CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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REP 13/FFP

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Thirty-sixth Session
Rome, Italy, 1 - 5 July 2013

REPORT OF THE THIRTY-SECOND SESSION OF THE CODEX COMMITTEE ON FISH AND FISHERY PRODUCTS

Bali, Indonesia
1 – 5 October 2012

Note: *This document incorporates Circular Letter CL 2012/31-FFP*

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CX 5/35 **CL 2012/31-FFP**
October 2012

TO: Codex Contact Points
Interested International Organizations

FROM: Secretariat, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, 00153 Rome, Italy

SUBJECT: **Distribution of the Report of the 32nd Session of the Codex Committee on Fish and Fishery Products (REP 13/FFP)**

A. MATTERS FOR ADOPTION BY THE 36TH SESSION OF THE CODEX ALIMENTARIUS COMMISSION

Draft Standards and Related Texts at Step 8 and Step 5/8 of the Procedure

1. Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish (para. 40, Appendix III);
2. Draft Standard for Live Abalone and for Raw Fresh Chilled or Frozen Abalone for Direct Consumption or for Further Processing (para. 83, Appendix IV);
3. Proposed Draft Amendment to the Standard for Quick Frozen Fish Sticks (para. 108, Appendix V);
4. Proposed Draft Revision of the Procedure for the Inclusion of Additional Species in Standards for Fish and Fishery Products (para. 128, Appendix VI); and
5. Amendments to sections I-6.5, I-8.5 and II-8.7 of the Standard for Live and Raw Bivalve Molluscs (CODEX STAN 292-2008) and Sections 7.1 and 7.2.2.2 to the Code of Practice for Fish and Fishery Products (CAC/RCP52 – 2003) (paras 12 and 14, Appendix II).

Governments wishing to propose amendments or comments on the above documents should do so in writing in conformity with the Guide to the Consideration of Standards at Step 8 and Step 5/8 (see Procedural Manual of the Codex Alimentarius Commission) to the above address **before 15 May 2013**.

Proposed Draft Standards and Related Texts at Step 5 of the Procedure

6. Proposed Draft Performance Criteria for Reference and Confirmatory Methods for Marine Biotoxins (Section I-8.6 Determination of Biotoxins) in the Standard for Live and Raw Bivalve Molluscs (CODEX STAN 292-2008) (para. 99, Appendix VII).

Governments wishing to propose amendments or comments on the above documents should do so in writing in conformity with the Guide to the Consideration of Standards at Step 5 (see Procedural Manual of the Codex Alimentarius Commission) to the above address **before 15 May 2013**.

B. REQUEST FOR COMMENTS

Proposed Draft Standards and Related Texts at Step 6 of the Procedure

7. Draft Section 4 Food Additives in the Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish (para. 40, Appendix VIII); and

8. Draft Standard for Raw, Fresh and Quick Frozen Scallop Products (para. 68, Appendix IX).

Governments wishing to submit comments should do so in writing to the above address **before 30 June 2013.**

SUMMARY AND CONCLUSIONS

The summary and conclusions of the 32nd Session of the Codex Committee on Fish and Fishery Products are as follows:

Matters for adoption by the Commission:

The Committee:

- advanced to Step 8 and Step 5/8 the Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish (para. 40, Appendix III); the Draft Standard for Live Abalone and for Raw Fresh Chilled or Frozen Abalone for Direct Consumption or for Further Processing) (para. 83, Appendix IV); the Proposed Draft Amendment to the Standard for Quick Frozen Fish Sticks (para. 108, Appendix V); and the Proposed Draft Revision of the Procedure for the Inclusion of Additional Species in Codex Standards for Fish and Fishery Products (para. 128, Appendix VI).
- advanced to Step 5 the Proposed Draft Performance Criteria for Reference and Confirmatory Methods for Marine Biotoxins in the *Standard for Live and Raw Bivalve Molluscs* (section I-8.6 Determination of Biotoxins) (para. 99, Appendix VII) and discontinued the Proposed Draft Performance Criteria for Screening Methods for Marine Biotoxins in the Standard for Live and Raw Bivalve Molluscs (para. 103). and
- forwarded the amendments to Section I-6.5, I-8.5 and II-8.7 of the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008) following advice from the CCFH and to amend Sections 7.1 and 7.2.2.2 to the *Code of Practice for Fish and Fishery Products* (CAC/RCP52 – 2003) (para. 12, Appendix II) as a consequence of the aforementioned decision on the *Standard for Live and Raw Bivalve Molluscs* and following the adoption of the *Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food* by the 35th CAC. (paras 12 and 14, Appendix II).

Proposals for New Work

The Committee agreed to submit to the Commission, through the Executive Committee a proposal for new work on:

- Proposed Draft Code of Practice for Processing of Fish Sauce (para. 153, Appendix X).

Other matters of interest to the Commission:

The Committee:

- agreed to return the Proposed Section 4 Food Additives in the Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish (para. 40, Appendix VIII); and the Draft Standard for Raw, Fresh and Quick Frozen Scallop Products (para.68, Appendix IX) to Step 6 for comments and further discussion at the next session;
- agreed to return to Step 2/3 for redrafting, comments and further discussion at the next session, the Proposed Draft Code of Practice on the Processing of Scallop Meat (paras 90-91) and the Proposed Draft Code of Practice for Fish and Fishery Products (section on sturgeon caviar) (para. 135); and
- agreed to delete Appendix XII to the Code of Practice for Fish and Fishery Products and to reference the relevant additional Codex texts in the appropriate sections of the Code of Practice for Fish and Fishery Products (para. 141) and to request comments on how to proceed with the other appendices on optional final product requirements to the Code of Practice for Fish and Fishery Products (para. 140); to continue consideration of food additive provisions in standards for fish and fishery products (paras 142-143); and histamine from fish and fishery products (paras 144-150); and the usefulness of nitrogen factors (paras 109-112).

Matters of interest to Other Committees and Task Forces

Committee on Food Labelling (CCFL)

With regard to the work on organic aquaculture, the Committee agreed to request CCFL to take into account the Code of Practice for Fish and Fishery Products, if relevant. (paras 7-8).

Committee on Contaminants in Foods (CCCF)

The Committee agreed that should new work be undertaken by CCCF on guideline levels for methylmercury in fish and predatory fish, the CCFFP should be kept informed and consulted on the work (para. 9).

Committee on Food Additives (CCFA)

The Committee agreed to set a ML of 200mg/kg (as tartrates) for the provision of tartrates in the Standard for Fish Sauce as recommended by the CCFA (para. 13).

The Committee agreed to ask the CCFA to consider the inclusion of "carrier" as a functional class in the Class Names and the International Numbering System for Food Additives (CAC/GL 36-1989) (para. 34).

The Committee agreed to propose to CCFA to insert a note to certain additives to specify that they were not allowed in the products covered by the Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish within category 09.2.5 (paras 37-38).

Committee on Food Import and Export Inspection and Certification Systems (CCFICS)

The Committee agreed to request advice from CCFICS on whether it is appropriate to have provisions that stipulate that countries may establish their own scientifically supported criterion and to allow an importing country to discuss the implementation of this criterion on a species by species basis in commodity standards and the implications thereof or whether the matter could be addressed through a more general text (para. 62, section 8.7 of the Draft Standard for Raw, Fresh and Quick Frozen Scallop Products, Appendix IX).

Committee on Methods of Analysis and Sampling (CCMAS)

The Committee agreed to request clarification from the Committee on Methods of Analysis and Sampling on whether methods should meet both LOD and LOQ or either of the two. (para. 96).

Committee on Food Hygiene (CCFH)

The CCFFP established an electronic working group on histamine in fish which would consider, amongst others, views from CCFH on the report of the Joint FAO and WHO Expert Meeting on the Public Health Risks of Histamine and other Biogenic Amines from Fish and Fishery Products, if applicable (para. 150).

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INTRODUCTION

1. The Codex Committee on Fish and Fishery Products (CCFFP) held its 32nd Session in Bali, Indonesia, from 1 to 5 October 2012 at the kind invitation of the Government of Indonesia. Dr Bjørn Røthe Knudsen, Regional Director of the Norwegian Food Safety Authority, chaired the session. The Session was attended by 152 delegates representing 58 Member Countries and one Member organization and Observers from 1 international organization. The list of participants is attached as Appendix I to this Report.

OPENING OF THE SESSION

2. Mr Suprapto, Acting Director-General of the National Standardization Agency of Indonesia, welcomed the participants. He thanked the Government of Norway for the opportunity to co-host the Session, which Indonesia considered as a milestone to host a Codex committee in the future. He said that CCFFP was one of the most important commodity Committees in Codex, whose standards were used as references for national legislation in many countries.

3. The Honorable Dr Gellwynn Jusuf, Secretary-General of the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, opened the Session. The Secretary-General also welcomed the participants and emphasized the importance of Codex, in particular the CCFFP, especially for Indonesia as a producer and a major consumer of fishery products. The Secretary-General said that Indonesia had more than 323 National Standards for fishery products based on Codex Standards and that Indonesia would continue to develop national standards for fishery products in order to produce high quality, safe, sustainable and competitive products.

Division of Competence[1]

4. The Committee noted the division of competence between the European Union (EU) and its Member States, according to paragraph 5, Rule II of the Procedure of the Codex Alimentarius Commission, as presented in CRD 1.

ADOPTION OF THE AGENDA (Agenda Item 1)[2]

5. The Committee agreed to adopt the Provisional Agenda as the Agenda for the session.

MATTERS REFERRED TO THE COMMITTEE BY THE CODEX ALIMENTARIUS COMMISSION AND OTHER CODEX COMMITTEES (Agenda Item 2a)[3]

6. The Committee noted the information provided in CX/FFP 12/32/2 and made the following comments or decisions:

Organic Aquaculture

7. The Committee considered a proposal of Norway as presented in CRD19 to request CCFL to consider in its work on organic aquaculture, the Code of Practice for Fish and Fishery Products, amongst others, to avoid duplication of work. The Secretariat clarified that the work on organic aquaculture was specifically focused on the requirements for organic production and that no duplication of work was foreseen. The Secretariat further indicated that the document was still under development at Step 2/3 and would be considered by the next session of CCFL in 2013, whereafter it would be sent to the CCFFP for information and/or comments. The Secretariat also stressed the need for coordination at the national level when considering the matter in CCFL.

8. In view of the concerns expressed, the Committee agreed to request CCFL to take into account the Code of Practice for Fish and Fishery Products, if relevant.

Review of Guideline levels for methylmercury

9. The Committee noted that the Committee on Contaminants in Foods would be discussing the review of guideline levels for methylmercury in fish and predatory fish at its next session. The Committee agreed that should new work be undertaken by CCCF in this regard, CCFFP should be kept informed and consulted on the work.

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1 CRD 1 (European Union Division of Competence)
2 CX/FFP 12/32/1
3 CX/FFP 12/32/2, CRD19 (comments of Norway)

Criterion for *Salmonella* in the Standard for Live and Raw Bivalve Molluscs (CODEX STAN 292-2008)

10. The Committee agreed to remove the criterion for *Salmonella* from section I-6.5 and to make consequential amendments to sections I-8.5 and II-8.7, based on the conclusions of the FAO and WHO Expert Group on *Salmonella* in bivalves (see Agenda item 2b) and the recommendation of the 43rd session of CCFH.

11. The Committee considered the further proposal by CCFH to include in section 7.2.2.2 of the Code of Practice for Fish and Fishery Products "when appropriate, taking into account the epidemiological situation as indicated by the results of environmental monitoring and/or other surveillance, the competent authority may decide to implement a criterion for *Salmonella"*. Some delegations expressed the view that such an inclusion was not necessary as section 7.2.2.2 sufficiently covered this matter, while another delegation believed that such guidance from CCFH was contrary to the conclusions and recommendations of the expert meeting and should not be included. Several delegations supported the amendment to section 7.2.2.2, noting section 7.2.2.2 dealt with monitoring, whereas the proposal from CCFH was specifically about the implementation of a criterion. In view of the discussion, the Committee therefore agreed to amend section 7.2.2.2 as proposed by CCFH.

12. The Committee agreed to send the amendments to the *Standard for Live and Raw Bivalve Molluscs* (sections I-6.5, I-8.5 and II-8.7) and the *Code of Practice for Fish and Fishery Products* (section 7.2.2.2) to the 36th Session of the Commission for adoption (Appendix II).

Standard for Fish Sauce (CODEX STAN 302-2011)

13. The Committee agreed to set a ML of 200 mg/kg (as tartrates) for the provision of tartrates as recommended by the Committee on Food Additives.

Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food

14. The Committee noted and supported the Guidelines, but agreed that there was a general need for more communication among committees to avoid duplication of work and that CCFFP should have been consulted earlier in the development of the guidelines. Since the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003) also contained a section on bivalves, it was agreed to introduce a reference to the Annex on Control of Hepatitis A virus (HAV) and Norovirus in bivalves in the *Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food* in section 7.1, paragraph 4. It was further agreed to insert a reference to the Guidelines on the *Application of General Principles of Food Hygiene to the Control of Pathogenic Vibrio species in Seafoods* (CAC/GL 73-2010), as also relevant. The Committee agreed to send these amendments to the 36th Session of the Commission for adoption (Appendix II).

15. The Committee further noted a proposal for revision of the Guidelines on the Application of Food Hygiene to the Control of Viruses with regard to sampling approaches for viruses and interpretation of PCR results, and encouraged delegates to bring this matter to the attention of the CCFH.

MATTERS ARISING FROM THE WORK OF FAO AND WHO (Agenda Item 2b)[4]

16. The Representative of FAO, on behalf of FAO and WHO, explained the conclusions of the FAO/WHO Expert Meeting on *Salmonella* in bivalve molluscs (20-21 October 2011) which addressed the questions from CCFFP on whether there is a significant public health risk associated with *Salmonella* in live and raw bivalves and whether the criterion and the accompanying sampling plan in the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008) would be meaningful for public health protection. The Expert Meeting noted that in parts of the world, where bivalve harvesting for direct human consumption (HDHC) was controlled through sanitary surveys using faecal coliforms or *Escherichia coli*, 0.5-2% samples could be positive for *Salmonella*, but epidemiological evidence from these regions indicated that there had been very few outbreaks (in the order of one every few years) and usually involving a relatively small number (<10) of consumers. Thus, the Expert Meeting concluded that bivalves harvested from HDHC areas do not cause frequent outbreaks of salmonellosis.

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4 CX/FFP 12/32/2-Add.1

17. The Expert Meeting used two approaches to address the question on the usefulness of the criterion. The first, based on available data, looked at the incremental value of the *Salmonella* test over the faecal indicator (faecal coliform/*E. coli*) test. This indicated that performing *Salmonella* tests in addition to the *E. coli* test would increase the number of unacceptable lots detected from 9.0 to 9.5%. The second theoretical approach was based on the performance of the n=5, c=0, m=0/25 g, which cannot reliably detect contamination levels of less than 2-5 cells of *Salmonella*/ 200 g serving. According to FAO/WHO dose response model for Salmonella, the probability of illness from ingesting 2 cells of *Salmonella* is predicted to be 1 in 200. Thus, the assurance provided by the criterion is that the risk was less than 1 in 200 and epidemiological data indicated that it is much lower than that. Therefore, the conclusion of the Expert Meeting was that the *Salmonella* criterion provided little or no additional protection above that achieved by the current risk management strategy using faecal indicators.

18. The representative of FAO also provided an update on the work done with respect of pathogenic *Vibrio* spp along the lines recommended by the 42nd Session of Codex Committee on Food Hygiene. Steps 1 and 2 recommended by CCFH were addressed by the Expert Meeting held during 17–19 October 2011 that identified the possible end uses of *Vibrio* methodology, evaluated the performance characteristics of available methods, provided recommendations on the requirements of different end uses and on collection of data to support national/regional risk assessments. In starting to address Step 3, a Regional training programme in Asia is scheduled to be held in Singapore during 19 – 23 November 2012.

19. To provide scientific support for the CCFFP work on histamine in fish and fishery products, FAO/WHO implemented a Joint Expert Meeting on the public health risks of histamine and other biogenic amines in these products on 23-27 July 2012. The expert meeting concluded that histamine is not a reliable indicator of decomposition in fish and decided to focus on consumer protection. A dose of 50 mg of histamine was agreed as the no-observed-adverse effect level (NOAEL) that could be used as the appropriate hazard level and based on a serving size of 250 g, the level of histamine that would not cause adverse effect would be 200 mg/kg. The meeting developed the most comprehensive list of fish associated with scombroid fish poisoning (SFP). The meeting concluded that the risk from SFP is best mitigated by applying basic GHPs and where feasible, HACCP system and sampling plan and testing is to be used to verify effectiveness of the control measures and detect failures in the system. In order to provide more explicit guidance on sampling approaches, the meeting analysed a range of sampling plans implemented under different scenarios of histamine levels as defined by mean and standard deviation and presented examples of attributes sampling plans appropriate for different levels of tolerance for samples above 200 mg/kg. In order to give more detailed guidance on sampling plans, a presentation by Dr Tom Ross, leader of the group on sampling plans in the Expert meeting was arranged during the session.

20. The representative of FAO provided information on the Joint FAO/WHO Expert Meeting on Foodborne parasites- Prioritisation for risk management held on 3-7 September 2012. Fishborne trematodes (Opisthorchideae) ranked 8th on risk ranking and 5th based on socioeconomic criteria, while Anisakidae ranked 17thbased on risk but ranked 4th in scores based on trade impacts. Though the focus of the meeting was on risk ranking, general risk management option and specific options with respect of top ranked parasites were also addressed.

