

# CODEX ALIMENTARIUS COMMISSION



**Food and Agriculture  
Organization of  
the United Nations**



**World Health  
Organization**

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**REP 11/FH**

## **JOINT FAO/WHO FOOD STANDARDS PROGRAMME**

### **CODEX ALIMENTARIUS COMMISSION**

*Thirty-fourth Session*

*Geneva, Switzerland, 4 - 9 July 2011*

## **REPORT OF THE FORTY-SECOND SESSION OF THE**

### **CODEX COMMITTEE ON FOOD HYGIENE**

*Kampala, Uganda, 29 November – 3 December 2010*

**NOTE:** *This report includes Codex Circular Letter CL 2010/57-FH*

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**CX 4/20.2**

**CL 2010/57-FH**

**TO:** Codex Contact Points  
Interested International Organizations

**FROM:** Secretariat  
Codex Alimentarius Commission  
Joint FAO/WHO Food Standards Programme  
FAO, Viale delle Terme di Caracalla, 00153 Rome, Italy

**SUBJECT:** **Distribution of the report of the Forty-second Session of the Codex Committee on Food Hygiene (REP11/FH)**

The report of the Forty-second Session of the Codex Committee on Food Hygiene (CCFH) is attached. It will be considered by the Thirty-fourth Session of the Codex Alimentarius Commission, (Geneva, Switzerland, 4 – 9 July 2011).

## **MATTERS FOR ADOPTION BY THE CODEX ALIMENTARIUS COMMISSION:**

### **Proposed Draft Standards and Related Texts at Steps 5/8 of the Procedure**

1. Proposed Draft Guidelines for the Control of *Campylobacter* and *Salmonella* spp. in Chicken Meat (REP11/FH para.63 and Appendix III); and
2. Proposed Draft Revision of the Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters (REP11/FH para. 116 and Appendix V);

Governments and interested international organizations are invited to comment on the above texts and should do so in writing, preferably by e-mail to the Secretariat, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, Viale delle Terme di Caracalla, 00153 Rome, Italy : [codex@fao.org](mailto:codex@fao.org) or fax: +39 06 570.54593), **before 31 March 2011.**

### **REQUEST FOR COMMENTS**

#### **Proposed Draft Standards and Related Texts at Step 3 of the Procedure**

3. Proposed Draft Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food (REP 11/FH para. 86 and Appendix IV).

Governments wishing to submit comments should do so in writing to: Dr Enne de Boer, email: [enne.de.boer@vwa.nl](mailto:enne.de.boer@vwa.nl) or fax: +31 575 588200 with a copy to the Secretariat, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme: [codex@fao.org](mailto:codex@fao.org) or fax: +39 06 570.54 593 **before 31 March 2011.**

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## SUMMARY AND CONCLUSIONS

The Forty-second Session of the Codex Committee on Food Hygiene reached the following conclusions:

### **MATTERS FOR ADOPTION BY THE 34<sup>TH</sup> SESSION OF THE CODEX ALIMENTARIUS COMMISSION:**

The Committee agreed to forward for adoption at Step 5/8:

- Proposed Draft Guidelines for the Control of *Campylobacter* and *Salmonella* spp. in Chicken Meat (para 63 and Appendix III); and
- Proposed Draft Revision of the Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters for adoption at Step 5/8 (para. 116 and Appendix V).

### **MATTERS FOR ACTION BY THE COMMISSION**

- The Committee agreed to request the removal of section 4.4 of the *Standard for Natural Mineral Waters* (CODEX STAN 108-1981) as a consequence to the decision to include microbiological criteria in the Proposed Draft Revision of the Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters (CAC/RCP 33-1985) (para. 115).

### **NEW WORK**

The Committee agreed to propose to the Commission to approve new work on:

- Guidelines for Control of Specific Zoonotic Parasites in Meat: *Trichinella spiralis* and *Cysticercus bovis* (REP11/FH, para.137 and Appendix VI); and
- Annex on melons to the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003) (REP11/FH, para.142 and Appendix VII).

### **MATTERS OF INTEREST TO THE COMMISSION AND/OR TO FAO/WHO**

The Committee agreed to:

- return the Proposed Draft Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food to Step 3 for comments and further consideration at its next session (para. 86 and Appendix IV).
- return the Proposed Draft Revision of the Principles for the Establishment and Application of Microbiological Criteria for Foods to Step 2 for redrafting, circulation for comments at Step 3 and consideration at its next session (para. 127).
- agreed to request FAO/WHO to:
  - (i) review the status of knowledge on parasites in food and their public health and trade impact; and
  - (ii) issue a call for data and to evaluate the pathogen specific hazards associated with various types of melons and the role of various agricultural and manufacturing practices in enhancing or mitigating these hazards in melons (para. 144)

### **MATTERS OF INTEREST TO OTHER COMMITTEES**

#### **Committee on General Principles**

The Committee agreed to review its risk analysis principles and procedures with a view to its simplification in line with Activity 2.2 of the Strategic Plan (2008 – 2013) and taking into account recommendation in CL 2010/1-GP) and did not discuss the amendment of the definition for hazard following the decision of the Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) not to amend the definition (paras 6- 7).

**Committee on Fish and Fishery Products**

The Committee endorsed the hygiene provisions Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish with amendments and the hygiene provisions of the Draft Standard for Fish Sauce without amendment (paras 9 - 10 and Appendix II)

## INTRODUCTION

1. The Codex Committee on Food Hygiene (CCFH) held its Forty-second session in Kampala, Uganda from 29 November to 3 December 2010, at the kind invitation of the Governments of the United States of America and Uganda. Dr Emilio Esteban, of the United States of America, chaired the Session and Dr Friday Agaba, of Uganda, served as co-Chair. The Session was attended by 230 delegates representing 75 member countries, one member organization and 11 international organizations including FAO and WHO. A complete list of participants, including the Secretariats, is attached as Appendix I.

