large number of amendments made and the number of outstanding questions. The amended standard is attached as Appendix IV to this Report.

CONSIDERATION AT STEP 2 OF THE REVISED PROPOSED DRAFT STANDARD FOR QUICK FROZEN BLOCKS OF COD, HADDOCK, HAKE AND OCEAN PERCH

93. The Committee considered the proposed draft standard (CX/FFP 73/9) on which comments (CX/FFP 73/9.1) had been received from four collaborating countries.

94. The Committee discussed the need for this standard in great detail. A number of delegations stated that in their view the international trade in quick frozen blocks of fish merited the elaboration of a standard. Several delegations further stated that in their opinion the standard should also cover minced fish flesh which was a new product of rapidly increasing importance in international trade. It was thought that blocks to be covered by this standard whether of fillets or of comminuted fish were intended for consumption with no further processing other than the cutting into portions to which batter and/or breaded material might be added. It was felt, therefore, that the product was covered by the scope of the Codex Alimentarius.

95. Other delegations held the view that the standard should not be elaborated by the Committee and that the work of the Committee should be restricted to products intended for direct consumption. They were further of the opinion that the hygiene requirements and also the technology related to the product could be adequately covered by a code of practice (see para 14).

Status of the Standard

96. In view of the major differences of opinion in the Committee, and although more delegations expressing views favoured proceeding with the elaboration of the standard, it was decided to retain the standard at Step 2 and to send it to Governments for comments together with comments of the collaborating countries (CX/FFP 73/9.1). Governments are specifically asked to comment on the need for the standard and if it is considered desirable to indicate whether it should be elaborated in its present form or extended to cover minced fish blocks too.

CONSIDERATION AT STEP 2 OF THE PROPOSED DRAFT CODES OF PRACTICE FOR FRESH FISH AND CANNED FISH

97. The Committee considered the proposed draft codes of practice as contained in documents CX/FFP 73/4 and 73/3. It was noted that these were the first of a series of codes of practice being elaborated by the FAO Ad Hoc Consultation on Fish and Fishery Products in which hygiene and technological considerations were being combined in accordance with the decision of the 18th Session of the Executive Committee (ALINORM 72/3 paragraphs 6-17). They had been referred to the Committee for elaboration through the steps of the Codex procedure.

98. It was agreed that the documents, which were found to be already in an advanced stage of elaboration, should be sent to Governments for comments at Step 3 of the Procedure.

99. It was the consensus of opinion that the codes before the Committee were useful documents and it was noted that FAO was already using them as advisory documents for use by officers in the field. The Committee emphasized the importance it placed on the need for such codes in order to complement the standards being elaborated.

CONSIDERATION AT STEP 7 OF THE DRAFT STANDARD FOR CANNED CRAB MEAT

100. The Committee considered the draft standard (ALINORM 72/18 - Appendix III) in the light of Government comments received (CX/FFP 73/10).
Product Definition

101. Some editorial amendments were made in the first sentence of the definition. During discussion it emerged that parchment paper was widely used, but in many different ways, so the reference to the wrapping material was deleted.

Presentation - Two End Leg Pack

102. It was agreed that no tolerance for the merus meat level in the pack should be given and the last sentence providing for a tolerance of the description was deleted.

Raw Material

103. It was proposed that the canned crab meat should be prepared from crab killed just before processing. As the raw material used for canning sometimes consisted of quick frozen crabs the Committee agreed to specify that the crabs should be killed immediately prior to processing or intermediate freezing.

Canned Product - Shell residues

104. The requirements of subsection 3.4(d) were completely revised.

Food Additives

105. The Committee noted the decision of the Commission (ALINORM 72/35 - para 255) that the additive section of the standard should be endorsed by the Codex Committee on Food Additives before the standard was advanced to Step 8. The Committee further noted the remarks made by the Codex Committee on Food Additives (ALINORM 72/4 - para 31). The Committee reconsidered the various additives listed and decided to retain only four substances: sodium acid pyrophosphate (5,000 mg/kg expressed as P₂O₅), citric acid (for regulating pH), aluminium sulphate (180 mg/kg expressed as aluminium sulphate), and phosphoric acid (for regulating pH).

Hygiene

106. The last paragraph of the section was amended as recommended by the Codex Committee on Food Hygiene (ALINORM 74/13, para 9).

Weights and Measures

107. The Committee agreed to delete the subsection 6.2 and to make different requirements for contents depending on whether the product was wrapped, unwrapped or in broth or free liquid. It was agreed that the maximum limit for broth or free liquid should be temporarily set at 20% of the declared net weight and that comments would be sought on this figure. Consequential amendments were made in subsections 7.4, 8.2 and 8.7.

Net Contents

108. It was agreed to specify in this provision that the net contents should be declared exclusive of wrapping material.

Country of Origin

109. This provision which also appeared in other similar standards had been inadvertently omitted during a previous revision of the standard. The Committee agreed to its re-insertion.

Lot Identification

110. This paragraph was amended as requested by the Food Labelling Committee.

Determination of Drained Weight

111. The Committee agreed to revise this sub-section to conform with the amendment made in the section on weights and measures. The heading was changed to read "Determination of Broth or Free Liquid".
Determination of Water Capacity of Container

112. The consensus of opinion was that the first procedure listed in the standard was preferable and the alternative text was deleted. The Committee was informed that the Codex Committee on Methods of Analysis and Sampling was studying a new procedure for the determination of water capacity of a container.

Determination of Net Contents

113. An amendment was made in the third paragraph by adding to the existing text the words: "after removing excess broth or liquid and adhering meat".

Lot Acceptance

114. This subsection was revised in the light of the decision taken with regard to the section on weights and measures.

Status of the Standard

115. The Committee agreed to retain the standard at Step 7 of the Procedure to allow for further consideration of the temporary limit set for broth or free liquid. The revised standard is contained in Appendix V to this Report.

CONSIDERATION AT STEP 4 OF PROPOSED DRAFT STANDARD FOR CANNED MACKEREL

116. The Committee considered the Proposed Draft Standard (ALINORM 74/13 - Appendix VII) in the light of Government comments received (CX/FFP 73/11).

Title

117. The delegation of the USA supported by other delegations proposed to change the title of the standard so that it would cover both mackerel and jack mackerel. It was pointed out that the technological aspects were similar and that the commercial importance of jack mackerel in international trade had reached sizeable proportions and the fear was expressed that if a standard for mackerel only was elaborated, this might affect the trade in jack mackerel. The delegation of Japan supported by other delegations expressed the view that the differences between mackerel and jack mackerel in processing, texture, appearance and also with regard to defects were such that an inclusion of jack mackerel in the standard for mackerel was inappropriate.

118. The Committee agreed to consider the standard as it stood but to include in the title the words "and jack mackerel" in square brackets. The Committee could then reconsider the scope of the standard in the light of comments received. A number of changes were made to various sections including the presentation and additives.

119. The Committee agreed to request Governments to comment on the scope of the standard and on provisions for the final product; to propose food additives considered to be technologically necessary with their limits; and to comment on the use of "mackerel" unqualified and appropriate qualifications for further species should the scope of the standard be extended.

Defect Tables

120. The delegations of Canada, Japan* (Coordinator), Portugal* and USA agreed to collaborate in the elaboration of Defect Tables pertaining to mackerel and jack mackerel.

Status of the Standard

121. The Committee agreed to return the standard to Step 3 of the Procedure. The revised standard is given in Appendix VI to this Report.

CONSIDERATION OF ELABORATION OF STANDARD FOR SARDINES AND SARDINE TYPE PRODUCTS

122. The Committee had before it for consideration a paper "Canned Sardines and Sardine Type Products", prepared for the 1972 Session by the delegation of the United Kingdom (CX/FFP 72/3) and further a paper prepared by the delegation of Norway, "Defects of Canned Sardines and Sardine Type Products (CX/FFP 73/13) and a summary of government observations (CX/FFP 73/12)".

* Author countries of the standard
123. The discussions of the Committee were based on a compromise proposal made by the
delegations of Canada and the USA at the 1972 Session dealing with the question of the
designation of the product (ALINORM 74/13 – para 63):

"Fish species covered by this standard shall be designated either:

(i) as "sardines" (to be reserved exclusively for Sardina Pilchardus Walbaum); or
(ii) as "X sardines" where "X" is the name of a country, a geographical area or the
species; or
(iii) by the common name of the species laid down for the species;

whichever is required by the country in which the product is sold, and in a manner so as
not to mislead the consumer.

In addition, if required by the country in which the product is sold, the common name
shall be accompanied either by the common name of the species or by one of the terms
"sardine style" or "sardine type" or by both descriptions."

124. The majority of delegations expressing views stated that they could accept the
proposal. Other delegations considered that the wording relating to the indication
of a geographical name would need to be amended.