21. The representative of FAO informed CCFFP of the publication of Fisheries and Aquaculture Technical Paper 551 that contained updated papers prepared for Joint FAO/WHO/IOC Expert meeting on biotoxins in bivalve molluscs and outputs of the Working Groups of CCFFP that led to the development of Codex Standard for Live and Raw Bivalve Mollusc. Information on the forthcoming publication of Fisheries and Aquaculture Technical Paper 574, Assessment and Management of Seafood Safety and Quality was also provided.

DRAFT STANDARD FOR SMOKED FISH, SMOKE-FLAVOURED FISH AND SMOKE-DRIED FISH (Agenda Item 3)[5]

22. The Committee recalled that its last session had agreed to retain the draft Standard at Step 7 pending completion of the section on food additives, which was returned for redrafting at Step 6 by an electronic Working Group chaired by the European Union and the United States of America, which was also working on other provisions for additives in the standards for fish and fishery products. The Committee noted that the report of the Working Group included a proposed section on food additives in Appendix I to CX/FFP 12/32/3. However, noting that further work was required on the additive sections, the Committee agreed to establish an in-session Working Group chaired by the United States of America and working in English with the following mandate:

1) Agree to use the Procedural Manual
2) Agree on the food category which applies in Table 2
3) Agree on the functional class which applies
4) Within each functional class
    a. specify which food additives could be used (technological justification)
    b. Specify which food additives could not be used (technological justification)
5) If considering to move additives from Table 3 to Table 2, give technological justification

23. The Committee thanked the Delegations of the European Union and the United States of America and the Working Group for their excellent work to facilitate progress on complex issues and considered the recommendations put forward in CRD 24.

24. There was agreement to follow the provisions in the Procedural Manual (Format of Codex Standards), and it was noted that the relevant food category is 09.2.5. However, the general reference to the GSFA was not considered appropriate because the additive provisions in the standard differed from the broader provisions listed in the GSFA under food category 09.2.5.

25. It was recalled that the Committee on Food Additives had agreed that acidity regulators should be considered individually for category 09.2.5. The Committee agreed to list the additives individually and to provide the relevant technological justification applicable to the identified food additives within each functional class, as proposed in CRD 24.

Smoked Fish

26. The Committee noted the proposal to insert a definition of “GMP” at the beginning of the Table, however as this term is defined in the Preamble of the GSFA and it is widely used in Codex standards without repeating the definition, it was not included.

27. The Committee agreed to insert several acidity regulators, antioxidants, and packaging gas with the relevant justification in the section.

28. As regards colours, the Committee noted there was no clear technological justification for Brilliant Blue FCF and Caramel 1-plain caramel and it was agreed to return them to Step 6 for further consideration at the next session, and agreed to include the other colours proposed in the section.

29. The Delegation of the European Union expressed a reservation on the use of Sunset Yellow FCF for smoked fish and smoke-flavoured fish, recalling that EFSA had reassessed its safety and decreased the ADI, and that taking into account the provisions for this additive in the GSFA, the ADI might be exceeded.

30. The Committee agreed to include packaging gas for reduced oxygen packaged products only as the products covered by the standard may be packaged in modified atmosphere.

[5] CX/FFP 12/32/3, CX/FFP 12/32/3-Add.1 (comments of Canada, United States of America, IFAC, IOFI) CRD 4 (comments of Indonesia), CRD 5 (comments of European Union), CRD 6 (comments of Ghana), CRD 7 (comments of Japan), CRD 8 (comments of Kenya), CRD 10 (comments of Philippines), CRD 16 (comments of Malaysia), CRD 19 (comments of Norway), CRD 20 (comments of Brazil), CRD 24 (report of the in-session Working Group).

31. It was recognised that there was a technological need for the use of preservatives for certain types of products, in particular sorbates and benzoates, which are used to prevent growth of *Listeria monocytogenes*, and they were included with the correct INS references.

32. Some delegations expressed concerns with the use of sodium nitrite, as nitrites can combine with the amines in fish proteins to produce carcinogenic nitrosamines. Another delegation expressed the view that it was widely used to control *Clostridium botulinum* and that the benefits outweighed the risks. The Committee agreed to return the level for sodium nitrite to Step 6 for further consideration.

Smoked Flavoured Fish

33. The Committee reached the same conclusions as in the Smoked Fish section as regards acidity regulators, antioxidants, colours, packaging gas, and preservatives.

34. The Committee agreed to insert the carrier INS 1400 Dextrin, roasted starch, with a note "carryover from flavouring substances" to clarify that it is linked with flavouring substances and a similar amendment was made for the emulsifier for INS 433 polyoxyethylene (20) sorbitan monooleate included in the list. As currently "carrier" is not recognised as a functional class for INS 1400 Dextrin, roasted starch, the Committee agreed to ask the CCFA to consider the inclusion of "carrier" as a functional class for this additive in the *Class Names and the International Numbering System for Food Additives* (CAC/GL 36-1989).

Smoke-Dried Fish

35. The Committee discussed how to address the additives in spices used in all products covered by the Standard, and recognised that although spices were commonly used in all products covered by the Standard, they were not explicitly mentioned in the standard. It was therefore agreed to specify in the Product definition of all three product categories that "spices and other optional ingredients may be used', noting that it was already specified under Ingredients that "All ingredients used shall be of food grade quality and conform to all applicable Codex standards", and therefore if additives were used in spices, there was no need to list them if they had no technological function in the end product.

36. The Committee noted a proposal from the Delegation of Canada to allow sorbic acid as a preservative in smoke-dried fish. However other delegations pointed out that moisture content was very low in these products and that there was no need for preservatives and the Committee confirmed that no additives should be used in these products.

37. The Committee noted that the following additives intended in the GSFA for other products in food category 09.2.5 in the applicable functional classes are not technologically justified for the specific foods covered in the standard, as follows:

Antioxidants

Propyl gallate

Sulfites

Colours

Canthaxanthin

Caramel III – ammonia caramel

Caramel IV (For use in surimi and fish roe products only)

Carmines

Carotenoids (for use in surimi and fish roe products only)

beta-Carotenes, vegetable

Chlorophylls and chlorophyllins, copper complexes

Fast Green FCF

Grape skin extract

Indigotine (Indigo carmines)

Iron oxides

Ponceau 4R (Cochineal red A)

Riboflavines

Preservatives

Butylated hydroxyanisole (BHA)

Butylated hydroxytoluene (BHT)

Sulfites

Flavour enhancers or Sweetener

Acesulfame potassium (For use in sweet and sour products only)

Aspartame (For use in sweet and sour products only)

38. The Committee therefore agreed to propose to the Committee on Food Additives to insert a note to these additives to specify that they were not allowed in the products covered by the present standard, within category 09.2.5.

39. The Committee recalled that the section on additives was the only section pending as all other sections had been addressed in previous sessions, and therefore the standard was ready for finalisation.

Status of the Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish

40. The Committee agreed to advance the draft Standard to Step 8 for adoption by the 36th Session of the Commission (Appendix III) and to return to Step 6 the additives for which further consideration was required as indicated above (Appendix VIII). The provisions on food additives, food labelling and methods of analysis and sampling will be sent to the relevant committees for endorsement.

DRAFT STANDARD FOR QUICK FROZEN SCALLOP ADDUCTOR MUSCLE MEAT (Agenda Item 4)[6]

41. The Committee recalled that the draft Standard had been advanced to Step 5 by the last session, adopted at Step 5 by the Commission and circulated for comments at Step 6.

42. The Committee considered the text section by section and in addition to editorial corrections, made the following amendments and/or comments.

Title

43. The Committee agreed to change the title to “Draft Standard for Raw, Fresh and Quick Frozen Scallop Products” to better reflect the products covered by the standard.

Scope

44. The scope was amended to clearly illustrate the categories of scallops included in the standard and to better reflect the products that were not covered by the Standard. It was further agreed to replace “additives” with “phosphates”, where relevant, in the scope and subsequent sections as appropriate.

45. On the issue of whether or not to include scallops (with or without roe) with added water, it was noted that these products were traded internationally and that the issue of water content could be addressed through labelling and other sections of the standard.

2.1 Product definition

46. The Committee agreed to amend this section to provide clear differentiation between the products identified in the scope.

2.2 Process definition

47. Section 2.2.1 was amended to indicate that the process as defined referred to both scallop meat without roe and viscera as well as to “roe on scallops”.

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[6] CL 2011/15-FFP, REP11/FFP, Appendix VII, CX/FFP12/32/4 (comments of Kenya), CX/FFP 12/32/4-Add.1 (comments of Ghana and United States of America), CX/FFP 12/32/4-Add.2 (comments of Australia, Canada, Indonesia and Thailand), CRD 10 (comments of Philippines), CRD 15 (comments of Nigeria), CRD 17 (comments of European Union), CRD 18 (comments of United States of America), CRD 20 (comments of Brazil) , CRD 22 (comments of India), CRD 23 (comments of Egypt).

48. The Committee agreed to amend the title of section 2.2.2 to “quick frozen scallop meat processed with added water and/or solution of water and phosphates” to include ‘roe-on-scallops” and to exclude products where only water was added. The section was further amended to better align with section 2.2.1 on the need to minimize water absorption; to emphasize the importance of measuring solution uptake for labelling purposes; and to reflect that phosphate solutions are allowed only in frozen product.

49. In view of the above, the Committee agreed to introduce a new section 2.2.3 to accommodate fresh scallop meat processed with added water.

3. Essential Composition and Quality Factors

50. The titles in sections 3.1 and 3.2 were amended to better reflect the products covered by these sections and in accordance with earlier decisions on the products covered by the standard and to apply these titles as applicable in other parts of the Standard.

51. The Committee did not agree to the proposal to transfer section 3.4.2.1 to 3.1 as not appropriate and also agreed to its deletion from section 3, but agreed to amend section 3.2 to indicate that accurately measuring the amount of solution of water and phosphate was essential to composition and fair trade.

3.3 Glazing

52. The Committee replaced “sea water” with “clean water” since clean water included seawater as defined in the Code of Practice for Fish and Fishery Products.

3.4 Final Product

53. Sections 3.4.2 to 3.4.2.2 were deleted as not appropriate or since these aspects were already covered by previous sections. Noting that the last paragraph of 3.4.2.2 concerned sampling and analysis, it was agreed to move this paragraph to section 8 for further consideration.

4. Food Additives

54. The Committee agreed that only phosphates used as humectants or sequestrants could be used in products in section 4.2 in accordance with the provision for phosphates in the food category 09.2.1 of the General Standard for Food Additives (CODEX STAN 192-1995).

5. Contaminants

55. The Committee agreed to amend section 5.2 by moving the footnote into the text as a new 5.2 (i) as the information in this provision was important and one of the reasons why scallop meat was not included in the Standard for Live and Raw Bivalve Molluscs. The Committee further agreed to insert a new 5.2 (ii) to indicate that biotoxins could present a possible hazard in roe-on-scallops and that in such cases, preventive measures in accordance with the Standard for Live and Raw Bivalve Molluscs should be in place.

6. Hygiene and Handling

56. The Committee agreed to reference additional hygiene guidelines on control of viruses and *Vibrio* and the Standard for Live and Raw Bivalve Molluscs in section 6.2 and to delete sections 6.1 and 6.4 as these provisions were sufficiently captured in the texts referenced in 6.2.

7. Labelling

57. The last paragraph of subsection 7.6 was moved to a new section 7.1.3 as the provisions applied to all containers and not only non-retail containers.

58. There was considerable discussion in the Committee on whether water for scallop meat best characterised composition of the product in the label and the Committee agreed to remove the square brackets in section 7.3 and to amend the section to indicate that the percentage of added water should be clearly indicated on the label. Some delegations disagreed with this text and preferred to quote percentages of scallop meat and/or water for flexibility in labelling while other delegations agreed that both percentage of water and meat need to be labelled to provide clear information to the consumer.

8. Sampling, examination and analysis

59. Section 8.4 was amended to include methods to determine drained weight and to provide a procedure for the thawing of block frozen scallops as scallops were frequently block frozen.

60. Section 8.5 was deleted as these methods were already listed in the *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CAC/GL 31-1999).

61. The Committee agreed to insert a new section 8.6 “Determination of the presence of viscera in scallop meat and roe-on-scallops”, without a tolerance listed in section 10 as viscera should not be treated as a defect with a tolerance level because it could pose a biotoxin hazard.

62. On the earlier proposal to transfer the last paragraph of section 3.4.2.2 to a new section 8.8[7] Determination of added water, the chairperson proposed to delete this provision as fair trade practices were already sufficiently covered in other sections of the standard, e.g., labelling. While some delegations supported the proposal to delete this section, several other delegations supported its retention in section 8.8 (new section 8.7) as the provision could draw the attention of countries to the possibility of developing criteria and discussions on a bilateral basis on the implementation of these criteria. It was further recalled that this text was a result of long discussion and compromise over many sessions. A delegation also expressed the view that such provisions should not be included in commodity standards but could be more appropriately addressed in a more horizontal way. In view of the discussion, the Committee agreed to retain this section in square brackets and to correct the references to the relevant subsections 3.1, 3.2 and 3.3. The Committee further agreed to request the advice from CCFICS on whether it was appropriate to have such provisions in commodity standards and the implications thereof or whether the matter could be addressed through a more general text.

9. Definition of defectives

63. The Committee agreed to include colour in section 9.3 as an additional indicator of decomposition and rancidity.

64. The Committee had some discussion on the tolerance of 20% for parasites in section 9.4. Several delegations expressed the view that the tolerance of 20% was too high and proposed to either align with other similar standards by allowing a tolerance of 5% or to indicate the presence of readily visible parasites at an objectionable level as proposed in CRD18, while several other delegations proposed that products with visible parasites should not be allowed. In view of the discussion and noting that a zero tolerance for parasites was not practical, the Committee agreed to the proposal as presented in CRD 18 and to place it in square brackets for further consideration.

65. The Committee also held a long discussion on section 9.5 where several different proposals were made for tolerances for objectionable matter. It was agreed to delete (i) as the presence of viscera is considered a hazard and should be completely removed, and to retain (ii) but to replace the tolerance of 10% with “objectionable level”.

66. The Committee agreed to include a new section 9.6 Exceeding level of added water in square brackets for further discussion as some delegations were of the view that it was more appropriate for a code of practice.

Conclusion

67. The Committee noted that considerable progress had been made on the draft Standard and that it was near finalization, but due to the extensive changes and corrections made, members would require time to examine the text before presenting it to the Commission for adoption.

Status of the Draft Standard for Raw, Fresh and Quick Frozen Scallop Products

68. The Committee agreed to return the draft Standard to Step 6 for comments and consideration by the next session (Appendix IX). The provisions on food additives, food labelling, and methods of analysis and sampling will be sent to the relevant committees for endorsement.

[7] This section corresponds to section 8.7 in Appendix IX to the report

DRAFT STANDARD FOR FRESH/LIVE AND FROZEN ABALONE (Agenda Item 5)[8]

69. The Committee recalled that the 35th Session of the Commission had adopted the draft Standard at Step 5 and advanced it to Step 6 for comments and consideration by the 32nd Session of the Committee.

70. The Committee considered the text section by section and made the following amendments and comments, in addition to editorial changes.

Part I- Live Abalone

I-7 Labelling

71. The Committee agreed to transfer the third paragraph of section I-7.4 concerning the use of the scientific name to I-7.1 as it was relevant to the "Name of the Food" rather than to non-retail containers (new I-7.1.3). A similar change was made to section II-7.

72. In sections I-7.4 the Committee noted a proposal to delete the second sentence allowing the use of an identification mark, in order to improve transparency and to prevent fraudulent practices. However it was retained since it is clear that the mark has to be identified in the accompanying documents, and as this is a general labelling provision mentioned in the Format of Codex Standards. The Committee agreed that the last paragraph should be presented as a separate section (new I-7.5) as it was of general application.

I-8 Sampling, Examination and Analysis

I-8.1 Sampling

73. The Committee agreed to refer to "sample unit" in this section and throughout the standard where relevant. The Committee made some changes to the text for clarification purposes, and agreed that the "sample unit shall be a minimum of 20 individual abalones" as there was no need to specify the weight of the sample and, taking into account a rate of defectives of 5%, this would correspond to rejection when two or more units were defective.

74. In section I-8.4 Determination of Biotoxins, it was agreed to refer to the methods specified in the Standard for Live and Raw Bivalve Molluscs in order to ensure consistency with the contaminants section, and the current text in square brackets and the Table were deleted.

I-10 Lot Acceptance

75. The reference to the General Guidelines on Sampling was deleted as they do not include specific sampling plans but provide general guidance on sampling.

Part II-Raw, Fresh Chilled or Frozen Abalone

II-2.1 Product Definition

76. Some delegations discussed to what extent the products in this section could be contaminated with biotoxins, especially due to the presence of viscera. Some delegations indicated that monitoring showed the presence of biotoxins (DSP) in some species when viscera were removed, in some cases at higher levels than in the viscera and that it was essential to control the raw material, and therefore contamination could not be excluded in the abalone covered by the present section. The Committee therefore agreed to delete the sentence indicating that section II.5 Contaminants "does not apply to processed abalone that has the viscera and epithelium removed". The last sentence of the first paragraph was also deleted as it was superfluous to describe the product.

II-4. Food Additives

77. The Committee noted the clarification from some delegations that additives were not currently used in chilled and frozen abalone, but only in canned products, and therefore agreed that no additives should be allowed in Part II.

[8] CL 2011/15-FFP, REP11/FFP, Appendix X, CX/FFP 12/32/5 (comments of Kenya), CX/FFP 12/32/5-Add.1 (comments of Ghana, United States of America), CX/FFP 12/32/5-Add.2 (comments of Australia and Thailand), CRD 5 (comments of European Union), CRD 7 (comments of Japan), CRD 10 (comments of Philippines), CRD 15 (comments of Nigeria), CRD 22 (comments of India), CRD 23 (comments of Egypt)

II-7 Labelling

78. The Committee deleted the sentence on the shelf life at the end of section II-7.4 as the requirement concerning shelf life was already covered in section II-7.3 Storage Instructions.