## OPENING OF THE SESSION

2. The Session was opened by the His Excellency the President of the Republic of Uganda, represented by His Excellency the Vice President Professor Gilbert Bukenya. The Committee was also addressed by Mr Jerry Lanier, the Ambassador of the United States of America to Uganda, Dr Karen Hulebak, the Chairperson of the Codex Alimentarius Commission, the Honourable Dr Richard Nduhuura, Minister of State for Health of Uganda, Dr Ben Manyindo, Vice Chairperson of the Codex Alimentarius Commission and Ms Karen Stuck, US Codex Manager. All speakers reiterated the importance of the work of the Committee in meeting the dual mandate of Codex to protect the health of consumers and to ensure fair practices in the food trade. It was noted that a number of items on the Agenda of the Committee were of significance to Uganda and the African region, in particular, the work on natural mineral waters and the control of *Campylobacter* and *Salmonella* species in chicken meat.

## Division of Competence

3. The Committee noted the division of competence between the European Union 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)<sup>1</sup>

4. The Committee adopted the Provisional Agenda as its Agenda for the session and agreed to discuss Item 6, Proposed Draft Revision of the *Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Minerals* before Item 5, the Proposed Draft Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses.

## MATTERS REFERRED BY THE CODEX ALIMENTARIUS COMMISSION AND/OR OTHER CODEX COMMITTEES TO THE FOOD HYGIENE COMMITTEE (Agenda Item 2)<sup>2</sup>

5. The Committee noted the information presented in CX/FH 10/42/2 and the update on the work of the *ad hoc* Task Force on Antimicrobial Resistance and made the following comments and/or decisions as follows:

### Codex Committee on General Principles (CCGP)

#### Working Principles for Risk Analysis

6. The Committee agreed to review its risk analysis principles and procedures with a view to its simplification in line with Activity 2.2 of the Strategic Plan (2008-2013) and taking into account the recommendations in CL 2010/1-GP. The Delegation of the European Union was requested to prepare a proposal in this regard for consideration by the next session of the Committee.

#### Definition of Hazard

7. The Committee considered the request from Committee on General Principles (CCGP) on the proposal to amend the Codex definition for hazard. Noting that the proposal was in relation to nutrient risk assessment and the decision of the 32<sup>nd</sup> session of the Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) not to amend the definition, the Committee agreed that further discussion on this matter was no longer necessary.

<sup>1</sup> CX/FH 10/42/1; CRD 1 (Division of competence between the European Union and its Member States, prepared by the European Union);

<sup>2</sup> CX/FH 10/42/2; CRD 7 (comments of Canada); CRD 8 (comments of Nigeria); CRD 9 (comments of the European Union); CRD 23 (Report of the in-session Working Group on endorsement); CRD 19 (comments of Japan); CRD 21 (comments of Egypt).

### **Endorsement of hygiene provisions from the Committee on Fish and Fishery Products (CCFFP)**

8. In accordance with its terms of reference, the CCFH considered the endorsement of hygiene provisions in the Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish and in the Draft Standard for Fish Sauce. In view of the considerable comments received, the Committee agreed to convene an in-session working group, led by Japan, to consider this endorsement.

#### Draft Standard for Smoked-Fish, Smoke-Flavoured Fish and Smoke-Dried Fish

9. The Committee considered the report of the in-session working group (CRD 23) and agreed to endorse the hygiene provisions in the Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish with amendments (*see* Appendix II). The amendments were to better reflect relevant published information and to provide more precise text from a scientific and technical point of view. Since temperature abuse has a direct impact on the safety and shelf-life of products, a new paragraph was added prior to the Table to explain that time/temperature integrators could be a useful tool to determine if the product had been temperature abused and deleted any particular reference to time/temperature integrators in the Table. The last row of the Table in Annex 2 was deleted because the use of the temperature range stipulated was an example of mild temperature abuse and was not appropriate.

#### Draft Standard for Fish Sauce

10. The Committee endorsed the hygiene provisions without amendments.

### **MATTERS ARISING FROM THE WORK OF FAO, WHO AND OTHER INTERNATIONAL ORGANIZATIONS (Agenda Item 3)<sup>3</sup>**

#### **PROGRESS REPORTS ON THE JOINT FAO/WHO EXPERT MEETINGS ON MICROBIOLOGICAL RISK ASSESSMENT (JEMRA) AND RELATED MATTERS (Agenda Item 3(a))**

11. The Representative of WHO, on behalf of FAO and WHO, presented this item and provided an overview of JEMRA and other FAO and WHO activities relevant to the work of the Committee.

12. Referring to the request of the 40<sup>th</sup> session of the Committee to develop “a decision-support tool for the control of *Campylobacter* and *Salmonella* in chicken meat”, the Representative indicated that the work on this web-based tool was now almost complete. The feedback on the “decision support tool” received during the last session of the Committee was acknowledged and that, together with the output of an expert peer review process, had been used as a basis for its revision and finalization. Details of the tool and its functionality were provided during a lunchtime demonstration and the Representative indicated that FAO and WHO were interested in hearing from delegations who would like to pilot test the tool and/or contribute to the development of case studies on its application. The Committee was also informed that future work in this area included the development of a database on control measures to support application of this tool.

13. Secondly, the Representative reported on the development of a “web-based tool to assess the performance of microbiological sampling plans”. This tool was being developed to assist FAO and WHO member countries to address issues related to sampling and has been subject to expert peer review to facilitate its finalisation. FAO and WHO are currently seeking expressions of interest from delegations with regard to the development of case studies and pilot testing of this tool.

14. Given the relevance of the FAO/WHO Expert Meeting on the Benefits and Risks of the Use of Chlorine-Containing Disinfectants in Food Production and Food Processing to Item 4, the Representative provided a summary of the outcome of that meeting and highlighted the overall conclusion that the identified residues of chlorine containing disinfectants and disinfection by-products did not raise health concerns based on estimated dietary exposures. Reference was also made to the activities of both organizations relevant to the control of *Salmonella* and *Campylobacter* in certain countries in East Africa.

15. Following the request of the 41<sup>st</sup> session of the Committee to address a number of issues relating to predictive risk models and testing methodology for *Vibrio parahaemolyticus* and *Vibrio vulnificus* in seafoods, it was noted that JEMRA had implemented an Expert Meeting to address these issues in September 2010. Direct replies to the requests of the Committee were provided in CX/FH 10/42/3 and the Representative highlighted the need for further guidance from the Committee on the next steps to be taken.