125. The Committee agreed unanimously on the first part of the proposal, namely to
reserve the name "sardines" exclusively for Sardina Pilchardus (Walbaum). With regard
to the second part, the delegation of Portugal, supported by Morocco and Spain, stated
their opposition as they felt that by allowing a canned product to be labelled
"X-sardine", X being a geographical description, consumers would be misled. A number
of delegations, however, pointed out that the products to be covered by a standard had
become familiar to certain consumers under the name "X-sardines". It was important
that these consumers should not become confused by requirements of a Codex standard.
It was therefore vital that any standard should be sufficiently flexible to enable
consumers in different countries to obtain the products they could recognize. The
proposal under consideration offered this flexibility and would enable each member country
to protect its consumers. By using the Acceptance Procedure to clarify the labelling
requirements of member countries, producing countries would also be assisted and this
would help to facilitate international trade.

126. The Committee noted that much progress had been made towards reconciliation of the
different points of view, and agreed to take up the elaboration of a standard using the
proposal as a basis for the labelling requirements. The delegations of Norway and the
UK were requested to prepare a draft standard on the basis of the agreement and the
earlier papers, for presentation to the Committee at its next Session at Step 2 of the
Procedure. The draft would be distributed to countries with a request to test the
applicability of it to their own trade, particularly with regard to the defect
provisions. The Committee requested Brazil, Canada, France, Japan, Norway and the
U.S.A. to act as a working group to study in particular the defect provisions.

FUTURE WORK

127. The delegation of Australia proposed as possible future work the elaboration of a
standard for fish fingers or fish sticks. In order that the Committee would have
adequate information the Australian delegation offered to prepare a survey of trade in
these products and related aspects for consideration by the Committee at its next
meeting. This paper could serve as a basis for a possible standard for discussion at a
later date. It was further agreed that the survey to be carried out by Australia would
cover both battered and breaded products. The delegation of Canada would collaborate
in the work.

128. The delegation of Spain supported by the delegation of Turkey took up the question
of the need to elaborate a standard for anchovies on which earlier work had been done.

129. The Committee agreed not to take on any new work for the time being.
"Styles" — mandatory or optional

130. The Australian delegation drew attention to the need for a clarification of the "styles" provisions in standards elaborated by the Committee. Some were optional, thus allowing styles not specified to be marketed, while others were mandatory, thus prohibiting any not listed. It was pointed out by the Australian delegate that it was essential that there should be a common interpretation of the basis on which styles were specified. He proposed that the matter be referred to the Executive Committee for clarification.

131. The Committee agreed that the Chairman, in collaboration with the Joint FAO/WHO Secretariat, would seek some means of clarifying this point.

Follow-up on Australian Paper — Elaboration of Standards for "Frozen" respectively "Quick Frozen" Fish and Fishery Products

132. The Committee also accepted an offer by the Australian delegation to prepare a paper to demonstrate the manner in which the recommendations in the Australian paper on Quick Frozen and Frozen Products (CX/FFP 72/12) could be put into effect bearing in mind the discussion at the 7th Session of the Committee (ALINORM 74/18 — paras 67-71).

133. At the request of the Chairman it was agreed that this paper would be put before the 10th Session of the Committee.

Use of Spanish Language

134. The delegation of Peru, on behalf of the Spanish speaking delegations, reiterated the request that Spanish be one of the working languages of the Committee. The request was noted, but it was pointed out that the matter could not be dealt with by the Committee.

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**SUMMARY STATUS OF WORK**

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1/ To be distributed in due time. 2/ Elaborated independently by the Food Hygiene Committee
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DRAFT GENERAL STANDARD FOR QUICK FROZEN FILLETS OF FLAT FISH

(retained at Step 7)

1. SCOPE

This standard shall apply to quick frozen fillets of edible species of the order Pleuronectiformes (Heterosomata) offered for direct consumption without further processing. It does not apply to the product indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

2.1 Product Definition

(a) Quick frozen fillets of flat fish are obtained from fish of any edible species of the order mentioned above.

(b) Fillets are slices of fish of irregular size and shape which are removed from the carcass by cuts made parallel to the backbone and sections of such fillets cut so as to facilitate packing.

2.2 Process Definition

The product shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached —18°C at the thermal centre after thermal stabilization. The product shall be maintained at a low temperature such as will maintain the quality during transportation, storage and distribution up to and including the time of final sale.

The recognized practice of repacking quick frozen products under controlled conditions followed by the re-application of the quick freezing process as defined is permitted.

2.3 Presentation

Fillets shall be presented as:

(a) skin-on; or

(b) skinless; or

(c) skin-on, on light side only.

The fillets may be presented as boneless, provided that boning has been completed.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Quick frozen fillets of flat fish shall be prepared from sound fish of the designated order which are of a quality such as to be fit to be sold fresh for human consumption.

3.2 Final Product

3.2.1 (a) The fillets shall be free from foreign matter and all internal organs and shall be reasonably free from ragged edges, tears and flaps, fins or part fins, significantly discoloured flesh, blood clots, parasites and, where appropriate, skin, scales, bones and black membrane (belly wall).

(b) After cooking by steaming, baking or boiling as set out in Annex A the product shall have a flavour characteristic of the species and shall be free from any objectionable flavour and odour, and its texture shall be firm and free from abnormal conditions such as chalkiness and milkiness.
The final product shall be free from small fillet pieces unless their presence is necessary to make up the weight of the pack. A piece weighing less than 25 g is classed small. The maximum number of small fillet pieces permitted is one per pack except as provided for in sub-section 6.1.1.

(d) The final product shall be free from deep dehydration (freezerburn) which cannot easily be removed by scraping without unduly affecting the quality and appearance of the final product.

Note: A recommended table of physical defects for optional use with consignments of the final product with an AQL of 6.5 is appended as Annex B.

4. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications as contained in Section . . of the Codex Alimentarius have been endorsed by the Codex Committee on Food Additives.

<table>
<thead>
<tr>
<th>Additive</th>
<th>Maximum level of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monophosphate, monosodium or monopotassium (Na or K orthophosphate)</td>
<td>5 g/kg of the final product expressed as P_2O_5, singly or in combination</td>
</tr>
<tr>
<td>Diphosphate, tetrasodium or tetrapotassium (Na or K pyrophosphate)</td>
<td></td>
</tr>
<tr>
<td>Triphosphate, pentasodium or pentapotassium or calcium (Na, K or Ca tripolyphosphates)</td>
<td></td>
</tr>
<tr>
<td>Polyphosphate, sodium (Na hexametaphosphate)</td>
<td></td>
</tr>
<tr>
<td>Ascorbate, potassium or sodium salts</td>
<td>1 g/kg of the final product expressed as ascorbic acid</td>
</tr>
</tbody>
</table>

5. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice — General Principles of Food Hygiene (CAC/RCP 1-1969).

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 the name according to the law, custom or practice in the country in which the product is to be distributed. Fillets cut from blocks which may possibly contain a number of small pieces in excess of the number permitted in sub-section 3.2.1(c) may be labelled as fillets of ..... provided that such labelling is customarily used in the country where the products are to be sold and provided the product is identified to the consumer so that he will not be misled.

6.1.2 The label may, in addition, include reference to the presentation as skin-on or skinless and/or boneless, as appropriate. This shall be included if the omission of such labelling would mislead the consumer.
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 process as defined in sub-section 2.2.

6.2 List of Ingredients

6.2.1 A complete list of ingredients shall be declared on the label 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 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.

6.3.2 Where products have been glazed the declaration of 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.

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 date of production, that is, the date the final product was packaged for final sale.

7. METHODS OF SAMPLING, EXAMINATION AND ANALYSIS

7.1 Sampling for Destructive Examination

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

7.2 Thawing

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

7.3 Determination of Net Contents of Products Covered by Glaze

The method of analysis described hereunder is an international referee method which is to be endorsed by the Codex Committee on Methods of Analysis and Sampling.

As soon as a package is removed from low temperature storage open immediately and place the contents under a gentle spray of cold water. Agitate carefully so that the product is not broken. Spray until all ice glaze that can be seen or felt is removed. Transfer the product to a circular No. 8 sieve, 20 cm (8 inches) in diameter for samples weighing less than 900 g (2 pounds) and 30 cm (12 inches) for those more than 900 g (2 pounds). Without shifting the product incline the sieve at an angle of approximately 17-20° to facilitate drainage, and drain exactly 2 minutes (stop watch). Immediately transfer the product to a tared pan and weigh (Methods of Analysis of AOAC 18.001).

(*) "frozen": This term is used as an alternative to "quick frozen" in some English speaking countries.
7.4 Organoleptic Examination
Organoleptic examination shall be made only by trained persons and shall take place after the sample has been cooked by a method set out in Annex A.

7.5 Examination for Physical Defects
The sample may be examined for physical defects according to Annex C.

8. CLASSIFICATION OF DEFECTIVES
A container which fails to meet the quality requirements for the final product (3.2.1(a), (c) and (d)) shall be considered as "defective".