II-8 Sampling, Examination and Analysis

II-8.5 Sample preparation

79. As regards the procedures for thawing, the Committee agreed that the sample should not be immersed in water as this could damage the sample and amended the text accordingly.

II-8.6 Determination of Biotoxins

80. The Committee agreed to use the same text as in section I-8.4.

II-9 Definition of Defectives

81. In section II-9.1 Deep Dehydration, reference was made to "an area greater than 10% of the surface of the abalone" which affects more than 10% of the weight of the abalones in the sample unit.

82. The Committee recognised that all issues and comments had been satisfactorily addressed and that the standard could be finalised.

Status of the Draft Standard for Live Abalone and for Raw Fresh Chilled or Frozen Abalone for Direct Consumption or for Further Processing

83. The Committee agreed to advance the draft Standard to Step 8 for adoption by the 36th Session of the Commission (Appendix IV). The provisions on food labelling and methods of analysis and sampling will be sent to the relevant committees for endorsement.

PROPOSED DRAFT CODE OF PRACTICE ON THE PROCESSING OF SCALLOP MEAT (Agenda Item 6)[9]

84. The Committee recalled that the proposed draft Code of Practice on the Processing of Scallop Meat had been returned to Step 3 for comments and that a physical Working Group to meet immediately prior to the Session would consider comments and prepare proposals for consideration at the 32nd Session.

85. The Delegation of Canada, as lead of the physical Working Group, introduced the report of the Working Group (CRD 2). The Delegation informed the Committee that the Working Group had made good progress and had amended the text up to and including section X.3.1.6. The Code now included all scallops (4 categories) not covered by section 7 on live and raw bivalve molluscs of the Code of Practice for Fish and Fishery Products.

86. The Delegation further highlighted that further discussion and guidance was needed on (i) alignment of the code with the scope of the draft Standard for Raw, Fresh and Quick Frozen Scallop Products; (ii) a definition for viscera; and (iii) whether scallops with roe posed a biotoxin hazard to a level that warrants control measures.

87. The Committee had a general discussion on the report of the Working Group and took the following decisions or comments.

88. The Committee noted that points (a) alignment of the Code with the Standard and (c) whether scallop products with roe can pose a biotoxin hazard to a level that warrants control measures, (paragraph 4 of CRD2), were already addressed following the discussion on the Standard for Raw, Fresh and Quick Frozen Scallop Products (see Agenda Item 4). However, further discussion was needed on a definition for viscera.

89. In summary the following recommendations/points were made:

- Develop a clear definition for viscera that excludes roe in order to clarify the issues around biotoxin risk;

[9] CL 2011/10-FFP, REP11/FFP, Appendix VIII, CX/FFP 12/32/6 (comments of Kenya), CX/FFP 12/32/6-Add.1 (comments of Ghana and United States of America), CX/FFP 12/32/6-Add.2 (comments of Canada and Indonesia), CRD 2 (report of the physical Working Group), CRD 10 (comments of Philippines), CRD 13 (comments of European Union), CRD 22 (comments of India).

- amend the definitions to take into account the decisions on the associated standard and the proposed development of a definition for viscera as follows: (i) roe on scallops: delete "all other" before viscera; and (ii) scallop meat indicating that scallop meat was the scallop adductor muscle remaining after the shell, the viscera and roe have been completely removed.
- delete section X.2.2 Defects and the Appendix X as not essential to the Code.

90. Following this discussion, the Committee agreed that the sections up to X.2.2.3 could simply be aligned with the corresponding draft Standard taking into account the recommendations raised. The rest of the document should be scrutinized to further improve and align where applicable, with the aforementioned standard. To undertake this work, the Committee therefore agreed to establish an electronic Working Group, led by Canada and working in English only to redraft the proposed draft Code taking into account the points raised at the session.

Status of the Proposed Draft Code of Practice on the Processing of Scallop Meat

91. The Committee agreed to return the proposed draft Code of Practice to Step 2/3 for redrafting by the above mentioned Working Group, comments and consideration by the next session.

PROPOSED DRAFT PERFORMANCE CRITERIA FOR REFERENCE AND CONFIRMATORY METHODS FOR MARINE BIOTOXINS IN THE STANDARD FOR LIVE AND RAW BIVALVE MOLLUSCS (Agenda Item 7)[10]

92. The Committee recalled that the proposed draft Criteria for inclusion in section I-8.6 in the Standard for Live and Raw Bivalve Molluscs had been returned to Step 3 for comments and consideration by the next session.

93. The Committee noted that several comments had been received on the proposed draft Criteria and that there was a need for better alignment with the Principles for the Establishment of Codex Methods of Analysis in the Procedural Manual. It was noted that the proposal by the United States of America (Appendix I of CX/FFP 12/32/7) covered most of the concerns raised in the written comments. The Committee therefore agreed to establish an in-session Working Group, led by the USA and working in English only, to consider Appendix I of CX/FFP 12/32/7 to prepare a revised proposal for consideration by the Committee.

94. The Delegation of the United States of America introduced the report of the in-session Working Group (CRD 26) and pointed out that the original proposal of the United States of America had been significantly reduced by deleting information that was not considered necessary. The Delegation also informed the Committee that the European Union had wanted pectenotoxins and yessotoxins to be included in Table 2 (CRD 26) but that there was no consensus in the Working Group on this.

General comments

95. A delegation recalled that the development of methods for biotoxin determination was evolving and that the criteria approach had been followed to take this into account. The Delegation noted the criteria had been crafted in such a way to allow flexibility for the inclusion of biological methods such as the widely used mouse bioassay as well as multi-analogue HPLC methods. It was also noted that there was a need for the development of better and more accurate methods and that in future such methods could be listed in the Standard.

[10] CL 2011/10-FFP, REP11/FFP, Appendix X, CX/FFP 12/32/7 (comments of Kenya and United States of America), CX/FFP 12/32/7-Add.1 (comments of Australia and Canada), CRD 4 (comments of Indonesia), CRD 5 (comments of European Union), CRD 10 (comments of Philippines), CRD 22 (comments of India), CRD 26 (report of the in-session Working Group on Criteria)

Section I-8.6 Determination of Biotoxins

96. It was agreed to insert two new paragraphs indicating that methods should meet the numerical criteria listed in Table 1 and may meet either the minimum applicable range or the LOD and LOQ. There was some discussion on whether the methods should meet both the LOD and LOQ or either of the two. There seemed to be some discrepancy among the texts in the *Working Instructions for the Implementation of the Criteria Approach in Codex*, the *Guidelines for Establishing Numeric Values for Method Criteria and/or Assessing Methods for Compliance Thereof* and the flow chart in the *Guidelines for Establishing Numeric Values for Method Criteria and/or Assessing Methods for Compliance Thereof* (Principles for the Establishment of Codex Methods of Analysis, Procedural Manual). The Committee therefore agreed to request clarification from the Committee on Methods of Analysis and Sampling on whether methods should meet both LOD and LOQ or either of the two.

97. The Committee agreed to amend the paragraph immediately below the first table to ensure that international scientifically validated toxicity equivalent factors were used to calculate total toxicity for methods that do not measure total toxicity directly.

98. The last sentence in square brackets was deleted since it was difficult to have certified reference materials for each analyte. The requirement for certified reference materials would mean that some analogues in Table 2 would have to be deleted.

Status of Section I-8.6 Determination of Biotoxins in the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008)

99. The Committee agreed to advance the proposed draft Section to the 36th Session of the Commission for adoption at Step 5 (Appendix VII) and to CCMAS for endorsement.

PROPOSED DRAFT PERFORMANCE CRITERIA FOR SCREENING METHODS FOR MARINE BIOTOXINS IN THE STANDARD FOR LIVE AND RAW BIVALVE MOLLUSCS (Agenda Item 8)[11]

100. The Committee recalled that it was agreed to start new work on proposed draft Performance Criteria for Screening Methods for Marine Biotoxins in the Standard for Live and Raw Bivalve Molluscs and that this work had been approved by the 35th Session of the Commission.

101. The Committee further noted that this work was agreed upon at the time when discussing the criteria for reference methods in the Standard for Live and Raw Bivalve Molluscs and noting that certain widely used methods that would not meet the criteria could be used for screening. This was in particular the case for the mouse bioassay. The Committee noted that the mouse bioassay was now included following the revision in this session. However, due to ethical and scientific reasons, the Delegation of the European Union stressed on the fact that an effort should be made to replace the biological assays by alternative methods.

102. Following the work and decisions on the criteria for reference methods and the recommendation of the in-session Working Group on criteria (see Agenda Item 7), the Committee agreed that there was no longer need for the continuation of the work on criteria for screening methods as concerns relating to the mouse bioassay had been resolved.

Status of the Proposed Draft Performance Criteria for Screening Methods for Marine Biotoxins in the Standard for Live and Raw Bivalve Molluscs (CODEX STAN 292-2008)

103. The Committee agreed to discontinue development of the criteria and to inform the 36th Session of the Commission accordingly.

AMENDMENT TO THE STANDARD FOR QUICK FROZEN FISH STICKS (NITROGEN FACTOR FOR SOUTH ATLANTIC HAKE) (Agenda Item 9)[12]

104. The Committee recalled that at its last Session it had agreed to return the nitrogen factor for South Atlantic Hake to Step 2/3 for redrafting, comments and consideration by the 32nd Session of the Committee.

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[11] CX/FFP 12/32/8; CRD 3 (comments of Australia), CRD4 (comments of Indonesia), CRD 5 (comments of European Union), CRD 10 (comments of Philippines), CRD 22 (comments of India), CRD 23 (comments of Egypt), CRD 26 (Report of the in-session Working Group on Criteria).

[12] CX/FFP 12/32/9, CRD 5 (comments of European Union), CRD 14 (comments of Kenya), CRD 22 (comments of India)

105. The Delegation of South Africa introduced the document (CX/FFP 12/32/9), and proposed a nitrogen factor of 2.45 for South Atlantic hake.

106. One delegation was of the view that the method was not appropriate and that fresh fish rather than frozen fish blocks should be used. The Delegation of South Africa clarified that as no Codex official method existed they had followed the method that the United Kingdom used for analysis for the determination of the nitrogen factor for cod, which had been accepted by the Committee. Similarly, frozen fish blocks were also used to determine the nitrogen factor for tilapia. The Delegation also said that the frozen sample would be appropriate because the nitrogen factor would be included in the Standard for Quick Frozen Fish Sticks.

107. The Committee, noting that two forms of raw material were used for production of fish sticks from South Atlantic hake, in line with the trials to establish the nitrogen factor(s) and following the same approach for cod, agreed to two different nitrogen factors, 2.46 for fillet and 2.38 for mince. The Committee also agreed to include the scientific names of South Atlantic hake to avoid confusion.

Status of the Proposed Draft Amendment to the Standard for Quick Frozen Fish Sticks

108. The Committee agreed to advance the amendment to the Standard for Quick Frozen Fish Sticks to the Commission for adoption at Step 5/8, with the recommendation to omit Steps 6 and 7 (Appendix V).

Other matters

109. One delegation questioned whether different nitrogen factors should be established for each form of the fish products; whether this was a reliable for verifying fish content and how widely it was used. The Delegation also questioned whether the figures in the Table 1 of the Standard applied to fillets/fish blocks or minced product. It was clarified that the figures in the table generally related to fish blocks or fillets, except for cod where factors for both fillets and mince were established due to the nature of the product.

110. It was further clarified that use of nitrogen factors was one of the means to verify fish content in products; that nitrogen factors were widely used in many countries; and that it was important to establish nitrogen factors for different species.

111. The Committee was also reminded that due to changes in fishing and aquaculture practices there could be changes in the nature of fish content with time, and therefore there might be a need to periodically review the current factors in the future as new data becomes available.

112. After some discussion, the Committee agreed that a discussion paper would be prepared by the United States of America, the United Kingdom and New Zealand with assistance from other interested members and observers, for discussion at its next session. It was agreed that the discussion paper should address the usefulness of nitrogen factors; and the need to review, as appropriate, the list of existing nitrogen factors contained in the Table of the Standard.

PROPOSED DRAFT REVISION OF THE PROCEDURE FOR THE INCLUSION OF ADDITIONAL SPECIES IN CODEX STANDARDS FOR FISH AND FISHERY PRODUCTS (Agenda Item 10)[13]

113. The Committee recalled that the proposed draft Revision was returned to Step 2/3 for redrafting by an electronic Working Group led by Chile and France, comments and consideration by the next session.

[13] CX/FFP12/32/10, CX/FFP 12/32/10-Add.1 (comments of Argentina, Canada, Colombia, Costa Rica, Ghana and Thailand), CX/FFP 12/32/10-Add.2 (comments of Brazil); CRD 5 (comments of European Union); CRD 9 (comments of Morocco); CRD 10 (comments of Philippines), CRD 11 (comments of United States of America); CRD 12 (comments of USA); CRD 14 (comments of Kenya); CRD 15 (comments of Nigeria); CRD 22 (comments of India).

114. The Delegations of France and Chile, as leads of the Working Group, introduced the report of the Working Group as contained in CX/FFP 12/32/10. The Committee was informed that the procedure had been simplified, that the structure was easier to follow and that it no longer contained any diagram as the Working Group did not consider its inclusion necessary. The Committee was further informed that the scope did not apply to species already in Codex standards, but would apply to inclusion of species in existing standards or future standards. Some remaining issues on which guidance was needed by the Committee were highlighted, such as the selection of the 3 species that will be compared with the candidate species and whether the information of the candidate species should be published by an internationally recognized institution or by recognized national or regional institutions.

115. The Committee considered the proposal in Appendix II of CX/FFP 12/32/10 and in addition to some editorial corrections, made the following amendments and/or comments.

Scope

116. The Committee agreed to delete the square brackets and to retain the text in the last sentence of the scope since it was clear that species for non-food industry was not within the mandate of Codex and also as previously agreed, the procedure would not be applied retroactively to species already included in Standards. However, a delegation proposed to include in the scope species already in existing standards as the procedure could be used to reaffirm the species currently included in a standard.

2.3 Working group

117. The Committee agreed to replace “supervise” with “oversee” in the second bullet point, as more appropriate and to remove the square brackets from the last sentence.

3.1 Candidate species description

118. The Committee agreed not to limit the source of information by replacing, in the first paragraph, “ internationally” with “appropriate” and to apply this throughout the document where relevant; to delete the text in square brackets, as not practical; and to delete internet as an example of a source of information.

119. In 3.1 a, the Committee agreed to delete “internationally recognized” to indicate that the scientific name should be from a credible source, rather than indicating that it should be internationally recognized. It was also agreed to add the Catalog of Fishes as an additional source of scientific names of species, as this was also a credible source of information.

120. A delegation proposed to include a new item 3.1 b to indicate that the common name of a species should also be provided in order to ensure common names of a species recognized by consumers would be included in a specific standard. The Committee however did not agree with this proposal as it was recognized that this matter was not necessary for the inclusion of a species into a standard, but more appropriately dealt with through the labelling provisions of a standard.

121. The Committee deleted the example, canned fish, from 3.1 d as there was no reason to single out canned fish.

3.2 Economic data of the candidate species

122. Some delegations proposed to delete this section as economic data requirements could be considered as an unnecessary burden and barrier to trade. These delegations were of the opinion that while a new standard would require some economic justification, the addition of a new species to an already existing standard should not. Other delegations supported the retention of the section and pointed out that it was in accordance with the requirements as outlined in the Procedural Manual. In order to provide some flexibility to the economic data requirements, the Committee agreed to delete the text in the first set of square brackets and to delete the second set of square brackets, but to retain the text in 3.2.1 (b). Similar changes were made throughout the document where appropriate.

123. The Committee further considered a proposal to delete 3.2.1 (c) as this was related to resource management and sustainability. The Committee however agreed to retain this requirement noting that “if available” allowed for sufficient flexibility. Following this decision, the Committee then considered whether fish from aquaculture was included in this requirement. It was clarified that fish stocks generally referred to wild fish and that aquaculture production was dependent on other restrictions and was sufficiently covered in 3.2.1 (b).

124. The last sentence of this section was deleted as it did not address resources.

3.2.2 Processing technology and marketing

125. In line with an earlier decision on the need for flexibility, the Committee agreed to retain only the text in the second set of square brackets and to delete the bullets in 3.2.2 (b) as not needed. A delegation questioned whether the flexibility applied to the provision of data for the past 5 years or to the provision of data. It was clarified that trade data did not distinguish between aquaculture or wild caught fish, and the flexibility therefore applied to both.

3.3 Principles of the sensory testing procedure

126. The Committee agreed to amend the first paragraph to provide more flexibility. Noting that accredited laboratories may not always exist, it was agreed to refer to laboratories that have the relevant proven expertise in sensory evaluation rather than to require that the laboratories be accredited or independent. Also noting that it was more important that laboratories have the essential expertise rather than where laboratories should be situated, it was agreed to allow flexibility with regard to the use of laboratories in the proposing member country by inserting "preferably" before "excluding the proposing member(s)". The Committee also agreed to delete the square brackets from the 5th sentence and to replace "recognized" with "accepted" as more appropriate and in the last sentence to delete "and will prepare the report on sensory assessment". The Committee agreed to include an additional last sentence to this paragraph to indicate that the proposing member should propose the 3 species to be compared with candidate species.

4. Report of the Sensory Evaluation of the Candidate Species

127. The second paragraph was amended to include "whole fish" as more correct as standards were applicable to whole fish as well as processed fish products and deletion of the text in square brackets as not appropriate.