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<sup>3</sup> CX/FH 10/42/3, CRD 3 (comments of Kenya); CRD 6 (comments of Japan); CRD 9 (comments of the European Union); CRD 21 (comments of Egypt).



16. Finally, the Representative noted that this year JEMRA was celebrating its 10<sup>th</sup> anniversary and took the opportunity to express extensive appreciation of FAO and WHO to all the experts, data providers and donors who had contributed to JEMRA. It was noted that it was their contributions, which made the work of JEMRA possible.

17. The Chairperson expressed appreciation to FAO and WHO for the provision of extensive and high quality scientific advice in a timely manner, which greatly facilitated the work of the Committee over the past 10 years. This sentiment was echoed by the Committee.

18. Specific appreciation was expressed by several Delegations for the work undertaken on the development of the two web-based tools noting that these tools facilitated a more risk-based approach to the management of *Campylobacter* and *Salmonella* in chicken meat as well as in the application of sampling plans. In addition, the development of a database to support the application of the “decision support tool for the control of *Campylobacter* and *Salmonella* in chicken meat” was considered by several Delegations to be an important and necessary step, and FAO/WHO were encouraged to proceed with this work.

19. A number of Delegations highlighted the importance of the work of JEMRA for developing countries and welcomed recent FAO/WHO initiatives to stimulate data collection and encourage the application of risk-based approaches in these countries. FAO/WHO were requested to consider extending initiatives such as those underway in East Africa to other countries, regions (e.g. West Africa) and commodities (e.g. fish). While noting their appreciation for FAO and WHO capacity development activities several Delegations highlighted the need for ongoing support.

20. With regard to the future work on *Vibrio* spp. in seafood, the Delegation of Japan highlighted the importance of continuing with this work but considered that the next step should focus on methodology and data collection. This approach was supported by several other Delegations. In noting these recommendations, the Representative of FAO stated that there was potential to use existing frameworks such as those provided by the Global Foodborne Infections Network (GFN)<sup>4</sup> to facilitate this work. However, this would be a resource intensive activity, which would require support and resources from member countries as well as FAO and WHO, particularly those countries with a high level of expertise in this area. In addition, it was noted that some of the proposed aspects such as method validation were outside the remit of FAO and WHO and so could not be addressed as proposed. In light of these discussions, the Committee recommended that FAO and WHO continue with this work in the following manner:

- Step 1: Provide recommendations on a range of test methods for quantifying *V. parahaemolyticus* (total and pathogenic (e.g. tdh+, trh+)) and *V. vulnificus* in seawater and bivalves and facilitate performance evaluation of the proposed methodologies;
- Step 2: Develop data collection strategies (that would facilitate the collection of data) by countries to support the modification/development of models with a broader scope than those which currently exist;
- Step 3: Encourage the collection of data in different regions, in different bivalve species and for geographically diverse strains of pathogenic *V. parahaemolyticus* and *V. vulnificus* according to the data collection strategy and using recommended test methods; and
- Step 4: To modify/develop risk assessment models that could be used to address a range of risk management questions in a number of different regions and products, when adequate data becomes available.

#### **INFORMATION FROM THE WORLD ORGANIZATION FOR ANIMAL HEALTH (OIE) (Agenda Item 3 (b))**

21. In addition to information provided in CX/FH 10/42/3-Add.1, the Observer from OIE informed the Committee of ongoing work on zoonotic parasites, in particular the *ad hoc* Group on zoonotic parasites. This Group had updated the current OIE *Terrestrial Animal Health Code* Chapter 8.13 on trichinellosis to put more emphasis on achieving control of the infestation and preventing foodborne illness in humans by implementation of control measures at the farm level. The Observer also noted that advice on *Cysticercus bovis* would be prepared and published in the form of OIE recommendations or as part of a general chapter on biosecurity procedures in livestock farming, for inclusion in the Veterinary Public Health section of the OIE *Terrestrial Animal Health Code*.

<sup>4</sup> For more information see [www.who.int/gfn/en/](http://www.who.int/gfn/en/)

22. The Observer informed the Committee that the OIE considered that any future work of Codex on trichinellosis should take into account the work of OIE and that it would continue to give support and cooperation to such work to ensure that control measures are applied consistently throughout the farm-to-fork continuum.

23. The Delegation of the European Union welcomed the close cooperation established between Codex and the OIE and noted that the opportunity for continued cooperation between the Codex and OIE on the question of zoonotic parasites in meat, if the proposal for new work to be discussed under Item 8 was accepted.

24. The Committee expressed its appreciation to the OIE for the information and noted that the information would be of relevance under Items 4 and 8, in particular.

#### **PROPOSED DRAFT GUIDELINES FOR THE CONTROL OF *CAMPYLOBACTER* AND *SALMONELLA* SPP. IN CHICKEN MEAT (Agenda Item 4)<sup>5</sup>**

25. The Committee recalled that at its 41<sup>st</sup> session it had agreed to return the proposed draft guidelines to Step 2 for further elaboration by an electronic working group led by New Zealand and Sweden, circulation for comments at Step 3 and consideration at the current session of the Committee.

26. The Delegation of Sweden, in introducing the report of the working group, as presented in document CX/FH 10/42/4, recalled the history of the development of the Guidelines. The Working Group had taken into consideration all written comments submitted at the 41<sup>st</sup> CCFH and the working group, as instructed, had ensured that the revised document remained as close as possible to the structure and content of the document submitted at the 41<sup>st</sup> CCFH.

27. The Committee noted that the only substantial change in the revised document was the reintroduction of data on the use of Tri-Sodium Phosphate (TSP) for decontamination of chicken carcasses. While the FAO/WHO Technical Meeting on *Salmonella* and *Campylobacter* in Chicken Meat (Rome, Italy, May 2009) had excluded the use of TSP, this was not due to a food safety concern but the fact that information available at that meeting indicated that TSP was no longer being used and that there were concerns regarding employees safety. The Working Group had recommended that the Committee consider the revised document for further advancement in the Step procedure.