9. LOT ACCEPTANCE
A lot will be considered as meeting the requirements of this standard when:
1. The total number of "defectives" does not exceed the acceptance number (c) of the appropriate Sampling Plan (AQL = 6.5) in the Sampling Plans for Prepackaged Foods (CAC/RM 42-1969).
2. The average net contents of all containers examined is not less than the declared net contents.

ANNEX A
COOKING METHODS

Steaming
Steam the sample in a closed dish over boiling water for about 35 minutes if frozen, or for about 20 minutes after thawing the product. The dish should be covered and should be kept in a water bath at +60° C (+140° F) during testing.

Baking
Place the sample in a baking pan lined with aluminium foil. Cover the pan with a sheet of aluminium foil and crimp the foil around the edges of the top of the pan. Place the pan and contents in a pre-heated oven maintained at 230° C (450° F) until cooking is completed. This requires about 20 minutes.

Boiling in Bag
Place the thawed sample into a boilable film-type pouch and seal. Immerse the pouch and its contents into boiling water and cook until the internal temperature of the fillet sample reaches 70° C (160° F) which requires about 20 minutes. Remove the boiled product from the pouch and drain.

ANNEX B
DEFINITION OF DEFECTS IN QUICK FROZEN FILLETS OF FLAT FISH

Bones — Bones exceeding the sizes specified in Annex C. Cartilaginous material and rudimentary pin bones which are not perceptible after cooking shall not be considered bone defects.

Blood clots — Any lump or mass of clotted blood greater than 5 mm in any dimension.

External fins or part fins — Part fins are two or more rays connected by a membrane.

Skin — A piece of skin larger than 3 cm² on fillets presented as skinless, or any such piece of dark skin on fillets presented as skin on light side only.

Belly wall — Any piece of the black membrane lining the belly wall that is larger than 3 cm².

Discolouration — Any significant discolouration larger than 5 cm², including naturally occurring dark pigmented spots on the skin of the light side, in fillet packs designated as skin on light side only.

Parasites —
   a. Nematodes — Each nematode with a capsular diameter greater than 3 mm or each worm not encapsulated, greater than 1 cm in length, or each worm which is objectionable by virtue of its dark colour or any other characteristic.
   b. Other Parasites — (to be elaborated in the light of government comments)
This table and the maximum allowable number of instances of defects are based on an AQL of 6.5. The defect table is not to be applied to individual packs but to consignments in association with the appropriate Sampling Plan. Instances of defects are assigned for the indicated occurrences in one kilogramme of product.

<table>
<thead>
<tr>
<th>Type of Defect</th>
<th>One Instance</th>
<th>Additional Instance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bones</td>
<td>(i) For fillets with an average count of less than 15 per kg a single bone greater than 10 mm in any dimension, or an agglomeration of bones greater than 5 mm in any dimension within an area of 3 cm²</td>
<td>Each additional occurrence, or an agglomeration of bones greater than 5 mm in any dimension covering an area greater than 3 cm²</td>
</tr>
<tr>
<td></td>
<td>(ii) For fillets with an average count of 15 or more per kg, a single bone greater than 5 mm in any dimension, or an agglomeration of such bones within an area of 3 cm²</td>
<td>Each additional occurrence, or an agglomeration of such bones covering an area greater than 3 cm²</td>
</tr>
<tr>
<td>- fillets not designated as boneless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood clots</td>
<td>A single bone greater than 5 mm in any dimension</td>
<td>Each additional occurrence</td>
</tr>
<tr>
<td>External fins</td>
<td>A clot greater than 5 mm in any dimension</td>
<td>Each additional occurrence</td>
</tr>
<tr>
<td>Skin (fillets designated as skinless or skin on light side only)</td>
<td>A piece greater than 2 cm² up to and including 5 cm²</td>
<td>Each additional occurrence and, for each piece over 5 cm², every additional complete 5 cm²</td>
</tr>
<tr>
<td>Belly wall (black membrane)</td>
<td>A piece greater than 3 cm² up to and including 5 cm²</td>
<td>Each additional occurrence and, for each piece greater than 5 cm², every additional complete 5 cm²</td>
</tr>
<tr>
<td>Discolouration</td>
<td>A significant discolouration of the flesh greater than 5 cm² up to and including 10 cm²</td>
<td>Each additional occurrence and, for each significant discolouration over 10 cm², every additional complete 5 cm²</td>
</tr>
<tr>
<td>Parasites</td>
<td>A nematode with a capsular diameter greater than 3 mm or a worm not encapsulated, greater than 1 cm in length, or a worm which is objectionable by virtue of its dark colour or any other characteristic</td>
<td>Each additional occurrence</td>
</tr>
</tbody>
</table>

Maximum Allowable Tolerances for Defects: A sample of one kg is considered defective if it contains
(a) more than 4 instances of bone defects; or
(b) a total of more than 7 instances of defects for fillets presented as skin on; or
(c) a total of more than 8 instances of defects for fillets presented as skinless or skin on light side only.
1. **SCOPE**

This standard applies to quick frozen raw shrimps or prawns and those which have been steamed, parboiled or fully boiled during processing and offered for direct consumption. It does not apply to products indicated as intended for further processing or speciality products where shrimps or prawns only constitute a portion of the edible contents.

2. **DESCRIPTION**

2.1 **Product Definition**

2.1.1 Quick frozen shrimps or prawns are obtained from species of the families Penaeidae, Pandalidae, Crangonidae and Palaemonidae.

2.1.2 Shrimps or prawns of comparable size and colour may be mixed. Shrimps or prawns of obvious visual differences shall not be mixed.

2.2 **Process Definition**

2.2.1 The shrimps or prawns can be:

(i) "Raw" – not exposed to temperatures over 38°C (100°F).

(ii) "Parboiled" – exposed to atmospheric steam or hot water for a period of time such that the surface of the product reaches a temperature adequate to coagulate the protein at the surface of the shrimp but inadequate to coagulate the protein at the thermal centre.

(iii) "Cooked" – exposed to steam or hot water for a period of time such that the thermal centre of the shrimp reaches a temperature adequate to coagulate the protein.

2.2.2 The product 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 crystallisation is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C (0°F) at the thermal centre after thermal stabilisation. The product shall be maintained at a low temperature such as will maintain the quality during transportation, storage and distribution up to and including the time of final sale.

The recognised practice of repacking quick frozen products under controlled conditions followed by the re-application of the quick freezing process as defined is permitted.

2.2.3 Shrimps or prawns shall be either individually quick frozen or quick frozen in mass. If individually quick frozen the shrimps or prawns shall be maintained substantially separate until the time of final sale.

2.3 **Presentation**

Shrimps or prawns shall be presented as:

2.3.1 Whole – Cephalothorax (head), shell and tail fans on.

2.3.2 Headless – Cephalothorax (head) removed shell and tail fans on.

2.3.3 Peeled (tail fans on) – Cephalothorax (head) removed and shell removed down to the last segment. The shell on the last segment and the tail fans to be present.

(i) Round – Prepared as described in 2.3.3.

(ii) Round and deveined – in addition to the preparation as described in 2.3.3, the back of the peeled segments of the shrimps or prawns have been cut open and the vein removed.
(iii) Fantail (split or cutlet) — in addition to the preparation described in 2.3.3 the peeled segments of the shrimps or prawns have been split longitudinally through the dorsal axis, laid open and the vein removed.

(iv) Western style — in addition to the preparation as described in 2.3.3 the peeled segments of the shrimps or prawns have been split completely and longitudinally through the dorsal axis of the first four segments, laid apart and the vein removed.

2.3.4 Peeled (tail fans removed) — Cephalothorax (head) and all shell including tail fans removed.

(i) Peeled — as described in 2.3.4

(ii) Peeled and deveined — in addition to peeling as described in 2.3.4, the back has been cut open and the vein removed.

2.3.5 Pieces — pieces of the product consisting of less than four segments of shrimps or prawns of such size that they would, if unbroken in the raw headless state, number more than 150/kg (70/lbs), or consisting of less than five segments of larger shrimps or prawns. Such pieces may be present in the products defined in sub-sections 2.3.1, 2.3.2, 2.3.3 and 2.3.4, subject to the tolerances provided for in 3.3.6. When pieces are packed and sold as such, they shall be designated in accordance with section 6.1.2.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

Quick frozen shrimps or prawns shall be prepared from clean and sound fresh or prefrozen shrimps or prawns of the designated species and be of such a quality that they are suitable for human consumption.

3.2 Optional Ingredients

Water utilized either for glazing, cooking or for freezing may contain:
- Salt
- Lemon juice
- Sugars (sucrose, invert sugar, dextrose, fructose, glucose syrup, lactose)
- Seasonings, spices, flavourings (hydrolyzed vegetable protein)

3.3 Final Product

3.3.1 Appearance

- Clean, generally uniform in size within any count category where appropriate, and easily separated when labelled as individually frozen.
- Colour characteristic of the species and habitat or areas from which harvested.
- Free from foreign material and practically free from: dehydration; blackening or other abnormal colouration; legs, loose shell, antennae, heads, parts of heads or veins as appropriate for the style of presentation; and free from torn, damaged or otherwise unacceptable shrimps or prawns.
- Free from pieces in any style of presentation except as provided for in sub-section 2.3.5 and subject to the tolerances provided for in sub-section 3.3.6.