Status of the Proposed Draft Revision of the Procedure for the Inclusion of Additional Species in Standards for Fish and Fishery Products

128. The Committee agreed to advance the proposed draft Revision to the Commission for adoption at Step 5/8 with the recommendation to omit Steps 6 & 7 (Appendix VI) for inclusion in Section II: Elaboration of Codex Standards and Related Texts: Guidelines for the Inclusion of Specific Provisions in Codex Standards and Related Texts of the Procedural Manual.

PROPOSED DRAFT CODE OF PRACTICE FOR FISH AND FISHERY PRODUCTS (SECTION ON STURGEON CAVIAR) (Agenda Item 11)[14]

129. The Committee recalled that at its last session it had agreed to propose new work on a Code of Practice for Sturgeon Caviar for inclusion into the Code of Practice for Fish and Fishery Products and that the 34th Session of the Commission had approved this new work. The Delegation of Iran, as the chair of the electronic Working Group, explained the work done by the electronic Working Group and that consensus could not be reached on several key issues.

130. The Committee had a general discussion on the proposed draft Code.

131. One delegation noted that the term "as allowed by the competent authority" should be changed or removed as it was not appropriate in a Codex text which should achieve international harmonization.

132. One delegation was of the view that the "General Considerations" section could include a discussion of the combined water phase salt (WPS) and refrigeration temperature required to control *Clostridium botulinum* growth and toxin formation as caviar is packaged anaerobically. The Delegation said that the required water phase salt should always be listed as "Greater or equal to 5% water phase salt", noting that 3% salt could result in less than the required WPS to control *C. botulinum*. The Delegation of Iran confirmed that a 5% WPS was needed to control *C. botulinum* and that this aspect would need further consideration.

133. Concerns were also expressed on the use of hormones, egg shell improving agents, and anaesthetics.

[14] CX/FFP 12/32/11; CX/FFP 12/32/11-Add.1 (comments of Canada); CX/FFP 12/32/11-Add.2 (comments of United States of America); CRD 14 (comments of Kenya); CRD 20 (comments of Brazil); CRD 21 (comments of United States of America)

134. Several delegations were of the view that the proposed draft Section on Sturgeon Caviar needed further elaboration. However, in view of time constraints and the extensive comments received, the Committee agreed to return the proposed draft Code for redrafting by the electronic Working Group, chaired by Iran and working in English only, and for circulation for comments and consideration at the next Session. The electronic Working Group should prepare the redrafted document, also taking into consideration the written comments submitted to the Committee and the comments made at the plenary.

Status of the Proposed Draft Code of Practice for Fish and Fishery Products (section on sturgeon caviar)

135. The Committee agreed to return the proposed draft Code to Step 2/3 for redrafting by the above mentioned Working Group, comments and consideration by the next session.

DISCUSSION PAPER ON THE PROPOSED DRAFT CODE OF PRACTICE FOR FISH AND FISHERY PRODUCTS (APPENDICES ON OPTIONAL FINAL PRODUCT REQUIREMENTS) (Agenda Item 12)[15]

136. The Committee recalled that at its 31st Session it had been reminded that a number of appendices to the Code of Practice for Fish and Fishery Products on optional final product requirements still needed finalization. It was also noted that optional requirements might no longer be necessary in view of the new approach to standards development which focused mainly on safety issues and on essential quality provisions and agreed to discuss the matter at the next session.

137. The Committee considered recommendations in CX/FFP 12/32/12 and took the following decisions:

Appendix I: Modified Atmosphere Packing

138. The Committee agreed to continue working on Appendix I as the Appendix is referred to in several sections of the Code and provides useful information to ensure that Modified Atmosphere Packing was correctly used.

Appendix II – XI: Optional final product requirements for commodities

139. One delegation proposed to remove these Appendices from the Code as the Code already contains sufficient guidance for the protection of consumer health and essential quality factors. Other delegations were of the view that the Appendices might contain useful and relevant text that should be maintained. One delegation noted that Appendix VI includes scientific names of species of fish relevant to salted fish; this information could be used for trade and consumer information; and was not covered in the *Standard for Salted Fish and Dried Salted Fish of the Gadidae Family* (CODEX STAN 167-1989) and that no information would be available if it would be removed.

140. The Committee agreed that the Codex Secretariat would circulate these Appendices already drafted through a circular letter to request comments on

- Their relevance; and
- if needed, then whether the information in the appendices could be integrated into the Code or a relevant standard; or retained as appendices to the Code.
- proposals for text for the appendices not yet elaborated.

Appendix XII: List of all Codex codes and standards concerning fish and fishery products and related documents in an Appendix

141. The Committee agreed to remove Appendix XII and to reference the relevant additional Codex texts in the appropriate sections.

PROPOSED FOOD ADDITIVE PROVISIONS IN STANDARDS FOR FISH AND FISHERY PRODUCTS (Agenda Item 13)[16]

142. The Committee agreed to continue work on the consideration of food additives in current standards for fish and fishery products.

[15] CX/FFP 12/32/12, CRD 14 (comments of Kenya)
[16] CRD 14 (comments of Kenya)

143. The Committee agreed to establish an electronic Working Group, working in English only and chaired by the European Union and the United States of America, with the following mandate:

- to prepare proposals for food additives in the standards for fish and fishery products following the approach taken for the Standard for Smoked Fish; and
- to focus on technological justification for those food additives, and if necessary, propose changes to the GSFA

DISCUSSION PAPER ON HISTAMINE (Agenda Item 14)[17]

144. The Committee recalled that at its last Session it had agreed to establish an electronic Working Group led by Japan and the United States of America to prepare a discussion paper on histamine and had pointed out the need for scientific advice from FAO and WHO.

145. The Delegation of Japan, as the chair of the electronic Working Group, said that the Joint FAO and WHO Expert Meeting on the Public Health Risks of Histamine and Other Biogenic Amines from Fish and Fishery Products had been held from 23 to 27 July 2012 (See Agenda Item 2b) and that due to time constraints the Working Group could not start its work. The Delegation emphasized that histamine was considered a microbiological criterion (MC) and should contain all the components of an MC and that the work in CCFH on the revision of the Principles for the Establishment and Application of Microbiological Criteria for Foods should be taken into account. Noting that further work needed to be done and that the full report of the Expert Meeting needed to be considered in order to do so, the Delegation proposed to establish an eWG with the terms of reference described in CRD 25.

146. The Committee agreed to establish an eWG and discussed the terms of reference proposed in CRD 25.

147. Several delegations noted that the eWG should also consider the health risks of other biogenic amines than histamine and that the consideration of other biogenic amines should therefore be included in the ToR. The Delegation of Japan clarified that the eWG would analyse the results of the expert meeting that included information on other biogenic amines and that there was no need to include it explicitly in the ToR. The Delegation also noted that there was limited evidence that other biogenic amines than histamine was a human health risk.

148. One delegation said that according to the report, histamine in fish could easily be controlled by GHP and/or HACCP and noted that the eWG should consider this fact..

149. With regard to the interaction with CCFH, the Delegation of Japan was of the view that the Committee should ask the advice of CCFH on the establishment of risk-based sampling plans for histamine and their advice would be taken into account by the eWG. One delegation noted that it would be better to consider the question after the Committee studied the report. The Delegation also noted that if the question was about sampling plans, CCMAS, rather than CCFH, could be an appropriate committee to provide advice.

150. After some discussion, the Committee agreed to establish an eWG, chaired by Japan and the United States of America and working in English only, with the following terms of reference:

- Assess how the CCFFP might use the expert advice and make recommendations with respect to approaches that the CCFFP could consider to integrate the advice into the relevant Standards and relevant sections of the Code of Practice on Fish and Fishery Products, taking into account the fact that histamine can be easily controlled by applying GHP and/or HACCP;
- Identify new questions that the CCFFP may need further clarification on;
- Identify areas in the report that may need further clarification;
- As appropriate, make recommendations on the histamine hygienic criteria and associated sampling plan;
- As appropriate, consider the views from CCFH on the report of the Joint FAO and WHO Expert Meeting on the Public Health Risks of Histamine and Other Biogenic Amines from Fish and Fishery Products, if applicable.

[17] CX/FFP 12/32/14, CRD 14 (comments of Kenya), CRD 25 (proposed terms of reference for the EWG on histamine)

DISCUSSION PAPER ON A CODE OF PRACTICE FOR FISH SAUCE (Agenda Item 15)[18]

151. The Committee recalled that at its last Session the Committee had invited Thailand and Vietnam to prepare a discussion paper and project document for new work to develop a Code of Practice for Fish Sauce for consideration by the 32nd Session of the Committee.

152. The Delegations of Thailand and Vietnam introduced the document, as presented in CX/FFP 12/32/15, and highlighted the necessity for the additional guidance to support compliance with the Standard for Fish Sauce (CODEX STAN 302-2011).

153. The Committee agreed to the proposal for new work for the elaboration of a Code of Practice for Processing of Fish Sauce and to submit a project document (Appendix X) to the 36th Session of the Commission for approval. Subject to the approval of the Commission, an electronic Working Group, led by Thailand and Vietnam and working in English, would prepare a proposed draft for circulation for comments at Step 3 and consideration at the next session.

OTHER BUSINESS AND FUTURE WORK (Agenda Item 16)

154. No other business was proposed.

DATE AND PLACE OF NEXT SESSION (Agenda Item 17)

155. The Committee noted that the next Session was tentatively scheduled to be held in approximately 18 months time subject to confirmation by the host Government and the Codex Secretariat.

[18] CX/FFP 12/32/15, CRD 14 (comments of Kenya)

SUMMARY STATUS OF WORK

Subject Matter	Step	Action by	Document Reference in REP 13/FFP
Amendments to Sections I-6.5, I-8.5 and II-8.7 to the Standard for Live and Raw Bivalve Molluscs and Sections 7.1 and 7.2.2.2 of the Code of Practice for Fish and Fishery Products.	-	Governments 36th CAC	Paras 12 and 14, Appendix II
Draft Standard Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish	8	Governments, 36th CAC	Para. 40, Appendix III.
Draft Standard for Live Abalone and for Raw Fresh Chilled or Frozen Abalone for Direct Consumption or for Further Processing	8	Governments, 36th CAC	Para. 83 Appendix IV
Proposed Draft Amendment to the Standard for Quick Frozen Fish Sticks (Nitrogen Factor for South Atlantic Hake)	5/8	Governments 36th CAC	Para. 108 Appendix V
Proposed Draft Revision of the Procedure for the Inclusion of Additional Species in Standards for Fish and Fishery Products	5/8	Governments 36th CAC	Para. 128 Appendix VI
Proposed Draft Performance Criteria for Reference and Confirmatory Methods for Marine Biotoxins (Section I-8.6 Determination of Biotoxins) in the Standard for Live and Raw Bivalve Molluscs	5	Governments, 36th CAC 33rd CCFFP	Para.99 Appendix VII
Draft Section 4 Food Additive Provisions in the Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish	6	Governments 33rd CCFFP	Para. 40, Appendix VIII
Draft Standard for Raw, Fresh and Quick Frozen Scallop Products	6	Governments 33rd CCFFP	Para. 68 Appendix IX
Proposed Draft Code of Practice on the Processing of Scallop Meat	2/3	Electronic Working Group (Canada) 33rd CCFFP	Paras 90-91
Proposed Draft Code of Practice for Fish and Fishery Products (section on Sturgeon Caviar)	2/3	Electronic Working Group (Iran) 33rd CCFFP	Para. 135
Proposed Draft Code of Practice for Processing of Fish Sauce	1/2/3	36th CAC Electronic Working Group (Thailand, Vietnam) 33rd CCFFP	Para. 153 Appendix X
Proposed Draft Code of Practice for Fish and Fishery Products (optional final product requirements for commodities)	-	Governments 33rd CCFFP	Para. 141
Food Additive Provisions in Standards for Fish and Fishery Products (food additive provisions in adopted standards)	-	EWG led by EU and USA Governments 33rd CCFFP	Paras 142-143
Discussion Paper on Histamine	-	Electronic Working Group (Japan and USA) 33rd CCFFP	Paras 146-150
Discussion Paper on Nitrogen Factors	-	USA, UK and NZ 33rd CCFFP	Paras 109-112

APPENDIX I

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APPENDIX II

AMENDMENTS TO THE CODE OF PRACTICE FOR FISH AND FISHERY PRODUCTS (CAC/RCP 52-2003)

(for adoption)

Section 7.1, para. 4

To control the hazards, identification and monitoring of growing areas is very important for ensuring the safety of bivalve molluscs. The identification, classification and monitoring of these areas is a responsibility for competent authorities in cooperation with fishers and primary producers. *Escherichia coli*/faecal coliforms or total coliforms may be used as an indicator for the possibility of faecal contamination. To control viruses, refer to the Annex on the *Control of Hepatitis A Virus (HAV) and Norovirus (NoV) in Bivalve Molluscs* (Annex I) to the *Guidelines on the Application of the General Principles of Food Hygiene to the Control of Viruses in Food* (CAC/GL 79-2012). To control pathogenic *Vibrio* spp., refer to the Annex on the *Control Measures for Vibrio parahaemolyticus and Vibrio vulnificus in Bivalve Molluscs* to the *Guidelines on the Application of the General Principles of Food Hygiene to the Control of Pathogenic Vibrio Species in Seafood* (CAC/GL 73-2010). If biotoxins are found in the bivalve molluscs flesh in hazardous amounts, the growing area must be closed for harvesting bivalve molluscs until toxicological investigation has made clear that the bivalve mollusc meat is free from hazardous amounts of biotoxins. Harmful chemical substances should not be present in the edible part in such amounts that the calculated dietary intake exceeds the permissible daily intake.

7.2.2.2 Pathogen monitoring

Shellfish sanitation programmes rely upon the use of indicator organisms for the presence of contamination rather than upon attempts to monitor for specific pathogens. However, where there has been a shellfish-borne outbreak caused by an identified pathogen such as *Salmonella* and others (*Vibrio* and viruses), monitoring the bivalve molluscs may be appropriate as part of the process of closure/reopening of the affected harvest area. The species, and typically the actual strain, should be known in order to ensure that monitoring is addressing the source of the pathogen. Predetermined acceptance/rejection levels for the pathogen should have been established in order to use such monitoring results for decision-making. Other conditions including the sanitary survey requirements should also have been satisfied as a condition of reopening this area. When appropriate, taking into account the epidemiological situation as indicated by the results of environmental monitoring and/or other surveillance, the competent authority may decide to implement a criterion for *Salmonella*.

APPENDIX III

DRAFT STANDARD FOR SMOKED FISH, SMOKE-FLAVOURED FISH AND SMOKE-DRIED FISH

(At Step 8 of the Procedure)

1. SCOPE

This standard applies to smoked, smoke-flavoured and smoke-dried fish prepared from fresh, chilled or frozen raw material. It deals with whole fish, fillets and sliced and similar products thereof. The standard applies to fish, either for direct consumption, for further processing, or for addition into speciality or minced products where fish constitutes only part of the edible contents.

It does not apply to fish treated with carbon monoxide (filtered, "clear" or 'tasteless' smoke), fish packaged in hermetically sealed containers processed to commercial sterility. Speciality or minced products as such are not included (e.g. fish-salads).

2. DESCRIPTION

Product and process definitions for smoked fish, smoke-flavoured fish and smoke-dried fish are considered separately under this section.

2.1 SMOKED FISH

2.1.1 Product definition

Smoked fish is prepared from fish that has undergone a hot or cold smoking process. The smoke must be applied through one of the smoking processes defined in 2.1.2 and the end product must have smoked sensory characteristics. Spices and other optional ingredients may be used.

2.1.2 Process definitions

- **"Smoking"** is a process of treating fish by exposing it to smoke from smouldering wood or plant materials. This process is usually characterised by an integrated combination of salting, drying, heating and smoking steps in a smoking chamber.
- **"Smoking by regenerated smoke"** is a process of treating fish by exposing it to smoke which is regenerated by atomizing smoke condensate in a smoking chamber under the time and temperature conditions similar to those for hot or cold smoking.
- **"Smoke Condensates**" are products obtained by controlled thermal degradation of wood in a limited supply of oxygen (pyrolysis), subsequent condensation of the resultant smoke vapours, and fractionation of the resulting liquid products..
- **"Hot smoking"** is a process in which fish is smoked at an appropriate combination of temperature and time sufficient to cause the complete coagulation of the proteins in the fish flesh. Hot smoking is generally sufficient to kill parasites, to destroy non-sporulated bacterial pathogens and to injure spores of human health concern.
- **"Cold smoking"** is a process of treating fish with smoke using a time/temperature combination that will not cause significant coagulation of the proteins in the fish flesh but that will cause some reduction of the water activity.
- **"Salting"** is a process of treating fish with salt of food grade quality to lower water activity in fish flesh and to enhance flavour by any appropriate salting technology (e.g. dry salting, brining, injection salting).
- **"Drying"** is a process in which the moisture content in the fish is decreased to appropriate required characteristics under controlled hygienic conditions.
- **"Packaging"** is a process in which smoked fish is put in a container, either aerobically or under reduced oxygen conditions, including under vacuum or in a modified atmosphere.
- **"Storage"** is a process in which smoked fish is kept refrigerated or frozen to assure product quality and safety in conformity with Sections 3 and 6.

2.2 SMOKE-FLAVOURED FISH

2.2.1 Product definition

Smoke-flavoured fish is prepared from fish that has been treated with smoke flavours, without undergoing a smoking process as described in 2.1. The end product must have a smoked taste. Spices and other optional ingredients may be used.