#### **General comments**

28. At the proposal of the Chairperson, the Committee considered a revised version of paragraph 14, resolution of which would unblock the situation that had prevented the 41<sup>st</sup> CCFH considering the document in detail. The proposed paragraph highlighted that the use of control measures in the primary production-to-consumption food chain were subject to approval by the competent authority, where appropriate, and allowed for the use of control measures other than those mentioned as examples in the document. The Committee agreed to the proposed paragraph, which represented a compromise solution to the different proposals and allowed for flexibility by recognizing that the competent authorities should decide on the specific control measure to be approved. It was noted that the revised paragraph also allowed for new technologies to be used without amending the document.

#### **Specific comments**

29. In view of the above decision, the Committee agreed to consider the document in detail with a view to progress it in the Step procedure and to focus its discussion on substantial issues in view of the extensive revision made by the working groups (physical and electronic) to improve the logical flow and readability of the document.

30. The Committee noted that, for consistency with the use of literature references in other Codex documents, Section 14 “Scientific References” should be deleted and only relevant references Codex, FAO,WHO and OIE documents would be updated, where necessary, and included as footnotes in the document.

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<sup>5</sup> CX/FH 10/42/4; CX/FH 10/42/4-Add.1 (comments of Argentina, Brazil, Canada, Colombia, Costa Rica, Ghana, Honduras, Jamaica, Japan, Kenya, Mexico, Paraguay, Peru, Philippines, United States of America, Uruguay and IACFO); CRD 3 (comments of Kenya); CRD 8 (comments of Nigeria); CRD 9 (comments of the European Union); CRD 10 (comments of India); CRD 11 (comments of South Africa); CRD 12 (comments of Mali); CRD 13 (comments of Ghana); CRD 14 (comments of Thailand); CRD 18 (comments of Uganda); CRD 21 (comments of Egypt).

31. The Committee reviewed the document in detail and in addition to some editorial changes and amendments to the French and Spanish version, agreed to the following changes.

#### 1. Introduction

32. In paragraph 2, the reference to the work of the Committee on Food Hygiene was changed with the specific reference to the *Principles and Guidelines for the Conduct of Microbiological Risk Management (MRM)* (CAC/GL 63-2007) as the work of CCFH had been finalized and the text adopted by the Commission.

33. The last sentence of the second bullet in paragraph 3 was amended to clarify why the benefit of a hazard-based measure could not be precisely quantified without a specific risk assessment.

34. In the first sentence of paragraph 4, “and review” was added after “a rigorous scientific evaluation” to better describe the process followed in the development of the Guidelines.

#### 2. Objectives

35. The first two sentences of paragraph 7 were merged and the text simplified by deleting reference to “significant reduction in foodborne disease” since there was no quantitative link established between the proposed control measures and the risk reduction.

##### 3.1. Scope

36. In paragraph 10, the term “food pathway” was changed to “food chain” for consistency with other Codex texts. The Committee agreed to amend the term throughout the document.

37. The Committee noted that the Guidelines applied to chicken meat produced in typical “industrial” systems and that the specific needs of small scale operations could be addressed in the future in an Appendix to the Guidelines. It also noted that more specific measures for the control of *Salmonella* in eggs could be addressed in an Appendix to the *Code of Hygienic Practice for Egg and Eggs Products* (CAC/RCP 15-1976) in the future.

##### 3.2. Use

38. The Committee agreed to add a reference to the *Code of Practice on Good Animal Feeding* (CAC/RCP 54-2004) in paragraph 11 and to delete paragraph 12, the content of which was replicated in paragraph 24.

39. In paragraph 13, a new sentence was inserted after the third sentence to clarify that where no quantifiable outcome was mentioned for a specific control measure it should be kept in mind that the effect might be different between *Salmonella* and *Campylobacter*. The sentence referring to Section 14 was deleted in view of the decision to delete the section on scientific references.

#### 4. Definitions

40. The reference to slaughterhouse in the definition of “crate” was deleted to recognize that the use of crates was not limited to the transport of chicken to the slaughterhouse.

#### 6. Risk Profiles

41. The specific titles of the risk profiles on *Salmonella* and *Campylobacter* in broiler chicken were added in paragraph 19.

##### 7.1 Generic flow diagram for application of control measures

42. The Committee added a new step “Re-hanging (optional)” between the “hock cutting” and “venting” steps in the “Process Flow Diagram 3: Step 15 – Dress”, recognizing that this step could be necessary to carry out the evisceration process.

##### 7.2 Availability of control measures at specific process flow steps address in these Guidelines

43. The title of the table was amended to make it consistent with the title of section 7.2.

#### 8. Control measures for Steps 1 to 11 (Primary Production)

44. The Committee added a reference to the *Code of Hygienic Practice for Meat* (CAC/RCP 58-2005) as the Code included several control measures applicable to the primary production of chicken.

### 8.1 Step 1: Manage grandparent flocks

45. The Committee noted that although biosecurity measures applied to several steps, the document included reference to these measures only in those steps where their application was significant for the control of *Campylobacter* and *Salmonella*.

46. In the second sentence of paragraph 25, “by the competent authority” was deleted to allow for more flexibility.

### 8.3 Step 3: Parent hatchery

47. The second sentence in paragraph 32 was revised to read “Trace back of contamination to the infected breeding” as more appropriate and a similar revision was made in the second sentence of paragraph 36.

### 8.9 Step 9: Manage chicken

48. The Committee agreed to add a new sentence at the beginning of paragraph 39 making a more general reference to biosecurity measures and personnel hygiene, in a similar way to that used in Step 1 “Management of grandparent flock” and Step 5 “Manage parent stock”.

49. A new paragraph was added after paragraph 40, to include the use of fly screens as a specific measure for the control of *Campylobacter*. The table on Availability of Specific Control Measures was amended accordingly.