3.3.2 Odour and flavour

After thawing and where applicable cooking, shrimps or prawns shall have a good characteristic odour and flavour and shall be free of objectionable odours and flavours of any kind. A natural odour or flavour reminiscent of iodoform is not a defect unless excessive.

3.3.3 Texture

Shrimps and prawns shall be relatively firm and not mushy. Texture will be assessed only after thawing in accordance with the procedure as set forth in this standard in sub-section 7.2 or where appropriate after cooking.
3.3.4 Glazing

Shrimps or prawns may be glazed either individually or in bulk. When glazed the coating of ice shall cover the shrimps or prawns so as to minimize dehydration and oxidation. The water used in glazing shall be of potable quality. Standards for potability shall be not less than those contained in the "International Standards for Drinking Water", World Health Organization. Any other ingredient or additive as listed in 3.2 and 4 respectively, used for glazing shall fulfill the hygiene requirements of section 5.

3.3.5 Size classification

Quick frozen shrimps or prawns in any style of presentation may be packed by count, i.e. the average number of shrimps or prawns per standard weight (or mass) expressed either in the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold, and may be so declared as described in Annex D.

3.3.6 Defects and tolerances

The quick frozen shrimps or prawns in the various styles of presentation shall comply with the definition and essential quality factors as set forth in this standard, subject to tolerance allowances as defined in Annex B and set out in Annex C.

4. FOOD ADDITIVES

The following additives in quick frozen shrimps or prawns are subject to endorsement by the Codex Committee on Food Additives:

<table>
<thead>
<tr>
<th>Additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>according to GMP</td>
</tr>
<tr>
<td>Ascorbic acid</td>
<td>according to GMP</td>
</tr>
<tr>
<td>Canthaxanthine C.I.75135</td>
<td>30 mg/kg of the final product, singly or in combination</td>
</tr>
<tr>
<td>Erythrosine C.I.45430</td>
<td></td>
</tr>
<tr>
<td>Ponceau 4R C.I.16255</td>
<td></td>
</tr>
<tr>
<td>Diphosphate, tetrasodium or tetrapotassium (Na or K pyrophosphate)</td>
<td>5 g/kg of the final product, expressed as P₂O₅; singly or in combination</td>
</tr>
<tr>
<td>Triphosphate, pentasodium or pentapotassium (Na or K tripolyphosphates)</td>
<td></td>
</tr>
<tr>
<td>Sodium bisulphite</td>
<td>(For use in raw product expressed as SO₂, singly or in combination)</td>
</tr>
<tr>
<td>Sodium sulphite</td>
<td></td>
</tr>
<tr>
<td>Sodium hyposulphite</td>
<td></td>
</tr>
<tr>
<td>Sodium or potassium metabisulphite</td>
<td></td>
</tr>
<tr>
<td>Hydrophilic colloids</td>
<td>(Governments to indicate which specific substances should be listed and at what level in the glazing water)</td>
</tr>
<tr>
<td>Monosodium glutamate</td>
<td>Limited by GMP</td>
</tr>
</tbody>
</table>

5. HYGIENE

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969) and the hygiene provisions of the Code of Practice for Shrimps and Prawns.

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 heat treated product:
   a. shall not contain any pathogenic microorganisms; and
   b. shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

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 product as declared on the label shall be "shrimp" or "shrimps" or "prawns" provided that such labelling is customarily used in the country where the products are to be sold and provided the product is identified to the consumer so that he will not be misled.

6.1.2 In addition, there shall appear on the label in conjunction with the name of the product, the style of presentation as indicated below:

<table>
<thead>
<tr>
<th>Style of presentation</th>
<th>Labelling designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole</td>
<td>Whole Shrimp, Shrimps or Prawns.</td>
</tr>
<tr>
<td>Headless</td>
<td>Headless Shrimp, Shrimps or Prawns.</td>
</tr>
<tr>
<td>Peeled (tail fans on)</td>
<td>Peeled (tail fans on) Shrimp, Shrimps or Prawns. In addition, one of the words &quot;Deveined&quot;, &quot;Fan tail&quot;, &quot;Cutlet&quot;, &quot;Butterfly&quot;, &quot;Split&quot; or &quot;Round&quot; may be used as appropriate.</td>
</tr>
<tr>
<td>Peeled (tail fans removed)</td>
<td>Peeled Shrimp, Shrimps or Prawns. In addition, the word &quot;Deveined&quot; may be used as appropriate.</td>
</tr>
<tr>
<td>Pieces</td>
<td>Pieces of Shrimp, Shrimps or Prawns - shell on.</td>
</tr>
<tr>
<td>Peeled Pieces or Broken Shrimp Meat</td>
<td>Peeled Pieces of Shrimp, Shrimps or Prawns. In addition, the word &quot;Deveined&quot; may be used if appropriate.</td>
</tr>
</tbody>
</table>

6.1.3 In the case of cooked products, an indication of the degree of cooking shall appear on the label: raw, parboiled or cooked, subject to the treatment provided for in sub-section 2.2.1.

6.1.4 (i) In addition there shall appear on the label the term "quick frozen" or "frozen* whichever is customarily used in the country of sale, to describe a product subjected to the freezing process as defined in sub-section 2.2.1.

(ii) Shrimps or prawns in any style of presentation may be individually quick frozen, and in such cases the labelling may be "individually quick frozen" or "individually frozen".

6.1.5 In addition to the specified labelling designations above, the usual or common trade names of the variety may be added so long as it is not misleading to the consumer in the country in which the product will be distributed.

6.2 **Size Classification**

6.2.1 If quick frozen shrimps or prawns are labelled as to count, the classification must comply with the provisions of sub-section 3.3.5.

6.2.2 If ungraded the product shall be so labelled.

* "Frozen": This term is used as an alternative to "quick frozen" in some English speaking countries.
6.3 **List of Ingredients**

When the shrimps or prawns are glazed no specific label declaration shall be required unless the cooking and/or glazing water contains additives, in which case a complete list of ingredients 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.

6.4 **Net Contents**

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

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

6.5 **Name and Address**

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

6.6 **Country of Origin**

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

6.6.2 When the 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.

6.7 **Lot Identification**

Each container shall be permanently marked in code or in clear to identify the producing factory, the date of production and the contents of the container.

7. **METHODS OF ANALYSIS AND SAMPLING**

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

7.1 **Sampling**

Sampling shall be in accordance with the **Sampling Plans for Prepackaged Foods** (CAC/RM 42-1969).

7.2 **Thawing** (Ref. CAC/RM 40-1971)

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

7.3 **Cooking** (Ref. CAC/RM 40-1971) (to be used prior to examination, as appropriate)

7.3.1 Steaming — Steam the sample in a closed dish of 18 cm (7 inches) diameter over boiling water for about 15-20 minutes if frozen, or for about 7-10 minutes after thawing the product. The dish should be covered and should be kept in a water bath at 60°C (140°F) during testing.

7.3.2 Boiling in Bag — Place the thawed sample into a boilable film-type pouch and seal. Immerse the pouch and its contents into boiling water and cook until the internal temperature of the product reaches 70°C (160°F) which requires about 20 minutes. Remove the boiled product from the pouch and drain.

7.4 **Examination of Physical Defects**

The sample shall be examined for defects set out in Annex B according to Annex C.

7.5 **Organoleptic Examination**

Organoleptic assessment shall be made by trained persons and shall take place after the sample has been thawed in accordance with the procedure as set forth in sub-section 7.2. When applicable, the sample shall be cooked prior to organoleptic assessment by a method set out in sub-section 7.3.
7.6 Determination of Net Contents of Products Covered by Glaze

Procedure

(1) Open the package with quick frozen shrimps or prawns immediately after removal from low temperature storage. Weigh the product free of all wrappings and record weight.

(i) For the raw product, place the contents in a container into which fresh water at room temperature is introduced from the bottom at a flow of approximately 25 litres per minute.

(ii) For the cooked product place the product in a container containing an amount of fresh potable water of 27°C (80°F) equal to 8 times the declared weight of the product. Leave the product in the water until all ice is melted. If the product is block frozen, turn block over several times during thawing. The point at which thawing is complete can be determined by gently probing the block apart.

(2) Weigh a dry clean sieve with woven wire cloth with nominal size of the square aperture 2.8 mm (ISO Recommendation R565) or alternatively 2.38 mm (U.S. no. 8 Standard Screen).

(i) If the quantity of the total contents of the package is 500 g (1.1 lbs) or less, use a sieve with a diameter of 20 cm (8 inches).

(ii) If the quantity of the total contents of the package is more than 500 g (1.1 lbs) use a sieve with a diameter of 30 cm (12 inches).