2.2.2 Process definition

- **"Smoke flavours"** are either smoke condensates or artificial flavour blends prepared by mixing chemically-defined substances in known amounts or any combination of both (smoke-preparations).
- **"Smoke flavouring"** is a process in which fish or fish preparations are treated with smoke flavour. The smoke flavour can be applied by any technology (e.g. dipping, spraying, injecting, soaking).
- **"Smoke Condensates"** are products obtained by controlled thermal degradation of wood in a limited supply of oxygen (pyrolysis), subsequent condensation of the resultant smoke vapours, and fractionation of the resulting liquid products.
- **"Packaging"** is a process in which smoke-flavoured fish is put in a container, either aerobically or under reduced oxygen conditions, including under vacuum or in a modified atmosphere.
- **"Storage"** is a process in which smoke-flavoured fish is kept refrigerated or frozen to assure product quality and safety in conformity with Sections 3 and 6.
- **"Drying"** is a process in which the moisture content in the fish is decreased to appropriate required characteristics under controlled hygienic conditions.
- **"Salting"** is a process of treating fish with salt of food grade quality to lower water activity in fish flesh and to enhance flavour by any appropriate salting technology (e.g., dry salting, brining, injection salting).

2.3 SMOKE-DRIED FISH

2.3.1 Product definition

Smoke-dried fish is prepared from fish that has undergone a combined smoking and drying process and may include a salting process. The smoke must be applied through a smoke-drying process traditional for the respective country or an industrial smoke-drying process and the end product must have smoke-dried sensory characteristics. Spices and other optional ingredients may be used.

2.3.2 Process definition

- **"Smoke drying"** is a process in which fish is treated by combined smoking and drying steps to such an extent that the final product can be stored and transported without refrigeration and to achieve a water activity of 0.75 or less (10% moisture content or less), as necessary to control bacterial pathogens and fungal spoilage.
- **"Drying"** is a process in which the moisture content in the fish is decreased to appropriate required characteristics under controlled hygienic conditions.
- **"Salting"** is a process of treating fish with salt of food grade quality to lower water activity in fish flesh and to enhance flavour by any appropriate salting technology (e.g., dry salting, brining, injection salting).
- **"Packaging"** is a process in which smoke-dried fish is put in a container to avoid contamination and prevent rehydration.
- **"Storage"** is a process in which smoke-dried fish is typically kept at ambient temperature in a way to assure its safety and quality in conformity with Sections 3 and 6.

2.4 Presentation

Any presentation of the product shall be permitted provided that it meets all requirements of this Standard, and it is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 The raw material

Smoked fish, smoke-flavoured fish and smoke-dried fish shall be prepared from sound and wholesome fish, which may be fresh, chilled or frozen, and of a quality to be sold for human consumption after appropriate preparation.

3.2 Ingredients

All ingredients used shall be of food grade quality and conform to all applicable Codex standards.

3.3 Wood or other plant material for generation of smoke

Wood or other plant material used for the generation of smoke or smoke-condensates must not contain toxic substances either naturally or through contamination, or after having been treated with chemicals, paint or impregnating materials. In addition, wood or other plant material must be handled in a way to avoid contamination (refer to the *Code of Practice for the Reduction of Contamination of Food with Polycyclic Aromatic Hydrocarbons (PAH) from Smoking and Direct Drying Processes* (CAC/RCP 68-2009)).

3.4 Decomposition

The product of susceptible species shall not contain more than 10 mg of histamine per 100g fish flesh based on the average of the sample unit tested and all products in this Standard shall be free from persistent and objectionable odours and flavours characteristic of decomposition

3.5 Final product

Products shall meet the requirements of this Standard when lots examined in accordance with section 10, comply with the provisions set out in section 9. Products shall be examined by the methods given in section 8.

4. FOOD ADDITIVES

4.1 Smoked Fish

Acidity Regulators

These acidity regulators are in use and identified as technologically justified for pH control for the products complying with this Standard (e.g. to retard the growth of microorganisms that are acid-sensitive)

INS Number	Additive Name	Maximum Level in Product
260	Acetic acid, glacial	GMP
330	Citric acid	GMP
325	Sodium lactate	GMP
334	Tartaric acid, L[+]	200 mg/kg
270	Lactic acid, L-, D-, DL-	GMP
326	Potassium lactate	GMP
327	Calcium lactate	GMP

Antioxidants

These antioxidants are in use and identified as technologically justified to retard lipid oxidation for the products complying with this Standard (e.g., high fat content fish).

INS Number	Additive Name	Maximum Level in Product
301	Sodium ascorbate	GMP
316	Sodium erythorbate	GMP
325	Sodium lactate	GMP

Colours

These colours are in use and identified as technologically justified to provide the desirable colour when the smoking process does not impart sufficient colour.

INS Number	Additive Name	Maximum Level in Product
129	Allura Red AC	300 mg/kg
160b(i)	Annato extracts, bixin-based	10 mg/kg, as bixin
110	Sunset yellow FCF	100 mg/kg
102	Tartrazine	100 mg/kg

Packaging Gas

These packaging gases are in use and identified as technologically justified in order to slow down oxidation and growth of aerobic microorganisms.

INS Number	Additive Name	Maximum Level in Product
290	Carbon dioxide	GMP
941	Nitrogen	GMP

Preservatives (for reduced oxygen packaged products only)

These preservatives are in use and identified as technologically justified in order to prevent growth of *Listeria monocytogenes*.

INS Number	Additive Name	Maximum Level in Product
200-203	Sorbates	2000 mg/kg as sorbic acid
210-213	Benzoates	200 mg/kg as benzoic acid

4.2 Smoke-Flavoured Fish

Acidity Regulators

These acidity regulators are in use and identified as technologically justified for pH control for the products complying with this Standard (e.g. to retard the growth of microorganisms that are acid-sensitive)

INS Number	Additive Name	Maximum Level in Product
260	Acetic acid, glacial	GMP
330	Citric acid	GMP
325	Sodium lactate	GMP
334	Tartaric acid, L[+]	200 mg/kg
270	Lactic acid, L-, D-, DL-	GMP
326	Potassium lactate	GMP
327	Calcium lactate	GMP

Antioxidants

These antioxidants are in use and identified as technologically justified to retard lipid oxidation for the products complying with this Standard (e.g. high fat content fish).

INS Number	Additive Name	Maximum Level in Product
301	Sodium ascorbate	GMP
316	Sodium erythorbate	GMP
325	Sodium lactate	GMP

Carrier

INS Number	Additive Name	Maximum Level in Product
1400	Dextrins, roasted starch	GMP[1]

Colours

These colours are in use and identified as technologically justified to provide the desirable colour when the smoking process does not impart sufficient colour.

INS Number	Additive Name	Maximum Level in Product
129	Allura Red AC	300 mg/kg
160b(i)	Annato extracts, bixin-based	10 mg/kg, as bixin
110	Sunset yellow FCF	100 mg/kg
102	Tartrazine	100 mg/kg

Emulsifiers

INS Number	Additive Name	Maximum Level in Product
433	Polyoxyethylene (20) sorbitan monooleate	1000 mg/kg[1]

Packaging Gases

These packaging gases are in use and identified as technologically justified in order to slow down oxidation and growth of aerobic microorganisms.

INS Number	Additive Name	Maximum Level in Product
290	Carbon dioxide	GMP
941	Nitrogen	GMP

Preservatives (for reduced oxygen packaged products only)

These preservatives are in use and identified as technologically justified in order to prevent growth of *Listeria monocytogenes*.

INS Number	Additive Name	Maximum Level in Product
200-203	Sorbates	2000 mg/kg as sorbic acid
210-213	Benzoates	200 mg/kg as benzoic acid

4.3 Smoke-Dried Fish

No additives are permitted in smoke-dried fish.

5. CONTAMINANTS

5.1 General provisions

The products covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Foods and Feed* (CODEX STAN 193-1995).

5.2. Polycyclic Aromatic Hydrocarbons (PAH)

Smoking of fish should be done in a manner that minimises the formation of polycyclic aromatic hydrocarbons (PAH). This can be achieved by following the *Code of Practice for the Reduction of Contamination of Food with Polycyclic Hydrocarbons (PAH) from Smoking and Direct Drying Processes* (CAC/RCP 68-2009).

6. HYGIENE AND HANDLING

6.1 General provisions

The products covered by the provisions of this Standard shall be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CAC/RCP 1-1969) and other

[1] Carry over from flavouring

relevant Codex texts such as codes of practice and codes of hygienic practice, such as the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003).

6.2 Microbiological criteria

The products shall comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria in Foods* (CAC/GL 21-1997).

6.3 Parasites

Products covered by this Standard shall not contain living parasites and particular attention needs to be paid to cold smoked or smoke-flavoured products, which should be frozen before or after smoking if a parasite hazard is present (see Annex 1). Viability of nematodes, cestodes and trematodes shall be examined according to Section 8.10 and/or 8.11.

6.4 *Listeria monocytogenes*

The ready to eat products shall comply with microbiological criteria for *Listeria monocytogenes* in ready-to-eat foods which was elaborated in the Annex II of the Guidelines on the Application of General Principles of Food Hygiene to the Control of *Listeria monocytogenes* in Ready to Eat Foods (CAC/GL 61-2007).

6.5 *Clostridium botulinum*

Toxins of *Clostridium botulinum* are not allowed in smoked fish, smoke-flavoured fish and smoke-dried fish products. The formation of *Clostridium botulinum* toxin can be controlled through an application of a combination of science-based options such as packaging type, storage temperature, and water activity, e.g., by use of salt in the water phase. Examples are shown in the Table in Annex 2, which addresses these control options.

Countries where the products are to be consumed may allow these products in an uneviscerated state or may require evisceration, either before or after processing, in such a way as to minimise the risk of *Clostridium botulinum*.

6.6 Histamine

The product shall not contain histamine that exceeds 20 mg/100g fish flesh in any sample unit tested. This applies only to susceptible species (e.g., *Scombridae, Clupeidae, Engraulidae, Coryphaenidae, Pomatomidae, Scomberesocidae*).

6.7 Other Substances

The products shall not contain any other substance in amounts, which may present a hazard to health in accordance with standards established by the Codex Alimentarius Commission, and the final product shall be free from any foreign material that poses a threat to human health.

7. LABELLING

In addition to the provisions of the *General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985) the following specific provisions apply.

7.1 Name of the Food

The name of the food must be “smoked X” if treated by the processes described in paragraph 2.1, “smoke flavoured X” if treated by the processes described in paragraph 2.2,”smoke-dried X” if treated by the processes described in paragraph 2.3, X being the common or commercial name of the species of fish used in accordance with the law or customs of the country in which the food is sold, so as not to mislead the consumer.

7.2 Additional labelling

Countries where the product is sold can determine whether the use of regenerated smoke must be indicated on the label.

7.3 Storage and Handling Instructions

The label shall declare storage and handling instructions appropriate for the product.

7.4 Labelling of Non-retail Containers

Information specified above shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer or packer, as well as storage instructions, shall appear on the container.

However, the name and address of the manufacturer or packer may be replaced by an identification mark (e.g., plant approval number) provided that such a mark is clearly identifiable with the accompanying documents.

8. SAMPLING, EXAMINATION AND ANALYSIS

8.1 Sampling

Sampling of lots for examination of the product shall be in accordance with the *General Guidelines on Sampling* (CAC/GL 50-2004).

A sample unit is the individually packed product or a 1 kg portion from bulk containers.

The number of samples to be taken for the determination of the levels of histamine in a lot shall be determined by the Competent Authority having jurisdiction.

8.2 Sensory and Physical Examination

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination and in accordance with procedures elaborated in Sections 8.4 through 8.6 and the *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CAC/GL 31-1999)."

8.3 Determination of Histamine

AOAC 977.13 or other scientifically equivalent validated method.

8.4 Determination of Net Weight

The net weight is determined as the weight of the product, exclusive of packaging material, interleaving material, etc.

8.5 Temperatures for Thawing

Frozen samples of final products shall be thawed at refrigeration temperatures to maintain quality and safety.

8.6 Determination of *Listeria monocytogenes*

The microbiological criteria for products in which growth of *L. monocytogenes* will not occur are based on the use of the ISO 11290-2 method. Other methods that provide equivalent sensitivity, reproducibility, and reliability can be employed if they have been appropriately validated (e.g., based on ISO 16140). The microbiological criteria for products in which growth of *L. monocytogenes* can occur are based on the use of ISO 11290-1 method. Other methods that provide equivalent sensitivity, reproducibility, and reliability can be employed if they have been appropriately validated (e.g., based on ISO 16140).

8.7 Determination of *Clostridium botulinum*

AOAC 977.26 for the detection of *C. botulinum* and its toxins in foods or other scientifically equivalent validated method. This method is not routinely performed on the product, but may be used when there is a suspicion of the presence of toxins.

8.8 Determination of water phase salt

The percentage salt (NaCl) in the aqueous phase can be determined by the following calculation:

$$\text{\% salt aqueous phase} = \frac{\text{\% salt} \times 100}{\text{\% water + \% salt}}$$

% Moisture: AOAC, 952.08, Sec. 35.1.13, *Solids (Total) in Seafood*

% Salt: AOAC, 937.09, Sec. 35.1.18, *Salt (Sodium Chloride) in Seafood*

8.9 Determination of water activity

Water activity measurement is performed with a water activity meter that is properly calibrated with reference standards, and operated and maintained in accordance with the manufacturer's instructions.

8.10 Determination of the viability of parasites

Methods used for extracting and testing the viability of parasites could include the method set out in Annex I for nematodes in the *Standard for Salted Herring and Sprats* (CODEX STAN 244-2004) or other validated methods for parasites acceptable to the competent authority having jurisdiction.

8.11 Determination of visible Parasites

The entire sample unit is examined for the presence of parasites non-destructively by placing appropriate portions of the thawed (if necessary) sample unit on a 5 mm thick acryl sheet with 45% translucency and candled with a light source giving 1500 lux 30 cm above the sheet.

9. DEFINITION OF DEFECTIVES

A sample unit shall be considered as defective when it exhibits any of the properties defined below.

9.1 Foreign Matter

The presence in the sample unit of any matter, which has not been derived from the fish, does not pose a threat to human health, and is readily recognised without magnification or is present at a level determined by any method including magnification that indicates non-compliance with good manufacturing practice.

9.2 Parasites

The presence of two or more visible parasites per kg of the sample unit detected by the method described in 8.11 with a capsular diameter greater than 3 mm or a parasite not encapsulated and greater than 10 mm in length.

9.3 Odour, Flavour and Texture

A sample unit affected by persistent and distinct objectionable odours, flavours, or textures indicative of decomposition, or rancidity, burning sensation or other sensorial impressions not characteristic of the product.

10. LOT ACCEPTANCE

A lot will be considered as meeting the requirements of this standard when:

(i) The total number of defectives as classified according to Section 9 does not exceed the acceptance number (c) of an appropriate sampling plan (AQL-6.5) in the *General Guidelines on Sampling* (CAC/GL 50-2004);

(ii) The average net weight of all sample units is not less than the declared weight, provided there is no unreasonable shortage in any container and no individual container is less than 95% of the declared weight; and

(iii) The essential composition and quality factors, food additives, contaminants, hygiene and handling and labelling requirements of Sections 3, 4, 5, 6 and 7 are met. For histamine no sample unit shall exceed 20 mg/100 g of fish flesh as per the sampling plan chosen. (Refer to Section 8.3).

ANNEX 1

Procedures sufficient to kill parasites

A method that is acceptable to the competent authority having jurisdiction shall be used to kill parasites.

Where freezing is required to kill parasites (i.e., cold smoked fish and smoke-flavoured fish) the fish must be frozen either before or after processing to a temperature time combination sufficient to kill the living parasites.

Examples of freezing processes that may be sufficient to kill some or all parasites are:

- Freezing at -20ºC at the thermal centre of the product for 24 hours (for *Anisakis* species and *Pseudoterranova decipiens* only)[1];
- Freezing at -35ºC at the thermal centre of the product for 15 hours (all parasites)[2-5];
- Freezing at -20ºC at the thermal centre of the product for 168 hours (7 days) [2-5] (all parasites).

References:

1 FAO Fisheries Technical Paper 444 (Assessment and management of seafood safety and quality, 2004)

2 Bier, J. 1976. Experimental Anisakiasis: Cultivation and Temperature Tolerance Determinations. J. Milk Food Technol. 39:132-137.

3 Deardoff, T.L. et al. 1984. Behavior and Viability of Third-Stage Larvae of Terranova sp. (Type HA) and Anisakis simplex (Type I) Under Coolant Conditions. J. of Food Prot. 47:49-52.

4 Health and Welfare Canada (1992) (in consultation with Canadian Restaurant and Food Service

Association, Fisheries Council of Canada, and Fisheries and Oceans Canada). Code of practice for the preparation of raw, marinated, and partially cooked fin fish.

5 USFDA - Centre for Food Safety & Applied Nutrition (June 2001), Fish and Fisheries Products Hazards and Controls Guidance, Chapter 5 Parasites, 3rd Edition.

ANNEX 2

Examples of combinations of product attributes that minimise the likelihood of *Clostridium botulinum* toxin formation

Countries where the products are to be consumed can be expected to make their science-based risk management choices with the assistance of this framework, e.g. select some options and exclude others, based on conditions within the country (e.g., nature and enforcement of refrigeration and shelf life controls; transportation times and conditions; variability in amount of salt in the aqueous phase that could occur despite best efforts to achieve a required percentage, etc.). This table applies to smoked fish and smoke-flavoured fish where the smoke flavour is provided by smoke condensates. If the smoke flavour is imparted by artificial flavour blends, then 5% aqueous phase salt would be required in order to provide complete protection at temperatures between 3°C and 10°C**,** or 10% aqueous phase salt would be required at any temperature over 10°C. This table does not apply to smoke-dried fish because the required water activity of 0.75 or below (moisture content level of 10% or less) inhibits the growth of all foodborne pathogens so that refrigeration is not required.