### 8.11 Step 11: Transport to slaughterhouse

50. In paragraph 44 “sanitized” was changed to “disinfected” for consistency with the terminology used in the *Code of Hygienic Practice for Meat* (CAC/RCP 58-2005). Consequential changes were also made throughout the document.

### 9.1 Step 12: Receive at slaughterhouse

51. Paragraph 45 was amended to recognize that before slaughtering it was important to obtain information about the flock, in particular in relation to the *Salmonella* and *Campylobacter* status. In paragraph 48, the example of ways to minimize cross-contamination to other flocks was amended to allow for other interventions.

### 9.4 Step 15: Dress

52. In paragraph 54, the Committee added “running water” in the first bullet and a new bullet “Disposal or reprocessing of carcasses with extensive faecal contamination”. Paragraph 55 was amended to ensure consistency in the terminology and to improve its clarity.

### 9.8 Step 19: Chill carcass (air or immersion)

53. The Committee agreed to add “and washing action” at the end of paragraph 79, for completeness.

### 9.11 Step 22: Pack whole carcass and portion

54. The Committee amended paragraph 91 by adding “and storage” to recognize the importance of proper storage of chicken meat, along with handling, in limiting the growth of *Campylobacter* and *Salmonella*.

55. Paragraph 93 was deleted as the reference did not fit the criteria.

### 10.4 Step 28: Retail / Food service

56. The Committee revised paragraph 100 to make it more generic and to recognise the role of enforcement authorities and retailers in preventing cross-contamination. In paragraph 102 it was specified that retailers might also provide customers with the means to sanitise their hands before and after handling chicken meat.

57. Paragraph 105 was amended to clarify that thawing should be carried out in a manner that minimises growth of microorganisms and prevents cross-contamination.

### 10.6 Step 30: Consumer

58. In recognising that washing of chicken meat might facilitate cross-contamination but that in some regions this measure was used to remove debris and other impurities, the Committee revised paragraph 113 to indicate that information to consumers should discourage washing of chicken meat in the kitchen but, when deemed necessary, washing of chicken should be carried out in a manner that minimises the possibility of cross-contamination.

## 12. Validation

59. The Committee added a sentence at the end of paragraph 128 to make it clear that validation of a control measure is a prerequisite to its implementation.

## 13.2. Review

60. The Committee added a new sentence in paragraph 150 to recognise that additional data from industry would significantly increase the value of a trend analysis conducted by the regulatory authorities.

## **Conclusions**

61. In view of the agreement reached on paragraph 14, the detailed revision of the document and the absence of any outstanding issues, the Committee agreed that the document was ready to further progress in the Step procedure and to be adopted by the Commission.

62. The Committee further noted that FAO/WHO would include all scientific references removed from the document on the website of the “decision-support tool for the control of *Campylobacter* and *Salmonella* in poultry”.

## **Status of the Proposed Draft Guidelines for the Control of *Campylobacter* and *Salmonella* spp. in Chicken Meat**

63. The Committee agreed to forward the proposed draft Guidelines for the Control of *Campylobacter* and *Salmonella* spp. in Chicken Meat to the Commission for adoption at Step 5/8 with the recommendation to omit Steps 6 and 7 (see Appendix III).

## **PROPOSED DRAFT GUIDELINES ON THE APPLICATION OF GENERAL PRINCIPLES OF FOOD HYGIENE TO THE CONTROL OF VIRUSES IN FOOD (Agenda Item 5)<sup>6</sup>**

64. The Committee recalled that at its 41<sup>st</sup> session it had agreed to establish a physical working group, led by The Netherlands, to revise the proposed draft Guidelines for circulation for comments at Step 3 and consideration at the current session.

65. The Delegation of The Netherlands presented document CX/FH 10/42/5 and reported that the working group had taken into consideration all comments made at the last session and that, in an attempt to facilitate discussion at this session, it had prepared a revised draft taking into account further written comments made to this session and proposed that this document (CRD 16) be used for discussion. The key changes made were more of a structural nature to simplify the document and to remove repetitions between the main body and the annexes.

66. The Committee considered CRD 16 and noting that the structure and text of the document still needed improvements, agreed to consider the document section by section and to focus on key changes and comments for the further revision of the document with a view to its finalization by the next session.

67. The Delegation of The Netherlands introduced the major changes made to each section. The Committee made the following amendments and comments or proposals:

## **Introduction**

68. It was agreed to amend the second last paragraph to more accurately reflect that cooking of bivalves and fresh produce might not ensure total reduction of viral contamination and to cross-reference Annex I section 5.2.2.

## **Section II – Scope, Use and Definitions**

69. This section was amended to more clearly illustrate that the guidelines were applicable to all foods with a focus on ready-to-eat foods.

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<sup>6</sup> CX/FH 10/42/5; CX/FH 10/42/5-Add.1 (comments of Argentina, Australia, Bolivia, Brazil, Canada, Japan, Kenya, Mexico, New Zealand, Peru, Philippines, United States of America, Uruguay and IACFO); CRD 3 (comments of Kenya); CRD 10 (comments of India); CRD 11 (comments of South Africa); CRD 12 (comments of Mali); CRD 14 (comments of Thailand); CRD 16 (proposal for a revised draft Guideline prepared by The Netherlands); CRD 17 (comments of Nicaragua); CRD 18 (comments of Uganda); CRD 21 (comments of Egypt); and CRD 22 (comments of the European Union).

### **Section III – Primary production / harvesting area**

70. The second paragraph of section 3.2 was deleted as it was already covered in section 3.4.

71. In section 3.3, the last part of the 3<sup>rd</sup> paragraph was deleted so as not to specify how often a container could be used but rather to focus on the fact that containers should be in a good clean condition and should not be damaged.

72. The Committee did not support a proposal to include in section 3.4 reference to examples of specific molecular methods for testing to confirm that NoV shedding had stopped in faecal materials of infected food handlers in primary production for ready-to-eat food as these methods were not widely available and their results were difficult to interpret. The Delegation of Japan was however of the opinion that these were only examples and could be included in this document for use in certain circumstances for high risk populations

### **Section V – Control of Operation**

73. The Committee agreed that consideration should be given to a more appropriate location of the subsections 5.1.1, 5.1.2, 5.1.3 and 5.1.4, and agreed to introduce a chapeau paragraph in section 5.1 to provide a simple principle on hazard controls for viruses.