(3) After all glaze that can be seen or felt has been removed and the shrimps or prawns separate easily, empty the contents of the container on the previously weighed sieve. Incline the sieve at an angle of about 20° and drain for two minutes.

(4) Weigh the sieve containing the drained product. Subtract the mass of the sieve; the resultant figure shall be considered to be the net content of the package.

8. CLASSIFICATION OF DEFECTIVES

A container which fails to meet one or more of the following requirements shall be considered a "defective".

1. The quality requirements for the final product:
   (a) appearance (sub-section 3.3.1)
   (b) odour and flavour (sub-section 3.3.2)
   (c) texture (sub-section 3.3.3)

2. The tolerance for physical defects per sample unit of 500 g as shown in Annex B.

9. LOT ACCEPTANCE

A lot will be considered as meeting the requirements 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 Sampling Plans for Prepackaged Foods (CAC/RM 42-1969) and when the average net contents of all containers examined is not less than the specified minimum, and when the size of the shrimps or prawns complies with the declared count.
ANNEX A

The traditional practice followed in several countries of including "prawn", with some qualifying designation, in the common name of species which are not true prawns, such as "Dublin Bay Prawn" for Nephrops norvegicus, is recognised and nothing in the standard shall prevent this practice continuing provided due precautions are taken in the labelling of the product to ensure that the consumer in those countries will not be misled.

ANNEX B

DEFECTS IN QUICK FROZEN SHRIMPS OR PRAWNS
(to be examined in the thawed state)

Definition of Defects

(a) Dehydration — the shrimps or prawns shell or meat contains whitish areas which seriously affect its appearance, texture or palatability.

(b) Black spot — the shrimps or prawns shell or meat contains darkened areas which seriously affect its appearance.

(c) Cut or torn, damaged, piece

Cut or torn — a shrimp or prawn having a break in the meat greater than one third of the thickness of the shrimp or prawn at the location of the cut or tear.

Damaged — a shrimp or prawn which is crushed or mutilated so as to seriously affect its appearance.

Piece — a portion of a shrimp or prawn that contains less than five segments for counts less than 150/kg (70/lb) and less than four segments for counts over 150/kg (70/lb)

(d) Improperly peeled shrimps or prawns are those which have shell or pieces of shell on the meat in excess of that warranted by the style or presentation.

(e) Heads or parts of heads as well as shrimp having a soft shell.

(f) Legs, loose shells, and antennae.

Legs — walking legs either loose or attached to the shrimps or prawns.

Loose shell — any piece of shell which is completely detached from the shrimps or prawns.

(g) Incompletely deveined means any black or dark vein that has not been removed if warranted by style of presentation.

(h) Extraneous materials refers to any material in a container which is not shrimp material and is not harmful when eaten.
## ANNEX C

### DEFECT TABLE

A. This table and the maximum allowable number of instances of defects are based on an AQL of 6.5. The defect table is not applied to individual packs but to consignments in association with the Sampling Plan for Prepackaged Foods (1969). Instances of defects are awarded for the indicated occurrences per \( \frac{1}{2} \) kilogramme sample of product.

<table>
<thead>
<tr>
<th>Type of Defect</th>
<th>One Instance</th>
<th>Additional Instance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dehydration/desiccation</td>
<td>Not more than 440/kg (200/lb)</td>
<td></td>
</tr>
<tr>
<td>Black spot</td>
<td></td>
<td>+ 3%</td>
</tr>
<tr>
<td>- meat</td>
<td>8% by count</td>
<td>+ 4%</td>
</tr>
<tr>
<td>- shell</td>
<td>12% by count</td>
<td>+ 6%</td>
</tr>
<tr>
<td>Cut, torn, damaged or pieces (does not apply to 2.3.5)</td>
<td>9% by weight</td>
<td>+ 5%</td>
</tr>
<tr>
<td>Improperly peeled in relation to style or presentation</td>
<td>5% by weight</td>
<td>+ 3%</td>
</tr>
<tr>
<td>Heads, parts of heads and soft shell shrimp</td>
<td>3% by weight</td>
<td>+ 2%</td>
</tr>
<tr>
<td>Legs, loose shell and antennae</td>
<td>5 by number</td>
<td>+ 3%</td>
</tr>
<tr>
<td>Incompletely deveined (when specified)</td>
<td>5% by count</td>
<td>+ 3%</td>
</tr>
<tr>
<td>Extraneous material (not harmful)</td>
<td>2 by number</td>
<td>+ 1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dehydration/desiccation</th>
<th>Over 440/kg (200/lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black spot</td>
<td></td>
</tr>
<tr>
<td>- meat</td>
<td>8% by count</td>
</tr>
<tr>
<td>- shell</td>
<td>12% by count</td>
</tr>
<tr>
<td>Cut, torn, damaged</td>
<td>9% by weight</td>
</tr>
<tr>
<td>Pieces</td>
<td>25% by weight</td>
</tr>
<tr>
<td>Improperly peeled in relation to style or presentation</td>
<td>5% by weight</td>
</tr>
<tr>
<td>Heads, parts of heads and soft shell shrimp</td>
<td>3% by weight</td>
</tr>
<tr>
<td>Legs and loose shell</td>
<td>20 by number</td>
</tr>
<tr>
<td>Incompletely deveined (when specified)</td>
<td>5% by count</td>
</tr>
<tr>
<td>Extraneous material (not harmful)</td>
<td>2 by number</td>
</tr>
</tbody>
</table>

**Maximum Allowable Tolerances for Defects:** A sample of \( \frac{1}{2} \) kilogramme will be considered defective if it contains more than 4 instances of defects.

B. Tolerance for Uniformity

Uniformity of size is determined by computing the actual count per kilogramme or pound of the shrimps or prawns in the sample unit, and then allowing a tolerance of 10% (by number) to fall into the next larger or smaller bracket. The results from all containers of a sample representing a lot shall be averaged.
### Annex D

#### Size Classification (Optional)

<table>
<thead>
<tr>
<th>Number of shrimps or prawns per kilogramme</th>
<th>Number of shrimps or prawns per pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 22</td>
<td>Under 10</td>
</tr>
<tr>
<td>22 to 33 inclusive</td>
<td>10 to 15 inclusive</td>
</tr>
<tr>
<td>More than 33 but not more than 44</td>
<td>More than 15 but not more than 20</td>
</tr>
<tr>
<td>More than 44 but not more than 55</td>
<td>More than 20 but not more than 25</td>
</tr>
<tr>
<td>More than 55 but not more than 66</td>
<td>More than 25 but not more than 30</td>
</tr>
<tr>
<td>More than 66 but not more than 77</td>
<td>More than 30 but not more than 35</td>
</tr>
<tr>
<td>More than 77 but not more than 88</td>
<td>More than 35 but not more than 40</td>
</tr>
<tr>
<td>More than 88 but not more than 110</td>
<td>More than 40 but not more than 50</td>
</tr>
<tr>
<td>More than 110 but not more than 132</td>
<td>More than 50 but not more than 60</td>
</tr>
<tr>
<td>More than 132 but not more than 154</td>
<td>More than 60 but not more than 70</td>
</tr>
<tr>
<td>More than 154 but not more than 176</td>
<td>More than 70 but not more than 80</td>
</tr>
<tr>
<td>More than 176 but not more than 198</td>
<td>More than 80 but not more than 90</td>
</tr>
<tr>
<td>More than 198 but not more than 220</td>
<td>More than 90 but not more than 100</td>
</tr>
<tr>
<td>More than 220 but not more than 286</td>
<td>More than 100 but not more than 130</td>
</tr>
<tr>
<td>More than 286 but not more than 440</td>
<td>More than 130 but not more than 200</td>
</tr>
<tr>
<td>More than 440 but not more than 660</td>
<td>More than 200 but not more than 300</td>
</tr>
<tr>
<td>More than 660 but not more than 1100</td>
<td>More than 300 but not more than 500</td>
</tr>
<tr>
<td>Over 1100</td>
<td>Over 500</td>
</tr>
</tbody>
</table>

The count designation of quick frozen shrimps or prawns shall apply to the unglazed shrimps or prawns in the style of presentation designated on the label.

The following is an alternative method for size classification:

Quick frozen shrimps or prawns may be packed by size. The size classification shall relate to the unglazed shrimps or prawns contained in the final product, and may be expressed as a range indicating the average number of shrimps or prawns per unit of weight ("Système International" or avoirdupois). The difference between the maximum and minimum figures of the range shall not be greater than 20% of the average number, except for shrimps or prawns smaller than 220/kg (100/lb).
PROPOSED DRAFT STANDARD FOR QUICK FROZEN LOBSTERS, ROCK LOBSTERS,
SPINY LOBSTERS AND SLIPPER LOBSTERS

(returned to Step 3 of the Procedure for a further round of Government Comments)

1. **SCOPE**

This standard applies to quick frozen raw or cooked (steamed or boiled) lobsters, rock lobsters, spiny lobsters and slipper lobsters and to tails, claws and meat thereof offered for direct consumption. It does not apply to speciality packs where the flesh of the lobsters, rock lobsters, spiny lobsters or slipper lobsters constitutes only a portion of the edible contents.