As an alternative to aqueous phase salt, certain time/temperature parameters can minimise the likelihood that *C. botulinum* will grow in the product. *C. botulinum* cannot grow and produce toxin at or below 3ºC or below a water activity of 0.94. Other time/temperature combinations exist that similarly control the formation of toxin.[2] Where enforcement of shelf life as well as consumer acceptance of shelf life are norms, the country may select a system that relies on the combination of existing storage temperature conditions (i.e. during transport, retail storage, and consumer storage) and shelf life limitations.

[2] Skinner,G.E. and Larkin, J.W. (1998) Conservative prediction of time to *Clostridium botulinum* toxin formation for use with time-temperature indicators to ensure the safety of foods. (*Journal of Food Protection* 61, 1154-1160

Temperature-abuse has a direct impact on the safety and shelf-life of the products. Time/temperature integrators may be a useful tool to determine if the products have been temperature-abused.

Product Temperature During Storage	**Packaging**	**Aqueous Phase Salt (NaCl)**	**Comments**
Below 3°C	Any packaging	Not applicable.	*C. botulinum* toxin cannot form below 3° C. Temperature monitoring is needed to ensure that the temperature does not exceed 3ºC.
≥3°C to 5°C	Aerobically Packaged	No minimum water activity is needed. Nonetheless, where there is a possibility of severe time/ temperature abuse, the country where the product is being consumed might choose an aqueous phase salt barrier of at least 3% to 3.5% (w/w) as an additional barrier.	When these products are packaged aerobically, 5ºC is the maximum recommended storage temperature for the control of pathogens generally and for quality. The aerobic packaging does not necessarily prevent growth and toxin formation of *C. botulinum*. In air-packaged products, aerobic spoilage organisms provide sensory signs of spoilage before the formation of toxin by *C. botulinum.* In addition in air packaging it is possible for anaerobic micro-environments to exist and toxin may form if the product is subject to severe time/temperature abuse. For that reason, the country where the product is consumed should still require aqueous phase salt as a barrier to growth of non-proteolytic strains of *C. botulinum* if there are concerns about the ability of transporters, retailers or consumers to maintain time/temperature control.
Frozen (< or = -18°C)	Any packaging	Not applicable.	*C. botulinum* toxin cannot form when product is frozen. In the absence of adequate aqueous phase salt, toxin production can occur after thawing so, labelling information about the need for the consumer to keep the product frozen, to thaw it under refrigeration, and to use it immediately after thawing, is important.
(≥3°C to 5°C)	Reduced Oxygen (including vacuum packaging + modified atmosphere packaging)	Aqueous phase salt at minimum level of between 3% & 3.5% (w/w) may be selected by the country where the product is to be consumed.	Aqueous phase salt at a minimum level of between 3 and 3.5% (w/w) (aqueous phase salt) in combination with refrigeration will significantly delay (or prevent) toxin formation. For that reason, the country where the product is consumed should still require the higher aqueous phase salt as a barrier to growth of non-proteolytic strains of *C. botulinum* if there are concerns about temperature abuse of the product.

APPENDIX IV

DRAFT STANDARD FOR LIVE ABALONE AND FOR RAW FRESH CHILLED OR FROZEN ABALONE FOR DIRECT CONSUMPTION OR FOR FURTHER PROCESSING

(At Step 8 of the procedure)

1. SCOPE

This standard applies to live abalone and/or raw fresh chilled or frozen abalone of the genus *Haliotis.* Raw fresh chilled or frozen abalone may be whole or shucked with the viscera removed. The epithelium, mucous and radula may be removed. Chilling or freezing is done in such a way that essentially the characteristics of live abalone are retained. Both live and raw fresh chilled or frozen abalone may be intended for direct consumption or further processing. Part I below applies to live abalone, while Part II applies to raw fresh chilled or frozen abalone.

PART I – LIVE ABALONE

I-2 DESCRIPTION

I-2.1 Product definition

Live abalone are products that are alive immediately prior to consumption. Presentation includes the shell.

I-2.2 Process Definition

Live abalone may be wild caught or farmed. They may be purged in clean sea water and/or drained prior to packaging for direct human consumption or for further processing as in II-2.2.

I-2.3 Presentation

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

- meets all requirements of this Standard; and
- is adequately described on the label to avoid confusing or misleading the consumer.

The abalone may be packed by weight, count, count per unit of weight or volume per package.

I-3 ESSENTIAL COMPOSITION AND QUALITY FACTORS

I-3.1 Abalone

The abalone must be alive and possess organoleptic characteristics associated with freshness, and freedom from taint or extraneous matter, as determined by specialists familiar with the species concerned.

I-3.2 Final Product

Live abalone shall meet the requirements of this Standard when lots comply with the provisions of Section I-10. Live abalone shall be examined by the methods given in Sections I-8 and I-9.

I-4 FOOD ADDITIVES

Food additives are not permitted in live abalone.

I-5 CONTAMINANTS

I-5.1 The products covered by this Standard shall comply with the Maximum Levels of the *General Standard for Contaminants and Toxins in Foods and Feeds* (CODEX/STAN 193-1995) and the maximum residue limits for veterinary drugs established by the Codex Alimentarius Commission.

I-5.2 Abalone from some geographical areas have been found to accumulate certain marine biotoxins. It is up to the Competent Authority (using a Risk Assessment) to determine whether a risk exists in any geographical areas under its control and if so, put in the necessary mechanisms to ensure that the part of the abalone to be consumed, meets with the marine biotoxins level in the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008). The Risk Assessments

should be undertaken in accordance with the Working Principles for Risk Analysis for Food Safety for Application by Governments (CAC/GL 62-2007).

I-6 HYGIENE AND HANDLING

I-6.1 It is recommended that the products covered by provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CAC/RCP 1-1969), the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003) and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

I-6.2 The products should comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CAC/GL 21-1997).

I – 6.3 The final product shall be free from any foreign material that poses a threat to human health.

I-7 LABELLING

In addition to the provisions of the *General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985) the following specific provisions apply:

I-7.1 The Name of the Food

The name of the food to be declared on the label shall be the common or usual name of the species of abalone in accordance with the law and custom of the country in which the food is sold and in a manner not to mislead the consumer.

I-7.1.1 There shall appear on the label, reference to the presentation (provided for in Section I-2.3-Presentation) in close proximity to the name of the product in such descriptive terms that will adequately and fully describe the nature of the presentation of the product to avoid misleading or confusing the consumer.

I-7.1.2 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.

I-7.1.3 The country where the product is sold can determine if the scientific name must be indicated on the label.

I-7.2 Content Declaration

Live abalone shall be labelled by weight, count, volume per package or count per unit weight as appropriate to the product.

I-7.3 Storage Instructions

The label shall specify the conditions for storage and/or temperature that will maintain the product quality/viability during transportation, storage and distribution.

I-7.4 Labelling of Non-retail Containers

Information specified above shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address of the manufacturer or packer as well as storage instructions shall always appear on the container.

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

I-7.5 The durability or shelf life may be required in the country where the product is sold. Date of minimum durability may be replaced by the statement “Abalone must be alive when sold to the final consumer.

I-8 SAMPLING, EXAMINATION AND ANALYSIS

I-8.1 Sampling

(i) Sampling of lots for examination of the product shall be in accordance with the *General Guidelines on Sampling* (CAC/GL 50-2004).

(ii) The sample shall include a sufficient number of sample units selected throughout the lot to ensure that the sample is representative of the lot. The sample unit shall be a minimum of 20 individual abalones.

(iii) The portion of the abalone to be analysed shall be the part to be consumed.

I-8.2 Sensory and Physical Examination

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination and in accordance with procedures elaborated in Sections I-8.3 through I-9, and *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CAC/GL 31-1999).

I-8.3 Determination of Count per Unit Weight or Volume

When declared on the label, the count of abalone shall be determined by counting the number of abalone in the container or a representative sample thereof and dividing the count of abalone by the actual weight/volume to determine the count per unit weight or volume.

I-8.4. Determination of Biotoxins

Where a risk exists, the marine biotoxins of concern shall be determined according to the methods specified in the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008).

I-9 DEFINITION OF DEFECTIVES

The sample unit shall be considered defective when it exhibits any of the properties defined below.

I-9.1 Foreign Matter

The presence in the sample unit of any matter which has not been derived from abalone, does not pose a threat to human health and is readily recognized without magnification or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing and sanitation practices.

I-9.2 Dead or Damaged Product

A dead abalone is characterized by lack of muscle movement when touched and/or complete muscle stiffness due to the rigor mortis process setting in after death of the animal. A damaged abalone is flawed to the extent that its integrity is affected. The sample unit is defective if more than 5% of the abalones by count in the sample unit are dead or damaged.

I-10 LOT ACCEPTANCE

A lot shall be considered as meeting the requirements of this standard when:
(i) the total number of defectives as classified according to section I-9 does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

(ii) the average count designation as defined in section I-8.3 is within the declared count, and the total number of samples not meeting the count designation does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

(iii) the average net weight of all sample units is not less than the declared weight, provided there is no unreasonable shortage in any individual container;

(iv) the essential composition and quality factors, food additives, contaminants, hygiene and handling and labelling requirements of Sections I-3, I-4, I-5, I-6 and I-7 are met.

PART II – RAW FRESH CHILLED OR FROZEN ABALONE

II-2 DESCRIPTION

II-2.1 Product Definition

Raw fresh chilled or frozen whole abalone prepared for direct consumption or for further processing are products that were alive immediately prior to the commencement of freezing and/or processing and comply with Section I-2.2. They have been chilled or frozen whole or shucked with the viscera removed. The epithelium, mucous or radula may be removed.

II-2.2 Process Definition

The product is harvested as in I-2.2 and after suitable preparation is subjected to a chilling or freezing process complying with the conditions laid down hereafter. The chilling process shall be carried out in

appropriate equipment in such a way as to ensure the product shall be quickly brought down to the temperature of melting ice (with a maximum tolerance of -2°C to +4°C). The product shall be kept chilled at this temperature so as to maintain the quality during transportation, storage and distribution.

The freezing process shall be carried out in appropriate equipment in such a way that the range of maximum ice crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C or colder at the thermal centre after thermal stabilization. The product shall be kept deep frozen at -18ºC or colder so as to maintain the quality during transportation, storage and distribution.

II-2.3 Presentation

Refer to I-2.3.

II-3 ESSENTIAL COMPOSITION AND QUALITY FACTORS

II-3.1 Raw Fresh Chilled or Frozen Abalone

Raw abalone shall be of a quality fit for human consumption.

II-3.2 Glazing (for Frozen Abalone only)

If glazed, the water used for glazing or preparing glazing solutions shall be of potable quality or shall be clean sea-water. Potable water is fresh-water fit for human consumption. Standards of potability shall not be less than those contained in the latest edition of the WHO “International Guidelines for Drinking Water Quality.” Clean sea-water is sea-water which meets the same microbiological standards as potable water and is free from objectionable substances.

II-3.3 Other Ingredients

The packing medium and all other ingredients used shall be of food grade quality and conform to all applicable Codex standards.

II-3.4 Final Product

Raw fresh chilled or frozen abalone shall meet the requirements of this standard when lots examined in accordance with Sections II-8 and II-9 comply with the provisions set out in Section II-10.

II-4 FOOD ADDITIVES

Food additives are not permitted in raw fresh chilled or frozen abalone.

II-5 CONTAMINANTS

Refer to I-5 Contaminants

II-6 HYGIENE AND HANDLING

Abalone should meet the requirements of I-6 prior to chilling/freezing. After processing they should retain visual characteristics associated with freshness, including, where relevant, shells free of dirt.

II-7 LABELLING

In addition to the provisions of the *General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985) the following specific provisions apply:

II-7.1 The Name of the Food

The name of the food to be declared on the label shall be the common or usual name of the species of abalone in accordance with the law and custom of the country in which the food is sold and in a manner not to mislead the consumer.

II-7.1.1 There shall appear on the label, reference to the presentation (provided for in Section II-2.3-Presentation) in close proximity to the name of the product in such descriptive terms that will adequately and fully describe the nature of the presentation of the product to avoid misleading or confusing the consumer.

II-7.1.2 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.

II-7.1.3 The country where the product is sold can determine if the scientific name must be indicated on the label.

II-7.2 Content Declaration

Raw fresh chilled or frozen abalone shall be labelled by weight, count, count per unit weight, or volume as appropriate to the product.

Where the frozen food has been glazed, the declaration of the net weight of the food shall be exclusive of the glaze.

II-7.3 Storage Instructions

The label shall specify the conditions for storage and/or temperature that will maintain the product safety/quality during transportation, storage and distribution including date of minimum durability and date of shucking where required in the country of sale.

II-7.4 Labelling of non-retail containers

Information specified above shall be given either on the container or in accompanying documents, except that the name of the food, lot identification, and the name and address of the manufacturer or packer as well as storage instructions shall always appear on the container.

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

II-8 SAMPLING, EXAMINATION AND ANALYSIS

II-8.1 Sampling

Refer to I-8.1

II-8.2 Sensory and Physical Examination

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination and in accordance with procedures elaborated in Sections II-8.3 through II-8.5 and II-9, and *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CAC/GL 31-1999).

II-8.3 Determination of Net Weight

The net weight of all sample units shall be determined by the procedures described or mentioned in sections II-8.3.1 through II-8.3.3.

II-8.3.1 Determination of Net Weight of Product Exclusive of Packaging

(i) Remove frost and ice from outside of package;

(ii) Weigh the unopened container;

(iii) Open the container and remove the contents;

(iv) Dry the empty container and weigh.

(v) Subtract the weight of the empty container from the weight of the unopened container.

The resultant figure will be the total net weight.

II-8.3.2 Determination of Net Weight of Frozen Products not Covered by Glaze

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

II-8.3.3 Determination of Net Weight of Frozen Products Covered by Glaze

The net weight (exclusive of packaging material) of each sample unit representing a lot shall be determined using the AOAC official method 963.18, Net Contents of Frozen Seafoods.

II-8.4. DETERMINATION OF COUNT PER UNIT WEIGHT OR VOLUME

When declared on the label, the count of abalone shall be determined by counting the numbers of abalone in the container or a representative sample thereof and dividing the count of abalone by the actual weight/volume to determine the count per unit weight or volume.

II-8.5. SAMPLE PREPARATION

II-8.5.1 Procedures for Thawing

For frozen product, the sample is thawed by enclosing it in a film type bag allowing it to thaw at room temperature or in a refrigerator (at 2-6 °C). The complete thawing of the product is determined by gently squeezing the bag occasionally so as not to damage the texture of the abalone, until no hard core or ice crystals are left.

II-8.6 Determination of Biotoxins

Where a risk exists, the marine biotoxins of concern shall be determined according to the methods specified in the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008).

II-9 DEFINITION OF DEFECTIVES

The sample unit shall be considered as defective when it exhibits any of the properties defined below.

II-9.1 Deep Dehydration

An area of greater than 10% of the surface of the abalones in the sample unit exhibits excessive loss of moisture clearly shown as white or abnormal colour on the surface which masks the colour of the flesh and penetrates below the surface, and cannot be easily removed by scraping with a knife or other sharp instrument without unduly affecting the appearance of the abalone, which affects more than 10% of the weight of the abalones in the sample unit.

II-9.2 Foreign Matter

The presence in the sample of any matter which has not been derived from abalone, does not pose a threat to human health and is readily recognized without magnification or is present at a level determined by any method including magnification, that indicates non-compliance with good manufacturing and sanitation practices.

II-9.3 Odour/Flavour

Persistent and distinct objectionable odours or flavours indicative of decomposition, rancidity, or other odours or flavours unfit for food."

II-9.4 Texture

Textural breakdown of the flesh, indicative of decomposition, characterized by a muscle structure that is mushy or paste-like.

II-10 LOT ACCEPTANCE

A lot shall be considered as meeting the requirements of this standard when:
(i) the total number of defectives as classified according to section II-9 does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

(ii) the average count designation as defined in section II-8.3 is within the declared count, and the total number of samples not meeting the count designation does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

(iii) the average net weight of all sample units is not less than the declared weight, provided there is no unreasonable shortage in any individual container;

(iv) the essential composition and quality factors food additives, contaminants, hygiene and handling and labelling requirements of Sections II-3, II-4, II-5, II-6 and II-7 are met.

APPENDIX V

PROPOSED DRAFT AMENDMENT TO THE STANDARD FOR QUICK FROZEN FISH STICKS (CODEX STAN 166-1989)

Nitrogen Factor for South Atlantic Hake

(At Step 5/8 of the procedure)

7.4 ESTIMATION OF FISH CONTENT

Table: Average Nitrogen factors to be used for fish flesh used as raw material for the product

Species	**Nitrogen %**
White fish:	
Cod	2.66
Minced Cod	2.61
Coley/Saithe	2.69
European Hake	2.64
Haddock	2.72
Ling	2.78
Plaice	2.46
Alaskan Pollack	2.59
Whiting	2.68
South Atlantic Hake (mixture of *Merluccius capensis* and *M. paradoxus*)	2.46
Minced South Atlantic Hake (mixture of *Merluccius capensis* and *M. paradoxus*)	2.38
Other species:	
Tilapia	2.88

note: ±10% of variation is allowed due to natural variety (e.g., state of maturity, nutritional status, season)

APPENDIX VI

PROPOSED DRAFT REVISION OF THE PROCEDURE FOR THE INCLUSION OF ADDITIONAL SPECIES IN CODEX STANDARDS FOR FISH AND FISHERY PRODUCTS

(At Step 5/8 of the Procedure)

Preamble

Any member can make a proposal to revise an existing standard to include an additional species. In accordance with the Criteria for the Establishment of Work Priorities and on the basis of a project document submitted by the proposing member, the Committee on Fish and Fishery products (CCFFP) may decide to forward to the Codex Alimentarius Commission a proposal for new work. When there is a proposal to start new work on including additional species, the CCFFP initiates the inclusion procedure as described below to facilitate its work.