74. It was noted that regular checking for HAV infection of workers was not practical for many countries in particular countries where HAV was endemic and that it relied on serological testing which was costly and not always reliable. However, in noting that such testing was a control measure that could be considered together with other control measures, it was agreed to amend the last bullet point of section 5.1.2 to indicate that checking for HAV infection of workers was useful and could be carried out where feasible and appropriate.

75. It was agreed to recommend that section 5.2.1 be revised to take into account that conventional cooking was not always sufficient to inactivate viruses, especially in bivalves and to consider referencing the appropriate section in the Annex for control of HAV and NoV in bivalve molluscs.

76. The title of 5.2.2 was amended by replacing “steps” with “procedures” to better reflect the contents of this section and that the first paragraph should be extended to include pH control for enveloped viruses.

77. In noting that the paragraph on irradiation was specific to UV radiation treatment, it was agreed to change its title to “UV irradiation”. It was recommended that an additional paragraph be inserted to address ionising irradiation treatment.

78. The last paragraph on newer technologies was amended to reflect that, only if possible, methodologies that can distinguish between infectious and non-infectious materials should be applied when virucidal treatments are validated with the hazard/food combination. The last sentence on validation and approval was deleted as not applicable.

79. The Committee agreed with the recommendation of the Observer from IACFO that section 5.8 be amended to include language providing for risk-based recall decisions and public warning for HAV and NoV where appropriate.

### **Section VII – Establishment: Personal hygiene**

80. In the third paragraph of section 7.3, the last three sentences relating to how hands should be washed, the use of disposable paper towel and non-hand operable taps were deleted as these measures were considered too prescriptive.

81. Section 7.4 was amended for consistency with section 6.8 of the *Code of Hygienic Practice for Precooked and Cooked Foods in Mass Catering* (CAC/RCP 39-1993) and to more clearly indicate that hand-washing was essential after handling any contaminated material.

### **Section X - Training**

82. In section 10.1, “call” was replaced by “inform the employer” for clarity.

83. For purposes of flexibility, the second last sentence of section 10.2 was amended to indicate that, to the extent possible, children should be kept away from growing fields and food preparation areas in HAV endemic areas and as a consequence a similar amendment was made in section 5.1 of Annex II.

## Annex I

84. The Committee agreed to keep heat treatment condition as an example in paragraph 3 of primary production and to delete the sentence related to performance of accredited laboratories. While noting that water quality was essential to preventing viral contamination, it was recommended that consideration also be given to addressing other environmental conditions of the production and harvesting areas.

### Conclusion

85. The Committee agreed to circulate the proposed draft Guidelines, as amended, for comments at Step 3 and to establish an electronic working group, led by The Netherlands, open to all interested parties and working in English only, to prepare a revised proposed draft Guideline based on the written comments at Step 3 and the recommendations and discussions at this session. It was further agreed that a physical working group, led by The Netherlands, open to all interested parties and with interpretation in English, French and Spanish would meet immediately prior to the next session to consider comments submitted and to prepare a proposal for consideration by the next session to facilitate the finalization of the proposed draft Guidelines.

### Status of the Proposed Draft Guidelines on the Application of General Principles to the Control of Viruses in Food

86. The Committee agreed to return the Proposed Draft Guidelines on the Application of General Principles to the Control of Viruses in Food to Step 3 for comments and consideration by the next session (*see* Appendix IV).

### **PROPOSED DRAFT REVISION OF THE RECOMMENDED INTERNATIONAL CODE OF HYGIENIC PRACTICE FOR COLLECTING, PROCESSING AND MARKETING OF NATURAL MINERAL WATERS (Agenda Item 6)<sup>7</sup>**

87. The Committee recalled that at its 41<sup>st</sup> session it had agreed to start new work on the revision of the *Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters* (CAC/RCP 33-1985) and that a physical Working Group, led by Switzerland, would develop the proposed draft revision of the Code for circulation for comments at Step 3 and consideration by the current session of the Committee.

88. The Delegation of Switzerland, in introducing the report of the working group, highlighted the major agreements reached as reflected in CX/FH 10/42/6 and the recommendation that, if there was agreement on Annex I on microbiological criteria, consideration should be given to the deletion of section 4.4 of the *Standard for Natural Mineral Waters* (CODEX STAN 108-1981).

89. The Delegation highlighted the fact that natural mineral water is clearly distinguishable from ordinary drinking water as laid down in the definition for natural mineral water in section 2.1 of the *Standard for Natural Mineral Waters*.

90. The Delegation informed the Committee that it had prepared a revised proposal (CRD 20) taking into account all written comments at Step 3 and proposed that the Committee consider this document as the basis for its discussion.

91. The Committee considered CRD 20 section by section and, in addition to some editorial changes and amendments to the Spanish version, agreed to the following changes<sup>8</sup>.

### General comments

92. A Delegation requested clarification on how the current document could be used in conjunction with the WHO Guidelines on Drinking Water Quality and, in particular, how the concept of water safety might be adopted in natural mineral water harvesting. It was clarified that the WHO Guidelines were not applicable to natural mineral waters due to the specificity of the product, as outlined in its definition, and that the WHO Guidelines were only used to provide the rationale for the parameters presented in the table in the Annex on microbiological criteria.

<sup>7</sup> CX/FH 10/42/6; CX/FH 10/42/6-Add.1 (comments of Argentina, Australia, Brazil, Colombia, the European Union, Japan, Kenya, Peru, Philippines, United States of America and ICBWA); CRD 3 (comments of Kenya); CRD 8 (comments of Nigeria); CRD 10 (comments of India), CRD 11 (comments of South Africa), CRD 12 (comments of Mali), CRD 17 (comments of Nicaragua), CRD 18 (comments of Uganda), CRD 20 (revised proposal by Switzerland), and CRD 21 (comments of Egypt).

<sup>8</sup> Numbers of paragraphs in this section correspond to those in CRD 20.