2. **DESCRIPTION**

2.1 **Product Definition**

2.1.1 Quick frozen lobsters, rock lobsters, spiny lobsters and slipper lobsters are obtained from species of the Genera *Homarus*, *Palinurus*, *Panulirus*, *Jasus* and *Scyllaridae*.

2.1.2 Lobsters, rock lobsters, spiny lobsters and slipper lobsters of different varieties shall not be packed together.

2.2 **Process Definition**

2.2.1 The lobsters, rock lobsters, spiny lobsters and slipper lobsters can be:

(i) "Raw"— not exposed to temperatures over 38°C (100°F).

(ii) "Cooked" — exposed to steam or hot water for a period of time such that the thermal centre of the product reaches a temperature adequate to coagulate the protein.

2.2.2 The product shall be subjected to a freezing process and shall comply with the conditions laid down hereafter. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached —18°C (0°F) at the thermal centre after thermal stabilization. The product shall be maintained at a low temperature such as will maintain the quality during transportation, storage and distribution up to and including the time of final sale.

The recognized practice of repacking quick frozen products under controlled conditions followed by the re-application of the quick freezing process as defined is permitted.

2.2.3 The product shall be quick frozen either in mass or in individual units. If individually quick frozen, the units shall be packed in such a way as to maintain their individual separation until the time of final sale.

2.3 **Presentation**

Lobsters, rock lobsters, spiny lobsters and slipper lobsters shall be presented in the following styles:

2.3.1 Whole.

2.3.2 Whole, split. Split into two approximately equal halves down the centre line of the back. Clean with viscera removed.

2.3.3 Tail shell on. Alimentary tract removed.

2.3.4 Tail meat. Shell off, alimentary tract removed.

Each piece comprising the whole of the tail or a piece obtained by dividing the meat in a tail:

(a) Longitudinally into two pieces, or

(b) Transversely into not more than four pieces

2.3.5 Lobster meat — meat. The meat, without shell, of any part of the lobster, rock lobster, spiny lobster or slipper lobster not complying with sub-section 2.3.4.
3.

**ESSENTIAL COMPOSITION AND QUALITY FACTORS**

3.1 **Raw Material**

Quick frozen lobsters, rock lobsters, spiny lobsters and slipper lobsters shall be prepared from live, clean and sound lobster of the designated species and should be of such a quality that they are suitable for human consumption.

3.2 **Optional Ingredients**

Water utilized either for glazing, cooking or for freezing may contain:

(a) Salt
(b) Lemon Juice
(c) Sugars (to be listed)
(d) Vinegar

3.3 **Final Product**

3.3.1 **Appearance**

Easily separated without thawing when labelled as individually quick frozen. Colour generally uniform and characteristic of the species and habitat or areas from which harvested;

- in the case of the raw product, the flesh shall be white or pink as appropriate and translucent rather than opaque;
- in the case of the cooked product the flesh shall be white or pink as appropriate with no transulence indicating undercooking, firm, and where appropriate, easily detached from the shell;
- in the case of products in the shell, the shell shall be firm and unbroken as appropriate for the style of presentation, and reasonably free from algae or calcareous growth, detached legs or antennae;
- tail meat and lobster meat shall be practically free from shell, alimentary tract, viscera, blood or other extraneous material;
- all forms of presentation shall be free from foreign material and practically free from dehydration (freeze—burn), blackening or other abnormal discolouration.

3.3.2 **Odour and Flavour**

After thawing and, where applicable, cooking in accordance with Annex D, lobsters, rock lobsters, spiny lobsters and slipper lobsters shall have a good characteristic odour and flavour and shall be free of objectionable odours or flavours of any kind.

3.3.3 **Texture**

The flesh of lobsters, rock lobsters, spiny lobsters and slipper lobsters shall be relatively firm and not mushy or gelatinous. Texture will be assessed only after thawing in accordance with the procedure as set forth in this standard in sub—section 7.3 or where appropriate after cooking.

3.3.4 **Glazing**

Lobsters, rock lobsters, spiny lobsters and slipper lobsters may be glazed either individually or in bulk. When glazed the coating of ice shall cover the lobster so as to minimize dehydration and oxidation. The water used in glazing shall be of potable quality. Standards for potability shall be not less than those contained in the "International Standards for Drinking Water", World Health Organization. Any other ingredient or additive as listed in 3.2 and 4 respectively used for glazing shall fulfill the hygienic requirements of section 5.

3.3.5 **Defects and Tolerances**

Lobsters, rock lobsters, spiny lobsters and slipper lobsters in the various styles of presentation shall comply with the definition and essential quality factors as set forth in this standard, subject to tolerance allowances as set out in Annex B.
4. **FOOD ADDITIVES**

The following additives in quick frozen lobsters are subject to endorsement by the Codex Committee on Food Additives:

<table>
<thead>
<tr>
<th>Additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triphosphate, pentasodium or pentapotassium or calcium (Na, K or Ca tripolyphosphates)</td>
<td>5 g/kg of the final product expressed as $P_2O_5$, simply or in combination</td>
</tr>
<tr>
<td>Polyphosphate (Na — hexameta phosphate)</td>
<td>(Governments proposing such additives to provide maximum levels and technological justifications)</td>
</tr>
<tr>
<td>Sodium bisulphite</td>
<td>(Governments to indicate which specific substances should be listed and at what level in the glazing water)</td>
</tr>
<tr>
<td>Sodium sulphite</td>
<td></td>
</tr>
<tr>
<td>Sodium hyposulphite</td>
<td></td>
</tr>
<tr>
<td>Sodium or potassium metabisulphite</td>
<td></td>
</tr>
<tr>
<td>Hydrophilic colloids</td>
<td></td>
</tr>
<tr>
<td>Alginites</td>
<td></td>
</tr>
</tbody>
</table>

5. **HYGIENE**

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice — General Principles of Food Hygiene (CAC/RCP 1-1969) and the hygiene provisions of the Code of Practice for Frozen Fish.

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 heat treated product:

a. shall not contain any pathogenic microorganisms; and
b. shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

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 product shall be designated:

(i) if derived from *Homarus* species: Lobster;
(ii) if derived from *Panulirus*, *Palinurus* and *Jasus* species: Rock Lobster, Spiny Lobster, Crawfish;
(iii) if derived from *Scyllaridae* species: Slipper Lobster.

6.1.2 The style of presentation shall be declared as follows:

(i) whole: lobster, rock lobster, spiny lobster, slipper lobster, crawfish;
(ii) whole, split: split lobster, split rock lobster, split spiny lobster, split slipper lobster or split crawfish;
(iii) tail: lobster tail, rock lobster tail, spiny lobster tail, slipper lobster tail, crawfish tail;
(iv) tail meat: lobster tail meat, rock lobster tail meat, spiny lobster tail meat, slipper lobster tail meat, crawfish tail meat. (If tail in one piece, product may be designated lobster tail meat (whole), rock lobster tail meat (whole), spiny lobster tail meat (whole), slipper lobster tail meat (whole), crawfish tail meat (whole).)
(v) claw meat: lobster claw meat, lobster meat.
6.1.3 If cooked the word "cooked" shall appear on the label.

6.1.4 (i) In addition there shall appear on the label the term "quick frozen" or "frozen"* whichever is customarily used in the country of sale to describe a product subjected to the freezing process as defined in sub-section 2.2.2.

(ii) Lobster, rock lobsters, spiny lobsters and slipper lobsters in any style of presentation may be individually quick frozen, and in such case the labelling shall be "individually quick frozen" or "individually frozen".

6.1.5 In addition to the specified labelling designations above, the usual or common trade names of the variety may be added so long as it is not misleading to the consumer in the country in which the product will be distributed.

6.2 Size Classification

6.2.1 If quick frozen lobsters are labelled according to size, all lobsters in the container so designated must be within the declared size range subject to the tolerance provided in Annex B, paragraph 2.

6.3 List of Ingredients

When the lobsters are glazed no specific label declaration shall be required unless the glazing water contains additives, in which case a complete list of ingredients 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.

6.4 Net Contents

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

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

6.5 Name and Address

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

6.6 Country of Origin

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

6.6.2 When the 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.

6.7 Lot Identification

Each container shall be permanently marked in code or in clear to identify the producing factory, the date of production and the contents of the container.

7. METHODS OF SAMPLING, ANALYSIS AND EXAMINATION

The methods of analysis and sampling 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 (CAC/RM 42-1969) (AQL = 6.5).

* "Frozen": This term is used as an alternative to "Quick Frozen" in some English speaking countries.
7.2 **Determination of Net Contents of Products Covered by Glaze**

A method for the determination of net contents of products covered by glaze is set out in Annex C.