1- SCOPE

This procedure for inclusion applies to the relevant standards falling within the mandate of the CCFFP. The aim of the procedure is to enable new species to be included in the existing standards following a simple and harmonised approach. This procedure does not apply to species currently included in a standard or species dedicated for the non-food industry.

2- RESPONSIBILITIES AND DIVISION OF COMMITTEE DECISIONS

The division of labour is the following:

2.1. PROPOSING MEMBER

- Develops a project document according to the Procedural Manual.
- Provides information on the candidate species pursuant to Section 3.1 (Description) and Section 3.2. (Economic data).

If the sensory evaluation is required by the Committee:

- Proposes three species, the most representatives of the market, to be compared with the candidate species.
- Proposes three laboratories for sensory evaluation (see section 3.3).

2.2. COMMITTEE

- Reviews the information listed in Section 3 - information required.

The information provided by the proposing member should enable the Committee to decide whether the relevant standard must be revised by checking that:

a. the taxonomic relationship of the candidate species is established;

b. the candidate species is described with sufficient precision;

c. economic potential is clearly demonstrated.

- Decides to transmit to the *Codex Alimentarius Commission* a proposal for new work; and at the same time,
- Considers whether or not to establish a working group to coordinate the process and present recommendations to the Committee for consideration.

a. If the Committee is of the view that the information submitted at this stage is sufficient to allow the inclusion of the candidate species, the Committee may agree with the inclusion without further assessment being required. In this case, the Committee forwards the draft amendment of the standard to the *Codex Alimentarius Commission* for its adoption.

b. However, where the Committee is in doubt as to whether the candidate species should be included in a processed product standard based on the above information, the Committee may decide to form a working group to oversee sensory evaluation of the product(s) of the candidate species.

- Decides which are the laboratories selected to perform the sensory evaluation and designates the leading laboratory in charge of coordinating the assessment and preparing the final report.
- Decides which are the species selected to be compared with the candidate species.
- Reviews the report of the Working Group on sensory evaluation.
- Decides if the candidate species is adequate for inclusion in the relevant standard.
- Transmits the proposed amendment of the standard to the *Codex Alimentarius Commission* for its adoption.

2.3. WORKING GROUP

- Reviews the documentation provided by the proposing member(s).
- Oversee the sensory evaluation.
- Examines the laboratory report on the sensory evaluation.
- Informs the Committee if the candidate species satisfy the requirements for inclusion in the relevant standard.

If a working group is not established then the tasks of the working group will be conducted by the Committee.

3- INFORMATION REQUIRED

A member(s) willing to propose the inclusion of a new species into a standard should, when submitting the proposal, provide the following information to the Committee.

3.1. CANDIDATE SPECIES DESCRIPTION

To be valid, the information provided should originate from an appropriate recognised institute(s) or credible sources, e.g. literature databases.

Species description should include, in order to allow the identification of the products (both as whole fish and commercially processed products):

a. The scientific name, either from credible source e.g. FISHBASE or Catalog of Fishes, or if appropriate by attestation from an appropriate recognised institution;

b. Morphological and anatomical characteristics (including illustrative material as appropriate);

c. Taxonomic position of the candidate species in relation to all the species listed in the relevant Codex standard, presented in the form of a dendrogram or a list; the reference of the database(s) used for taxonomic classification (for example FAO database) or bibliographic references;

d. Where appropriate, depending on the product, specific DNA and/or electrophoretic protein profile sequence from international database(s).

3.2. ECONOMIC DATA OF THE CANDIDATE SPECIES

3.2.1. Resources

a) Location of the main capture grounds on the FAO map "*Major Fishing Areas for Statistical Purposes*".

b) Yearly catches or the aquaculture production of the candidate species, preferably for the past 5 years , if data are available.

c) Estimate of volume of stocks present in the natural environment if available.

3.2.2. Processing technology and marketing

a) Data on processed products of the candidate species

- types of marketed products,
- trade names used,
- main processing treatment(s) e.g. canning, marinating, smoking,
- annual production (preferably for the past 5 years if data are available).

b) Data on international trade of food products derived from the species (yearly quantity and values preferablyfor the past 5 years if data are available)

3-3 PRINCIPLES OF THE SENSORY EVALUATION PROCEDURE

The sensory evaluation procedure has to be carried out by three laboratories with relevant proven expertise in sensory evaluation of fish and fishery products. Ideally, the three laboratories should be chosen from different Codex regions, preferably excluding the proposing member (s). The proposing member(s) may at this stage of the procedure suggest the three laboratories that can carry out independent verification. The Committee may decide to choose other laboratories than those suggested. These three laboratories have to be accepted by the Committee as suitable for the task. The laboratories will be chosen from countries where the products are mainly consumed, when possible. The Committee has to designate one of the three laboratories as the leading laboratory, which will coordinate the tasks. The proposing member proposes the 3 species to be compared with candidate species.

The performance of the tests should conform to the *Guidelines for the Sensory evaluation of Fish and Shellfish in laboratories* (CAC - GL 31-1999)**.**

In addition, the three laboratories shall use the same protocol including:

a. The sensory evaluation method.

b. The species to be compared (candidate species and at least three species currently included in the Description section of the pertinent standard).

c. The sampling protocol (e.g. number of samples, sampling period, kind of products).

d. The criteria and parameters to evaluate the results.

4- REPORT OF THE SENSORY EVALUATION OF THE CANDIDATE SPECIES

The leading laboratory shall provide a report with the results of the sensory evaluation from the designated laboratories.

The report on the sensory evaluation should make clear whether whole fish or processed products from the candidate species are or are not significantly different from products covered by the relevant standard.

The Working Group reviews the laboratory report and presents recommendations to the Committee for consideration regarding the inclusion of the candidate species.

5- FINAL COMMITTEE DECISION

When the Committee has decided to conduct a sensory evaluation, it should decide, on the basis of the Working Group recommendations, whether the candidate species is suitable for inclusion in the relevant standard.

If affirmative, the Committee forwards the proposed draft amendment of the standard to the *Codex Alimentarius Commission* for its adoption.

APPENDIX VII

PROPOSED DRAFT PERFORMANCE CRITERIA FOR REFERENCE AND CONFIRMATORY METHODS FOR MARINE BIOTOXINS IN THE STANDARD FOR LIVE AND RAW BIVALVE MOLLUSCS

(At Step 5 of the procedure)

I-8.6 Determination of Biotoxins

Type II and Type III methods shall be selected in accordance with the "General Criteria for the Selection of Methods of Analysis" and "General Criteria for the Selection of Single-Laboratory Validated Methods of Analysis" in the *Codex Procedural Manual.*

The method selected should be chosen on the basis of practicability and preference should be given to methods which have applicability for routine use.

Methods shall meet the numerical criteria listed in Table 1 and may either meet the minimum applicable range, or LOD and LOQ criteria listed.

Multi-analogue method total toxicity criteria are estimated for toxin profiles encountered using validation study data.

I-8.6.1 Numerical Criteria Values for Biotoxins in Bivalve Molluscs

Table 1

Group	Toxin	Maximum level /kg of mollusc flesh	Minimum applicable range	LOD	LOQ	Precision (RSD_R)	Recovery percent
Saxitoxin (STX) group	Total Toxicity	≤ 0.8 milligrams (2HCL) of saxitoxin equivalent	0.4 – 1.2	0.08	0.16	33%	70 – 120
Okadaic acid (OA) group	Total Toxicity	≤ 0.16 milligrams of okadaic equivalent	0.05 – 0.27	0.016	0.032	44%	70 - 120
Domoic acid (DA) group	Domoic Acid (DA)	≤ 20 milligrams domoic acid	13.2 – 26.8	2	4	22%	85 - 110
Brevetoxin (BTX) group	Total Toxicity	≤ 200 Mouse Units or (0.8 milligrams BTX2 equivalent)	74 – 326 MU (0.26 – 1.34 mg BTX2 eq.)	20 (0.08)	40 (0.16)	44%	70 - 120
Azaspiracid (AZA) group	Total Toxicity	≤ 0.16 milligrams AZA1 equivalent	0.05 – 0.27	0.016	0.032	44%	70 - 120

Internationally scientifically validated toxicity equivalent factors (TEFs) must be used to calculate total toxicity for methods that do not measure total toxicity directly.

Methods that do not measure total toxicity directly should be validated and used for the relevant toxin analogues that may contribute to total toxicity. Currently known toxin analogues to consider are listed in Table 2.

Table 2. Toxin analogues to consider

Group	Toxin
Saxitoxin (STX) group	Saxitoxin (STX)
	Neosaxitoxin (NEO)
	Decarbamoyl-saxitoxin (dcSTX)
	Decarbamoyl-neosaxitoxin (dcNEO)
	Gonyautoxin-1 (GTX1)
	Gonyautoxin-2 (GTX2)
	Gonyautoxin-3 (GTX3)
	Gonyautoxin-4 (GTX4)
	Gonyautoxin-5 (B1)
	Gonyautoxin-6 (B2)
	Decarbamoyl-gonyautoxin-2 (dcGTX2)
	Decarbamoyl-gonyautoxin-3 (dcGTX3)
	N-sulfocarbamoyl-gonyautoxin-1 (C3)
	N-sulfocarbamoyl-gonyautoxin-2 (C1)
	N-sulfocarbamoyl-gonyautoxin-3 (C2)
	N-sulfocarbamoyl-gonyautoxin-4 (C4)
Okadaic acid (OA) group	Okadaic acid (OA)
	Dinophysistoxin-1 (DTX1)
	Dinophysistoxin-2 (DTX2)
	Esters of OA, DTX1 and DTX2 (FA-ESTERS)
Domoic acid (DA) group	Domoic Acid (DA)
Brevetoxin (BTX) group	Brevetoxin-1 (BTX1)
	Brevetoxin-2 (BTX2)
	Brevetoxin-1 derivatives (devBTX1)
	Brevetoxin-2 derivatives (devBTX2)
Azaspiracid (AZA) group	Azaspiracid-1 (AZA1)
	Azaspiracid-2 (AZA2)
	Azaspiracid-3 (AZA3)

APPENDIX VIII

DRAFT STANDARD FOR SMOKED FISH, SMOKE-FLAVOURED FISH AND SMOKE-DRIED FISH

(At Step 6 of the Procedure)

4. FOOD ADDITIVES

4.1 Smoked Fish

Colour

INS Number	Additive Name	Maximum Level in Product
133	Brilliant Blue FCF	100 mg/kg
150a	Caramel 1 – plain caramel	GMP

Preservative (for reduced oxygen packaged products only)

INS Number	Additive Name	Maximum Level in Product
250	Sodium nitrite	200 mg/kg

4.2 Smoke-Flavoured Fish

Colour

INS Number	Additive Name	Maximum Level in Product
133	Brilliant Blue FCF	100 mg/kg
150a	Caramel 1 – plain caramel	GMP

Preservative (for reduced oxygen packaged products only)

INS Number	Additive Name	Maximum Level in Product
250	Sodium nitrite	200 mg/kg

APPENDIX IX

DRAFT STANDARD FOR RAW, FRESH AND QUICK FROZEN SCALLOP PRODUCTS

(At Step 6 of the procedure)

1. SCOPE

This standard applies to bivalve species of the *Pectinidae* family in the following product categories:

i) Fresh or quick frozen "Scallop Meat", which is the scallop adductor muscle meat remaining after the shell and all viscera (including roe) have been completely removed.

ii) Fresh or quick frozen "Roe-on Scallops", which is the scallop adductor muscle meat and the attached roe remaining after the shell and all other viscera have been completely removed.

iii) Quick frozen "Scallop Meat", or "Roe-on Scallops", with added water and/or solutions of water and phosphates.

iv) Fresh scallop meat with or without roe with added water

Products covered by this standard may be intended for direct human consumption or for further processing.

This standard does not apply to:

i) scallop meat that is formed, mixed with extenders, or bound by fibrinogen or other binders and;

ii) Whole scallops (live, fresh or frozen in which the shell and all viscera are attached.) These products are included in the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008).

2. DESCRIPTION

2.1 Product definition

2.1.1 Scallop Meat

Fresh or quick frozen scallop meat is prepared by completely removing the adductor muscle from the shell and completely detaching the viscera and roe from the adductor muscle of live scallops. "Scallop meat" contains no added water, phosphates or other ingredients. The adductor muscle is presented whole.

2.1.2 Roe-on Scallops

Fresh or quick frozen "Roe-on Scallops" are prepared by completely removing the adductor muscle and attached roe from the shell and detaching all other viscera to the extent practical. Roe-on scallops contain no added water, phosphates, or other ingredients. The adductor muscle and roe are presented whole.

2.1.3 Quick Frozen Scallop Meat or Roe-on Scallops Processed with Added Water and/or with solution of water and phosphates

Quick frozen "scallop meat", or "Roe-on scallops", with added water and/or solutions of water and/or phosphates contain the products defined in 2.1.1. and 2.1.2, and a solution of water and/or phosphates and optionally salt.

2.1.4 Fresh Scallop meat, Roe-on Scallops with added water

Fresh scallop meat or roe-on scallops with added water contain the products defined in 2.1.1, 2.1.2 and added water.

2.2 Process definition

2.2.1 Scallop Meat and Roe-on-scallops

After removal of the shell, viscera, and roe as applicable, under good hygiene practices, the product is rinsed and stored with a method that minimizes absorption of water to the extent that is technologically practicable. The fresh product shall be kept at or below 4°C. Product, intended to be

frozen shall be subjected to a freezing process carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly, in accordance with the requirements of the *Code of Practice for the Processing and Handling of Quick Frozen Foods* (CAC/RCP 8-1976).

The recognized practice of repacking quick frozen products under controlled conditions which will maintain the quality of the product, followed by the reapplication of the quick freezing process as defined, is permitted. These products shall be processed and packaged so as to minimize dehydration and oxidation.

2.2.2 Quick Frozen Scallop Meat Processed with Added Water and/or solution of water and phosphates

After removal of the shell, viscera, and roe as applicable, under good hygiene practices, the product is rinsed and stored with a method that minimizes absorption of water to the extent that is technologically practicable. The fresh product shall be kept at or below 4°C. The product is subject to the addition of water and/or phosphate solution (e.g., soaked, sprayed). The amount of added solution shall be controlled and accurately measured for labelling purposes. Product, intended to be frozen shall be subjected to a freezing process carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly, in accordance with the requirements of the *Code of Practice for the Processing and Handling of Quick Frozen Foods* (CAC/RCP 8-1976).

The recognized practice of repacking quick frozen products under controlled conditions which will maintain the quality of the product, followed by the reapplication of the quick freezing process as defined, is permitted. These products shall be processed and packaged so as to minimize dehydration and oxidation.

2.2.3 Fresh Scallop Meat Processed with Added Water

After removal of the shell, viscera, and roe as applicable, under good hygiene practices, the product is rinsed and stored with a method that minimizes absorption of water to the extent that is technologically practicable. The fresh product shall be kept at or below 4°C. The product is subject to the addition of water (e.g., soaked, sprayed). The amount of added water shall be controlled and accurately measured for labelling purposes.

2.3 Presentation

Any presentation of the product shall be permitted provided that:

- It meets all requirements of this standard, and it is adequately described on the label to avoid confusing or misleading the consumer.
- The scallop meat may be packed by count per unit weight.
- If the scallop meat pack exhibits the presence of broken pieces that is > 5% of the sample weight, then the product must be presented as “pieces” or terms to that effect.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Scallop Meat and Roe-on Scallops

The product shall be prepared from sound and wholesome scallops which are of a quality suitable to be sold fresh for direct human consumption.

3.2 Quick Frozen Scallop meat, or roe-on scallops with added water and/or with solution of water and phosphates

The product shall be prepared from sound and wholesome scallops which are of a quality suitable to be sold quick frozen for direct human consumption.

Added water and/or solution of water and phosphates and salt are permitted to the extent that the water uptake is accurately measured and labelled and their use is acceptable in accordance with the law or custom of the country in which the product is sold. Water shall be of potable quality, phosphates shall be food grade, and salt shall comply with the *Standard for Food Grade Salt* (CODEX STAN 150-1985).

3.3 Fresh scallop meat, or roe-on scallops, with added water

The product shall be prepared from sound and wholesome scallops which are of a quality suitable to be sold fresh for direct human consumption.

Added water and/or salt are permitted to the extent that the added water uptake is accurately measured and labelled and their use is acceptable in accordance with the law or custom of the country in which the product is sold. Water shall be of potable quality and salt shall comply with the *Standard for Food Grade Salt* (CODEX STAN 150-1985).

3.4 Glazing

If glazed, the water used for glazing or for preparing glazing solutions shall be potable water[1] or clean water[2].

3.5 Final Product

Products shall meet the requirements of this Standard when lots examined in accordance with section 10 comply with the provisions set out in section 9. Products shall be examined by the methods given in section 8.

4. FOOD ADDITIVES

4.1 Fresh Scallop Meat and Roe-on Scallops with or without added water

No food additives are permitted in this product.

4.2 Quick Frozen Scallop Meat and Roe-on Scallops Processed With Phosphates

The phosphates listed below are allowed for use as humectants or sequestrants in only the products defined in 2.1.2 (Quick Frozen Scallop Meat, or Roe-on Scallops with Added Solution of Water and Phosphates).