## **Specific comments**

### **Section I - Objectives**

93. In the first bullet point “guarantee” was replaced by “ensure” for consistency with terminology used in Codex texts. Consequential changes were also made throughout the document.

#### **2.3 Definitions**

94. The definitions for “containers” and “packaging materials” were amended to better clarify that containers were those vessels made from food-grade packaging material to be filled with natural mineral water whereas packaging material could be any materials food grade or not.

#### **3.1.4 Protective Measures**

95. Paragraph 17 was amended to more clearly indicate that if the protection zone was bordered by areas not under the control of producers/manufacturers, it was still their responsibility to develop measures and monitoring programmes to avoid contamination of the zones.

#### **3.2.2 Protection of the extraction area**

96. Paragraph 31 was transferred to this section as a new paragraph (20bis) as it was considered more applicable to the section.

#### **3.2.3 Materials and 3.2.4 Equipment and Reservoirs**

97. Paragraph 21 was amended by referring to “inert” material for consistency with section 3.3.3 and transferred to section 3.2.4, as more appropriate. As a consequence, section 3.2.3 Materials was deleted.

98. Paragraph 22 was amended for purposes of clarity and to better reflect that the design and construction of equipment and reservoirs should be such so as to avoid contamination of the natural mineral water rather than to minimize hazards to human health.

### **3.3 Handling, Storage and Transport of Natural Mineral Waters Intended for Bottling**

99. “Transport” was deleted from the title as not applicable to natural mineral waters and “bottling” was replaced with “packaging” so as not to exclude other forms of packaging. Consequential changes were also made throughout the document.

#### **3.3.1 Technical aspects**

100. “Extraction facilities” was replaced by “handling and storage” as more appropriate.

#### **4.2 Premises and Rooms**

101. In paragraph 39, “aerial debris” was replaced by “suspended particles” since debris could be broken pieces or fragments and too big to be aerial while suspended particles could be aerosol or cloud dust. The 2<sup>nd</sup> and 3<sup>rd</sup> sentences of this paragraph were merged and restructured to better explain the reason why labelling machines inside filling rooms should have effective exhaust systems.

#### **4.3 Equipment**

102. In recognizing that the use of lubricants was necessary for the maintenance of the equipment and as a precaution in case of leakages, paragraph 42 was amended to reflect that it was necessary to verify that lubricants were suitable for food use, but that care should be taken to avoid their coming into contact with the natural mineral water.

#### **4.4.2 Drainage and Waste Disposal**

103. In light of the new definition for container, “waste disposal containers” were changed to “waste disposal bins” as more appropriate.

#### **4.4.3 Cleaning**

104. A new paragraph (45bis) was inserted to more clearly mention that cleaning facilities as per subsection 4.4.3 of the *General Principles of Food Hygiene* should be available.



#### 4.4.8 Storage

105. A new paragraph (51bis) was inserted to retain important provisions regarding facilities for storage of waste and inedible material, from the current Code in force.

#### 5.2.2.2. Treatment

106. In paragraph 58, “chemical” was replaced by “adsorption” to clarify the filtration process and not to imply the use of chemical treatments which were not allowed for natural mineral waters.

#### 5.2.5 Physical and Chemical Contamination

107. In paragraph 72, “primary packaging material” was replaced by “containers and closures” as more appropriate.

#### 5.5 Water

108. To avoid confusion and in line with the *General Principles of Food Hygiene*, paragraph 76 was amended to more accurately refer to section 5.5.1 of these principles.

#### Annex I: Microbiological Criteria

109. The Committee recalled that one of the objectives in revising the Code was to align the microbiological criteria with those of the *Standard for Natural Mineral Waters*. It was noted that those parameters in the Table were from the Standard and that in addition, aerobic mesophilic count (heterotrophic plate count) was included as an important indicator and that the method for this count was ISO 6222-1999.

110. Some delegations and an observer questioned the need for the use of all four faecal indicators and the suitability of *Pseudomonas aeruginosa* as an indicator as it was not a typical food related criterion and more applicable to medical applications. It was therefore proposed to limit the number of indicators as the use of multiple indicators could be costly to manufacturers.

111. Some other delegations and observers reiterated that the task of the work was to align the microbiological criteria with those of the *Standard for Natural Mineral Waters*, that there was no need to change anything as this was widely used standard industry practice that had been proved appropriate to ensure a high level of safety of natural mineral waters due to the fact that they were not subjected to the hygiene control measures usually applied to bottled water, in particular disinfection.

112. In recognition of the need for flexibility, it was agreed to amend paragraph 99 to indicate that manufacturers could choose all or a subset of the faecal indicators as appropriate in accordance with any requirements set by the competent authority. In addition, a new paragraph was added to clarify that competent authorities could use all or a subset of the criteria as appropriate to verify the effectiveness of general hygiene programmes in the food operational environment as well as to verify control measures in facilities employing HACCP or other food safety control systems. In line with this the Table was amended to clearly illustrate which criteria were faecal indicators and which were process control indicators.

113. The column “M” and the associated note were deleted as not applicable to a 2-class plan.

#### Rationale for the parameters chosen

114. The section on spore-forming sulphite-reducing anaerobes was amended to clarify that these bacteria were considered faecal indicators.

#### Conclusion

115. In view of the consensus reached on the document, it was agreed to progress it in the Step procedure for adoption by the Commission. As a consequence of the decision on Annex I on microbiological criteria, the Committee agreed to request the Commission to remove section 4.4 of the *Standard for Natural Mineral Waters* and to reference the Code as prescribed in the Procedural Manual.

#### Status of the Proposed Draft Revision of Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters

116. The Committee agreed to forward the Proposed Draft revision of the *Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters* to the Commission for adoption at Step 5/8 with the recommendation to omit Steps 6 and 7 (see Appendix V).

**PROPOSED DRAFT REVISION OF THE PRINCIPLES FOR THE ESTABLISHMENT AND APPLICATION OF MICROBIOLOGICAL CRITERIA FOR FOODS (Agenda Item 7)<sup>9</sup>**

117. The Committee recalled the decision of the 41<sup>st</sup> session to start new work on the revision of the *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CAC/GL 21-1997) and that a physical working group led by Finland and co-chaired by Japan would develop the proposed draft revision of the Principles for circulation for comments at Step 3 and consideration by the current session of the Committee.