7.3 **Thawing**

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

7.4 **Examination of Physical Defects**

The tolerances allowable, on examination, for the defects set out in Annex A, should be the corresponding allowances set out in Annex B.

7.5 **Sensory Examination**

Sensory assessment shall be made only by trained persons and shall take place after the sample has been thawed or cooked where applicable by the methods set out in Annexes C and D.

8. **CLASSIFICATION OF DEFECTIVES**

A container which fails to meet one or more of the following requirements shall be considered a "defective":

1. The quality requirements for the final product:
   - (a) appearance (sub-section 3.3.1)
   - (b) odour and flavour (sub-section 3.3.2)
   - (c) texture (sub-section 3.3.3)

2. The tolerance for physical defects per sample unit as shown in Annex B.

9. **LOT ACCEPTANCE**

A lot will be considered as meeting the requirements 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 Sampling Plans for Prepackaged Foods (CAC/RM 42-1969) when the average net contents of all containers examined is not less than the specified minimum, and when the size of the lobsters complies with the declared count.
ANNEX A

DEFECTS IN QUICK FROZEN LOBSTERS

APPLICABILITY TO STYLES OF PRESENTATION

(a) Dehydration

Shell or meat contains whitish areas which seriously affect its appearance

(b) Discolouration - Shell

(c) Damaged - Less than 5 tail segments

- Cuts or scars penetrating shell

- Crushed

(d) Incomplete removal of alimentary tract

(e) Algæ or calcareous growth on shell

(f) Soft shell

(g) Detached loose shell

(h) Legs, antennae or pieces thereof in excess of number expected

(i) Extraneous material, i.e. material not derived from lobsters

ANNEX B

SAMPLE ACCEPTANCE

1. Tolerances for Defects

(a) Dehydration

(b) Discolouration - Shell and/or meat

(c) Damaged - Less than 5 tail segments

- Cuts or scars penetrating shell

- Crushed

(d) Incomplete removal of alimentary tract

(e) Algæ or calcareous growth on shell

(f) Soft shell

(g) Detached loose shell

(h) Detached loose shell-legs, antennae in excess of number expected

(i) Extraneous material (1) Harmless

(2) Harmful, e.g. glass

A sample will be judged defective should it exceed the tolerance in respect of any one of the defects listed.
2. Tolerance for Uniformity — Applicable to Styles (i), (ii) and (iii)

The average weight of lobsters in a container determined by dividing total weight of lobster by number, must be within designated weight range. No more than 10% of lobster by number may be outside the designated size range.

---

ANNEX C

DETERMINATION OF NET CONTENTS OF PRODUCTS COVERED BY GLAZE AND DETERMINATION OF WEIGHT OF INDIVIDUAL LOBSTERS, ROCK LOBSTERS, SPINY LOBSTERS OR SLIPPER LOBSTERS COVERED BY GLAZE

Procedure

1. Open the package containing quick frozen lobsters, rock lobsters, spiny lobsters or slipper lobsters immediately after removal from low temperature storage and place the contents in a container into which fresh water at room temperature is introduced.

2. Weigh a dry clean sieve with woven wire cloth with nominal size of the square aperture to be determined. The sieve must be of a diameter appropriate to the size of the lobster.

3. After all glaze that can be seen or felt has been removed, empty the contents of the container on the previously weighed sieve. Incline the sieve at an angle of about 20° and drain for two minutes.

4. Weigh the sieve containing the drained product. Subtract the mass of the sieve; the resultant figure shall be considered to be the net content of the package.

---

ANNEX D

COOKING PROCEDURES

1. Steaming — Steam the sample in a closed dish of an appropriate size over boiling water until the internal temperature of the product reaches 70°C (160°F). The dish should be covered and should be kept in a water bath at 60°C (140°F) during testing.

2. Boiling in Bag — Place the thawed sample into a boilable film-type pouch and seal. Immerse the pouch and its contents into boiling water and cook until the internal temperature of the product reaches 70°C (160°F). Remove the boiled product from the pouch and drain.
DRAFT STANDARD FOR CANNED CRAB MEAT

1. SCOPE

This standard applies to canned crab meat and does not apply to speciality products where the crab meat constitutes only a part of the edible contents.

2. DESCRIPTION

2.1 Product Definition

Canned Crab Meat is the product consisting of leg, claw, body and shoulder meat from which the shell has been removed, of any of the edible species of the sub-order Brachyura of the order Decapoda and all species of the family Lithodidae packed in hermetically sealed containers and so processed with heat as to prevent spoilage.

2.2 Presentation

Canned crab meat may be presented as:

2.2.1 Two End Leg Pack

The top and the bottom of the content of the pack shall consist of leg meat or leg meat together with either claw or shoulder meat, having their original conformation except merus meat which may be cut according to can width. The pieces should appear well arranged with the large pieces of merus meat placed in the middle between small leg meat, claw or shoulder meat pieces.

The inner portion of the content of the pack shall consist of solid pieces of crab meat and flakes. For the Two End Leg Pack the amount of merus meat shall be not less than 18% and flakes not more than 2% of the declared net weight.

2.2.2 One End Leg Pack

Either end of the content of the pack shall consist of leg meat or leg meat together with either claw or shoulder meat, having their original conformation. The pieces should appear well arranged. The remaining content shall consist of solid pieces of crab meat and flakes.

2.2.3 Chunk Pack - consists of solid pieces of crab meat and flakes.

2.2.4 Flake Pack - consists of flakes only.

2.2.5 Lump Pack - consists of large segments of crab meat from the back fin cavity.

2.2.6 Claw Pack - consists of claw meat.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material

Canned crab meat shall be prepared from clean and sound crab, which is suitable for human consumption, killed just before processing or possible intermediate freezing.

3.2 Ingredients

The packing medium, where used, may only consist of water and salt.

3.3 Processing

The crab shall be cooked and the meat shucked. Damaged or discoloured meat associated with bruises or small wounds shall be removed. The meat shall be cleaned, wrapped or not, and packed.
3.4 **Canned Product**

(a) **Appearance**

On opening the cans shall appear well filled. The finished product shall have a good appetizing appearance and its colour shall be a colour characteristic of the species and be free from extraordinary discoloration, e.g. blue discoloration, browning or black spots.

(b) **Odour and flavour**

Canned crab meat shall have a good characteristic odour and flavour of the species and proper salinity and be free from objectionable odours of any kind.

(c) **Texture**

Canned crab meat shall have characteristic texture and not be mushy.

(d) **Shell residues**

Canned crab meat shall be free from foreign material and practically free from shell particles, antennae or other extraneous material. Tendons in intact pieces of leg, claw and shoulder meat are not considered a defect.

(e) **Struvite crystal**

Canned crab meat shall be nearly free of struvite crystal.

4. **FOOD ADDITIVES**

The following provisions in respect of food additives and their specifications as contained in Section... of the Codex Alimentarius are subject to endorsement by the Codex Committee on Food Additives:

<table>
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<tr>
<th>Additives</th>
<th>Maximum level in the final product</th>
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<td>Sodium acid pyrophosphate</td>
<td>5000 mg/kg expressed as $\text{P}_2\text{O}_5$</td>
</tr>
<tr>
<td>Citric acid</td>
<td></td>
</tr>
<tr>
<td>Phosphoric acid</td>
<td></td>
</tr>
<tr>
<td>Aluminium sulphate</td>
<td>180 mg/kg as aluminium sulphate</td>
</tr>
</tbody>
</table>

5. **HYGIENE**

5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1 – 1969).

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 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.

5.4 Products with an equilibrium pH above 4.5 shall have received a processing treatment sufficient to destroy all spores of Clostridium botulinum, unless growth of surviving spores is permanently prevented by product characteristics other than pH.
6. WEIGHTS AND MEASURES

Net Contents

6.1.1 Wrapped - Containers shall be filled so that the net contents by weight shall be more than 80% of the water capacity of the container.

6.1.2 Unwrapped - Containers shall be filled so that the net contents by weight shall be more than 88% of the water capacity of the container.

6.1.3 Broth or Free Liquid - The container shall be so filled with crab meat that the drained broth or free liquid shall not be more than 20% of the declared net weight.

7. 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 which have to be endorsed by the Codex Committee on Food Labelling shall apply:

7.1 The Name of the Food

The name of the product shall be "crab meat" preceded or followed by the common or usual name applied to the species legally accepted in the country where the product is distributed.

7.2 Presentation

The forms of the pack as described in subsection 2.2.1 - 6 respectively shall be declared as follows:

7.2.1 Two End Leg Pack
7.2.2 One End Leg Pack
7.2.3 Chunk Pack
7.2.4 Flakes
7.2.5 Lump Meat
7.2.6 Claw Meat

7.3 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion.

7.4 Net Contents

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

7.5 Name and Address

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

7.6 Country of Origin

7.6.1 The country of origin of the food shall be declared if its omission would mislead or deceive the consumer.
7.7 **Lot Identification**

Each container shall be embossed or otherwise permanently marked in code or clear to identify the producing factory, the date of production and the contents of the container.