Additives must be applied in conformance with section 3 of the *General Standard for Food Additives* (CODEX STAN 192-1995) and with good manufacturing practices as provided in section "X" of the Code of Practice for Processing of Quick Frozen Scallop Meat[3].

"Phosphates" allowed for food category 09.2.1 (Frozen fish, fish fillets, and fish products, including molluscs, crustaceans, and echinoderms) of the *General Standard for Food Additives* (CODEX STAN 192-1995) are also allowed in the products defined in subsection 2.1.2 of this Standard at a maximum level of 2200 mg/kg expressed as phosphorous.

5. CONTAMINANTS

5.1 The product covered by this Standard shall comply with the Maximum Levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX/STAN 193-1995) and the maximum residue limits for veterinary drugs established by the CAC.

5.2 The product shall not contain marine biotoxins[4] exceeding the levels set out in section I-5.2 of the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008) and as sampled and analysed in accordance with the same Standard .

i) Scallop Meat – When prepared in accordance with the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003) – section "X" [under elaboration], marine biotoxins are not reasonably likely to present a hazard in scallop meat. While the hazard analysis will consider marine biotoxins as a potential hazard, this hazard will be excluded or included based upon the species and the available data for toxins in that species.

ii) Roe-on Scallops – Marine biotoxins could present a possible hazard in roe-on scallops and preventive measures should be in place in accordance with the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008).

1 WHO "International Guidelines for Drinking Water Quality."
2 See definition for clean water in the *Code of Practice of Fish and Fishery Products* (CAC/RCP 52-2003).
3 under development

6. HYGIENE AND HANDLING

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of *General Principles of Food Hygiene* (CAC/RCP 1-1969) and other relevant Codex texts such as:

(i) the *Code of Practice for Fish and Fishery Products* (CAC/RCP 52-2003)*;*

(ii) the *Code of Practice for the Processing and Handling of Quick Frozen Foods* (CAC/RCP 8-1976);

(iii) *Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food* (CAC/GL 79-2012);

(iv) *Guidelines on the Application of General Principles of Food Hygiene to the Control of Pathogenic Vibrio Species in Seafood* (CAC/GL 73-2010

6.2 Roe on scallops with added water shall comply with the hygiene controls set out in Section I-6.4 and I-6.5 of the *Standard for Live and Raw Bivalve Molluscs* (CODEX STAN 292-2008) and sampled and analyzed in accordance with the same Standard.

6.3 The products should comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria in Foods* (CAC/GL 21-1997).

7. LABELLING

In addition to the provisions of the *General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985) the following specific provisions apply:

7.1 Name of the Food

The name of the product shall be:

7.1.1 Scallop Meat or Roe-on Scallops

"X scallops" if it conforms with the product description outlined in 2.1.1 or

7.1.2 Scallop Meat, or roe-on scallops, with Added Water

" X scallops with added water', 'Preparation of X scallops with added water', or a like name as allowed in the country of sale, which differentiates the product from scallop meat and is not misleading to the consumer if it conforms with the product description outlined in 2.1.2.

"X" in 7.1.1 and 7.1.2 being the common or usual name of the species of scallops according to the law, custom and practice in the country in which the product is to be distributed in a manner not to mislead the consumer.

7.1.3 In addition to the name identified in 7.1.1 and 7.1.2, the product shall be identified by common and/or scientific names as determined by the competent authority. The country where the product is sold can determine if the scientific name must be indicated on the label.

7.2 There shall appear on the label, reference to the forms of presentation described in section 2.3, in close proximity to the name of the product in such descriptive terms that will adequately and fully describe the nature of the presentation to avoid misleading or confusing the consumer.

7.3 Water added as an ingredient to scallop products shall be declared in the list of ingredient[5] and the percentages of scallop meat and percentage of added water shall clearly appear on the label.

7.4 Net Contents (Glazed Products)

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

7.5 Storage Instructions

The label should include terms to indicate that the product shall be stored at or below 4°C for fresh products and at a temperature of -18°C for frozen product processed in accordance with subsection 2.2 of this standard.

[5] As prescribed in section 4.2.1.5 and 5.1.2 in the *General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985)

7.6 Labelling of Non-Retail Containers

Information specified above shall be given either on the container or in accompanying documents, except the name of the food, lot identification, and the name and address of the producer or the packer as well as storage instructions shall always appear on the container.

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

The product shall be identified by common and/or scientific names as determined by the competent authority. The country where the product is sold can determine if the scientific name must be indicated on the label.

8. SAMPLING, EXAMINATION AND ANALYSIS

8.1 Sampling

(Sampling of lots for examination of the product shall be in accordance with the *General Guidelines on Sampling* (CAC/GL 50-2004). The sample unit is the primary container, or for individually quick frozen or bulk packaged products, is at least a 1 kg portion of the package.

8.2 Sensory and Physical Examination

Samples taken for sensory and physical examination shall be assessed by persons trained in such examination and in accordance with procedures elaborated in section 8.3 through 8.6 and Annexes, and in accordance with the *Guidelines for the Sensory Evaluation of Fish and Shellfish in Laboratories* (CAC/GL 31-1999).

8.3 Determination of Pieces and Count

(i) A scallop meat shall be considered as a scallop piece when the weight of that scallop meat is less than 50% of the average weight of 10 randomly selected unbroken scallop meats contained in the package. The percentage of scallop pieces in the sample unit can be determined by using the following equation:

$$\% \text{ Scallop Pieces} = \frac{\Sigma \text{ Weight of scallop pieces in a sample unit} \times 100}{\text{Weight of sample unit}}$$

(ii) When declared on the label, the count of the scallop meat shall be determined by counting the numbers of whole scallop meat (not including pieces defined above) in the package or representative sample thereof and dividing the count of whole scallop meat by the adjusted de-glazed weight (actual deglazed weight subtract the weight of de-glazed pieces) to determine the count per unit weight.

8.4 Determination of Net Weight

(i) The net weight shall be determined in accordance with Official method AOAC 963.18.

(ii) Block frozen products: AOAC Official Method 967.13 Drained Weight of Frozen Shrimp or Crab Meat, or AOAC Official Method 970.60 Drained Weight of Frozen Crab Meat. In addition to either AOAC procedure, block frozen scallops shall be thawed inside waterproof bags to prevent contact with, and absorption of, the water used to thaw the product.

8.5 Examination for Parasites

The presence of readily visible parasites in a sample unit detected by normal visual inspection of the scallops.

8.6 Determination of the presence of viscera

“Scallop meat” and “Roe-on scallops” is examined for the presence of visible viscera attached to the adductor muscle or loose in the package (such as remains of gills, mantle, hepatopancreas, intestinal tract and roe, if applicable).

[8.7 Determination of added water

In order to check the conformity with subsections 3.1, 3.2 and 3.3, a country may establish a scientifically supported criterion. Where a country has relevant scientific information on the

characteristics of the scallop species it exports, it may approach an importing country to discuss the implementation of this criterion on a species by species basis.]

9. DEFINITION OF DEFECTIVES

The sample unit shall be considered as defective when it exhibits any of the properties defined below.

9.1 Deep Dehydration

Greater than 10% of the weight of the scallop meat or greater than 10% of the surface area of the block exhibits excessive loss of moisture clearly shown as white or yellow abnormality on the surface which masks the colour of the flesh and penetrates below the surface, and cannot be easily removed by scraping with a knife or a sharp instrument without unduly affecting the appearance of the product.

9.2 Foreign matter

The presence in the sample unit of any matter which has not been derived from scallops, does not pose a threat to human health, and is readily recognized without magnification or is present at a level determined by any method including magnification that indicates non-compliance with good manufacturing and sanitation practices

9.3 Odour/Flavour/Texture/Colour

Scallop meat affected by persistent and distinct objectionable odours, flavours, texture or colours indicative of decomposition and/or rancidity; or other objectionable odours, flavours, textures and colours not characteristic of the product.

9.4 Parasites

[The presence of readily visible parasites at an objectionable level.]

9.5 Objectionable matter

The presence of sand, shell or other similar particles that is visible in the thawed state or detected by chewing during sensory examination at an objectionable level

[**9.6 Exceeding level of added water**

Level of added water exceeding that declared in the label.]

10. LOT ACCEPTANCE

A lot shall be considered as meeting the requirements of this standard when:

(i) the total number of defectives as classified according to section 9 does not exceed the acceptance number (c) of the appropriate sampling plan in the *General Guidelines on Sampling* (CAC/GL 50-2004) with an AQL of 6.5.

(ii) where appropriate, the total number of sample units not meeting the count designation or presentation as defined in section 2.3 does not exceed the acceptance number (c) of the appropriate sampling plan in the *Guidelines on Sampling* (CAC/GL 50-2004) with an AQL of 6.5. In addition, the average count per unit weight shall be within the declared count range;

(iii) the average net weight of all sample units is not less than the declared weight, provided there is no unreasonable shortage in any individual container; and

(iv) the essential composition and quality factors, food additives, contaminants, hygiene and handling and labelling requirements of sections 3, 4, 5, 6 and 7 are met.

ANNEX A

SENSORY AND PHYSICAL EXAMINATION

Complete net weight determination, according to defined procedures in section 8.4.

Examine the frozen scallop meat in the sample unit or the surface of the block for the presence of dehydration. Determine the percentage of scallop meat or surface area affected.

Thaw using the procedure described in section 8.4 and individually examine each scallop meat in the sample unit for the presence of foreign matter, objectionable matter, and presentation defects.

Determine the weight of scallop meat affected by presentation defects.

Examine product for pieces and count declarations in accordance with procedures in section 8.3.

Assess the scallop meat for odour and parasites as required.

A small portion of the sample unit (100 g to 200 g) is cooked without delay and the odour/flavour/texture and presence of sand is determined. If necessary, additional portions may be cooked and examined for confirmation.

APPENDIX X

PROJECT DOCUMENT
PROPOSAL FOR NEW WORK FOR THE ELABORATION OF CODE OF PRACTICE FOR PROCESSING OF FISH SAUCE

1. Purpose and Scope of the Standard

The aim of this proposal is to compile the Code of Practice for Processing of Fish Sauce. This guidance will be supplemental to the Code of Practice for Fish and Fishery Products.

The scope of new work will elaborate on the processing techniques of fish sauce which will take into account the issues on food safety and quality, as well as fair trade practices and consumer protection. HACCP principles will be addressed to ensure compliance to requirements of international markets. The Proposed Draft Code should comply with the requirements of the General Principles of Food Hygiene (CAC/RCP 1-1969) and Code of Practice for Fish and Fishery Products (CAC/RCP 52-2003).

2. Its Relevance and Timeliness

The Proposed Draft Code of Practice for Processing of Fish Sauce is necessary and very important to be used as a guideline to improve the processing practices of fish sauce to meet international requirements. The application of GMP and HACCP for this traditional product should be promoted to ensure consumers' health and safety. The Codex Standard for Fish Sauce was elaborated by the Codex Committee on Fish and Fishery Products. To achieve the quality and safety factors established in the standard, guidelines and recommendations on the processing techniques should be established and recommended for implementation by fish sauce manufacturers.

3. The Main Aspects to be covered

The Proposed Draft Code of Practice for Processing of Fish Sauce will address the general processing steps and technical guidance to be employed by fish sauce manufacturers which could vary from country to country. Potential hazards and defects at each processing step starting from fish handling to storage and distribution of final products will be identified. Technical guidance at each step of processing of fish sauce to ensure health and safety of consumers will also be elaborated.

4. An Assessment against the Criteria for the Establishment of Work Priorities (page 40, Procedural Manual, 20th Edition)

The proposed new work could assist in harmonizing national standard for processing of fish sauce and minimizing potential impediments to international trade.

4.1 General Criterion

The Proposed Draft Code of Practice for Processing of Fish Sauce will ensure consumer protection from the point of view of health and safety, ensuring fair practices in the food trade and taking into account the identified needs of developing countries.

4.2 Criteria applicable to commodities

(a) Volume of production and consumption in individual countries and volume and pattern of trade between countries.

In 2011, a total of 43 million litres of fish sauce was exported from Thailand to 106 countries worldwide. The major trading partners are USA (22%), Hong Kong (11%), Myanmar (8%), Laos (7%), Australia (6%) and Japan (5%). This product increasingly consumed worldwide.

(b) Diversification of national legislations and apparent resultant or potential impediments to international trade

Fish sauce is processed by fermentation of fish and salt. The production is mostly based on traditional techniques which can vary from country to country in Asia due to national preferences. However factors affecting the quality of fish sauce in general are raw material quality, fermentation process and sanitation and hygiene practices. Considering the tiny amount consumed as a condiment, fish sauce presents very low food safety risk. The proposed draft Code of Practice will help improve fish sauce processing practices by addressing appropriate control points. This document will also provide better

understandings to regulatory authorities to establish appropriate standard and criteria for fish sauce that are practical, achievable, scientifically justified and enabling fair trade.

(c) International or regional market potential

Currently, fish sauce has been exported from Thailand and Vietnam to more than 100 countries in all continents. This has been due to migration of Asian people to western countries and other parts of the world, dynamic movement of people and increasingly multi-culture acceptance. Asian foods are becoming more and more popular. This has significantly contributed to increased consumption of fish sauce worldwide.

(d) Amenability of the commodity to standardization

The proposed Draft Code of Practice will address appropriate practices from handling, processing, and quality and safety control through to final products and distribution. Traditional processing techniques will be preserved and at the same time, GMP and HACCP concepts can be incorporated to ensure quality and safety of the authentic products.

(e) Coverage of the main consumer protection and trade issues by existing or proposed general standards

The new work will elaborate the processing techniques of fish sauce which will take into account the issues on food safety and quality, as well as fair trade practices and consumer protection. HACCP principles will be addressed to ensure compliance to requirements of international markets.

(f) Number of Commodities which would need separate standards indicating whether raw, semi-processed or processed.

This new work will cover fish sauce under CODEX STAN 302-2011

(g) Work already undertaken by other international organizations in this field and/or suggested by the relevant international intergovernmental body(ies)

This new work does not duplicate work undertaken by other international organizations.

Several Asian countries such as Thailand, Vietnam, Indonesia and Malaysia developed their own standards for local use.

5. Relevance to the Codex Strategies Objectives

Goal 1: Promoting Sound Regulatory Frameworks

The Proposed Draft Code of Practice for Processing of Fish Sauce will contribute to the development and improvement of food control system of Codex member countries. Scientific and technical guidance outlined will assist the competent authority to establish or strengthen regulatory frameworks that address health and safety of consumers and at the same time promote fair trade practices.

Goal 2: Promoting Widest and Consistent Application of Scientific Principles and Risk Analysis

The Proposed Draft Code of Practice for Processing of Fish Sauce will take into account the internationally recognized hygiene control principles such as HACCP. The HACCP concepts require scientific justifications and risk analysis to develop control measures at the identified hazards in the production chain.

General Principles of Food Hygiene (CAC/RCP 1-1969) will be taken into account in the development of the Proposed Draft Code of Practice for Processing of Fish Sauce to ensure that the scientific principles and risk analysis are appropriately adhered to.

Goal 3: Strengthening Codex Work-management Capabilities

In developing the Proposed Draft Code of Practice for Fish Sauce, the Codex Committee on Fish and Fishery Products should be able to adhere to the expected timeframe for elaboration and able to contribute to efficient management of the CAC as a whole.

Goal 4: Promoting Cooperation between Codex and Relevant International Organization

The Proposed Draft Code of Practice for Processing of Fish Sauce will take into account concerned Codex Committees such as the Codex Committee on Food Hygiene as well as FAO and WHO.

Goal 5: Promoting Maximum and Effective Participation of Members

In the process of developing the Proposed Draft Code of Practice for Processing of Fish Sauce, participations of government and non-government organizations, consumer protection agencies, stakeholders as well as international bodies such as FAO are encouraged and welcomed. The elaboration process will enhance participation of developing countries as the major manufacturers of this type of fishery product.

6. Information on the Relation between the Proposal and other existing Codex Documents

The Proposed Draft Code of Practice for Processing of Fish Sauce will take into account the Code of Practice for Fish and Fishery Products (CAC/RCP 52-2003), the General Principles of Food Hygiene (CAC/RCP 1-1969) and Standard for Fish Sauce (CODEX STAN 302-2011).

7. Identification of any Requirement for and availability of expert scientific advice

In developing the Proposed Draft Code of Practice for Processing of Fish Sauce, scientific advices should be sought in identifying risks and hazards associated with microbial contamination and relation with the development of histamine.

8. Identification of any need for technical input to the standard from external bodies, so that this can be planned for

None

9. The Proposed timeline for completion of the new work

A period of 4 years is foreseen for the completion of this Proposed Draft Code of Practice for Processing of Fish Sauce.

10. Work to led by

Thailand and Vietnam

11. Inclusion of a risk profile

Not considered necessary at this stage.

12. Work plan for the development of the Proposed Draft Code of Practice for Processing of Fish Sauce

PROGRESS	CODEX SESSION	TIMETABLE
Agree on the objectives and scope of the proposed new work	32nd session, CCFFP	October 2012
Approval for new work	36th session, CAC	July 2013
Consideration of the Proposed Draft Code of Practice for Processing of Fish Sauce at step 4 and advance to Step 5	33rd session, CCFFP	April 2014
Adoption of the Proposed Draft Code of Practice for Processing of Fish Sauce at Step 5	37th session, CAC	July 2014
Consideration of the Proposed Draft Code of Practice for Processing of Fish Sauce at Step 7 and advance to Step 8	34th session, CCFFP	October 2015
Adoption of the Proposed Draft Code of Practice for Processing of Fish Sauce at Step 8	39th session, CAC	July 2016