8. **METHODS OF ANALYSIS AND SAMPLING**

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

8.1 **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 (CAC/RM 42-1969) (AQL - 6.5).

8.2 **Determination of Broth or Free Liquid**

Broth or free liquid shall be determined by averaging the results from all containers of a sample representing a lot, provided that there shall be no unreasonable overweight in any individual container.

**Procedure**

1. Keep the unopened containers at about 20°C (68°F) for a minimum of 12 hours immediately prior to examination.

2. Open the can by cutting around the inside of the top or bottom seam, leaving about 1 cm (3/8 inch) uncut. If parchment or similar liners are used, pry back cover, unfold liner to permit free drainage and press cover back to retain solid contents.

3. Place the can on a tared beaker or similar container at an angle of approximately 25° from horizontal and allow to drain for 2 minutes.

4. Weigh beaker and subtract tare.

8.3 **Determination of Water Capacity of Container**

**Procedure**

1. Select a container which is undamaged in all respects.

2. Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.

3. Fill the container with distilled water at 20°C to 5 mm vertical distance below the top level of the container, and weigh the container thus filled.

4. Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.4 **Determination of Net Content**

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

**Procedure**

1. Weigh the unopened container.
(2) Open and pour out the contents and allow the container to drain for two minutes.

(3) Weigh the empty container, including the top and wrapping material if present, after removing excess broth or liquid and adhering meat.

(4) Subtract the mass of the empty container and wrapping material, if present, from the mass of the unopened container. The resultant figure shall be considered to be the net content.

8.5 Examination of Product Quality

After examination for net content, the sample taken for destructive examination shall be examined organoleptically by persons trained in such examination.

8.6 Classification of "Defectives"

A container which fails to meet any of the applicable requirements for appearance, odour and flavour, texture, shell residue, and struvite crystal as set out in subsections 3.4(a), (b), (c), (d) and (e) shall be considered a "defective".

8.7 Lot Acceptance

A lot will be considered as meeting the requirements 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 Sampling Plans for Prepackaged Foods (CAC/RM 42-1969) and when the average net contents and the average broth or free liquid of all containers examined is not less than or not more than specified in sub-section 6.1 and when no container has objectionable flavours and odours indicative of decomposition or contamination and the presence of foreign materials.
PROPOSED DRAFT STANDARD FOR CANNED MACKEREL AND JACK MACKEREL

APPENDIX VI

1. SCOPE

This standard applies to canned mackerel and canned jack mackerel packed with or without seasonings in natural juices, brine (water with salt added), oil or sauce. It does not apply to speciality products where mackerel only constitutes a portion of the edible contents.

2. DESCRIPTION

2.1 Product Definition

Canned mackerel and canned jack mackerel is the product prepared from fish of the species listed below, packed with or without seasonings in natural juices, brine (water with salt added), oil or sauce and seasoning in hermetically sealed containers and so processed by heat as to prevent spoilage.

The products are prepared from the following species:

- Mackerel
  - Scomber colias
  - Scomber scombrus
  - Scomber japonicus
  - Scomber japonicus Houttuyn
  - Scomber japonicus tapeinocephalus Bleeker
  - Scomber japonicus Diego Ayres
  - Scomber japonicus marplatensis
  - Scomber japonicus peruanus Jordan and Hubbs
  - Scomber japonicus australasicus

- Jack mackerel
  - Trachurus declivis
  - Trachurus trachurus
  - Trachurus symmetricus
  - Trachurus symmetricus murphyi Nichols
  - Trachurus punctatus
  - Caranx rhomhus

2.2 Presentation

2.2.1 Style — natural.

2.2.1.1 In natural juice — salt may be added.

2.2.1.2 In water with salt added — salt or brine shall be added.

2.2.1.3 In oil — edible oil shall be added.

2.2.1.4 In sauce — sauce shall be added.

2.2.2 Style — smoked.

2.2.2.1 In natural juice — salt may be added.

2.2.2.2 In water with salt added — salt or brine shall be added.

2.2.2.3 In oil — edible oil shall be added.

2.2.2.4 In sauce — sauce shall be added.

2.2.3 Form of pack — canned mackerel and canned jack mackerel may be presented as:

2.2.3.1 Regular pack — whole dressed fish without head with skin and bone placed parallel to the length of the container. A piece or segment may be added to fill a container.

2.2.3.2 Solid — fish cut into transverse segments from which bones have been removed and to which no free fragments are added. Segments are placed in the can with the planes of their transverse cut ends parallel to the ends of the can. A piece or segment may be added if necessary, to fill a container.
2.2.3.3 Fillets with skin — are segments of flesh cut along the backbone, skin—on; the bones have been removed.

2.2.3.4 Fillets — are segments of flesh cut along the backbone; the skin and bones have been removed.

2.2.3.5 Chunk or chunks — a mixture of pieces of cooked fish most of which have dimensions of not less than 1.2 cm (one half inch) in each direction and in which the original muscle structure is retained.

2.2.3.6 Flake or flakes — a mixture of particles of cooked fish in which the muscular structure of the flesh is retained.

2.2.3.7 Grated or shredded — a mixture of particles of cooked fish meat that have been reduced to a small size and in which particles do not adhere to one another and do not comprise a paste.

ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Material
The product shall be prepared from clean, wholesome, sound fish belonging to one of the species listed under sub—section 2.1. The raw material may be either fresh, frozen or smoked and must be suitable for human consumption.

3.2 Packing Media
3.2.1 Edible oils, tomato sauce and other sauces — in conformity with the relevant Codex Alimentarius standards.

3.2.2 Potable water — of properties in accordance with the WHO requirements contained in the "International Standard for Drinking Water".

3.3 Optional Ingredients
3.3.1 Salt.

3.3.2 Spices, vegetable seasonings and vinegar.

3.4 Processing
Heads (including gills), pectoral fins when practicable, tails, viscera (excluding kidneys) and blood shall be completely removed; damaged flesh associated with bruises and/or blood spots shall be cut away; the fish shall be well washed; the body cavity shall be thoroughly cleaned; the fish may be cooked and shall be well packed in accordance with the form of pack desired, in clean containers which are free from dents, rust or defective seams. After packing the containers shall be heat processed and cooled.

3.5 Final Product
3.5.1 On opening, the cans shall be well filled with fish. The products shall be practically free from skin (except when presented as skin—on pack), prominent blood streaks, blood clots, bones (except when presented as regular pack, in which case the bone shall be soft), bruises and honey—combing. The colour, texture, odour and flavour shall be characteristic of good quality canned mackerel of the particular species.

FOOD ADDITIVES
The following additives in canned mackerel and canned jack mackerel are subject to endorsement by the Codex Committee on Food Additives:

<table>
<thead>
<tr>
<th>Additive</th>
<th>Maximum level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carboxymethyl Cellulose (CMC)</td>
<td>800 mg/kg in the final product</td>
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<tr>
<td>Natural flavours, e.g.</td>
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<tr>
<td>— spice oils</td>
<td>Limited by G.M.P.</td>
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<td>— spice extracts</td>
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<tr>
<td>Smoke flavours</td>
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</tr>
</tbody>
</table>
5. HYGIENE

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Practice — General Principles of Food Hygiene (CAC/RCP 1-1969).

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

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 which have to be endorsed by the Codex Committee on Food Labelling shall apply.

6.1 Name of the Food

The name of the food shall be mackerel, whether qualified or not, 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. The description mackerel shall not be applied to fish of any species other than those listed in sub-section 2.1.

6.2 Form of Pack and Style

The form of pack and the specific description of the packing medium shall be declared on the label.

6.3 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion. The 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.

6.4 Net Contents

The 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 food is sold.

6.5 Name and Address

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

6.6 Country of Origin

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

6.6.2 When the 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.

6.7 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or clear to identify the producing factory, the date of production and the contents of the container.

7. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling 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 (CAC/RM 42-1969) (AQL - 6.5).

7.2 Sensory Examination
Sensory assessment of canned mackerel shall be made only by trained persons.

7.3 Determination of Net Contents
Net content shall be determined by averaging the results from all containers of a sample representing a lot, provided that there shall be no unreasonable shortage in any individual container.

Procedure
(1) Weigh the unopened container.
(2) Open and pour out the contents and allow the container to drain for two minutes.
(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.

8. CLASSIFICATION OF DEFECTIVES
A container which fails to meet the end product requirements in accordance with 3.5 shall be considered a "defective".

9. LOT ACCEPTANCE
A lot will be considered as meeting the requirements of this standard when the number of "defectives" as classified in accordance with section 8 does not exceed the acceptance number (c) of the appropriate sampling plan (AQL - 6.5) in the Sampling Plans for Prepackaged Foods (1969).

SAMPLING PLAN  [To be developed]
DEFECT TABLE  [To be developed]
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