118. The Delegation of Finland, in introducing the report of the working group, highlighted the progress that had been made. Particular attention was drawn to the restructuring of the document, the change of title, the intended users of the document, the revised definition of a microbiological criterion (MC), the efforts to address the linkage between MC and the new microbiological risk management (MRM) metrics and the proposed structure of examples to be developed in the future to illustrate the various applications of MC.

119. The working group requested feedback from the Committee on the changes made to date, the proposed examples and a further list of issues as defined in paragraph 31 of CX/FH 10/42/7.

**General comments**

120. The importance of this work for developing as well as developed countries was emphasised.

121. While noting that there was still significant work to be carried out on this document and with the objective of providing the necessary guidance to facilitate such work, the Committee made the following comments and recommendations for the further development of the document:

- Further consider the main document taking into account the comments received before and during the current session, giving particular attention to the need for the guidelines to be more user-friendly and adequately flexible so that they could be used by countries with different levels of capacity and expertise on these issues.
- Give consideration to the concept of MC being categorised into: those which contribute to GHP (e.g. MC for indicator organisms), hazard-based MC (e.g. for a specific pathogen in a specific commodity) and those which are risk-based (e.g. linked to an ALOP, FSO).
- Ensure that relevant information from the current principles (CAC/GL 21-1997) is adequately captured in the proposed draft revision.
- In addressing the issues of uncertainty and variability, take into account the previous and ongoing work of the Codex Committee on Methods of Analysis and Sampling (CCMAS).
- While guidance on the establishment of MC for animal feed would be useful this was considered to be of lower priority and that in many cases the guidance in relation to food, processes and processing environments would equally apply to feed.
- Develop examples to illustrate the practical application of MC for different purposes based on paragraphs 47-61 of document CX/FH 10/42/7 as an annex to the main document; these were considered important in terms of ensuring the practical nature of the guidelines.
- Initiate development of an annex on the more technical and statistical aspects of MC and sampling; although complex, this was considered to be a critical component of the guidelines.
- Give consideration to indicator organisms in the guidelines, which were noted to be a valuable tool particularly in monitoring of process hygiene.
- Further elaborate on the relationship between MC and MRM metrics taking into consideration recent progress that had been made on the application of the MRM metrics.
- Undertake efforts to elaborate some text on communication issues related to MC in both the main body of the document, and in the examples to be developed.

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<sup>9</sup> CX/FH 10/42/7; CX/FH 10/42/7-Add.1 (comments of Argentina, Australia, Brazil, Costa Rica, Guinea Bissau, Kenya, Malaysia, Mexico, Nicaragua, Peru, Philippines and United States of America); CRD 3 (comments of Kenya); CRD 4 (comments of Japan); CRD 5 (comments of Japan); CRD 9 (comments of the European Union); CRD 10 (comments of India); CRD 11 (comments of South Africa), CRD 12 (comments of Mali).

122. In noting these suggestions, the Delegations of Finland and Japan highlighted the challenges that lay ahead in the further development of the document and requested the input of countries and observers, in particular to facilitate the development of the annexes on examples and the technical and statistical aspects.

123. Given the complexity of this issue, the importance of training material to facilitate the application of the proposed draft guidelines was highlighted. While training on the application of the guidelines was still premature, the ongoing work of FAO and WHO on the development of a tool to assess the performance of sampling plans was considered very useful and the collaborative efforts of national governments, FAO, WHO and ICMSF to facilitate capacity development in the general area of sampling were welcomed by the Committee.

### **Conclusions**

124. In light of the discussion, the Committee agreed that the document be returned to Step 2 for further elaboration.

125. The Committee agreed to establish a physical working group led by Finland and co-chaired by Japan, open to all interested parties and with interpretation in English, French and Spanish, to meet in Brussels in the second quarter of 2011 with the following terms of reference:

- Further consider the main document taking into account the comments received before and during the current session;
- Elaborate an Annex with practical examples on the establishment and application of MC; and
- Initiate development of an Annex to address the statistical and mathematical aspects of establishing MC including the elaboration of a sampling plan.

126. To facilitate the further development of the document and its annexes, taking into account the comments received before and during the current session, the working group would use electronic means to do its preparatory work and facilitate broad participation.

### **Status of the Proposed Draft Revision of the Principles for the Establishment and Application of Microbiological Criteria for Foods**

127. The Committee agreed to return the proposed draft revision of the *Principles for the Establishment and Application of Microbiological Criteria for Foods* to Step 2 for revision by the above working group. The revised version would be circulated for comments at Step 3 and considered by the next Session of the Committee.

### **OTHER BUSINESS AND FUTURE WORK (Agenda Item 8)**

#### **DISCUSSION OF THE REPORT OF THE WORKING GROUP FOR ESTABLISHMENT OF CCFH WORK PRIORITIES<sup>10</sup>**

128. The Delegation of Finland, the chair of the working group for establishment of CCFH work priorities, held immediately before the present session, introduced this Item and provided an overview of discussions and outcomes of the working group as presented in CRD 2.

129. The working group had recommended the Committee consider two new work proposals for the elaboration of: (i) Guidance for the control of *Trichinella spiralis* and *Cysticercus bovis* in meat (first priority); and (ii) Annex on tomatoes and/or melons to the *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53-2003) (second priority).

130. The working group had also recommended that the Committee consider how to deal with outstanding issues, including possible revision and/or revocation of codes of hygienic practices and to request FAO and WHO to review the current status of knowledge of parasites in food and their public health and trade impact.

131. The Committee noted that in view of the finalisation of work on *Campylobacter* and *Salmonella* in chicken meat (Item 4) and on the revision of the *Code of Practice on Natural Mineral Waters* (Item 6), it could accommodate both these new work items in its workplan.

132. The Committee considered the two proposals as follows.

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<sup>10</sup> CX/FH 10/42/8; CRD 2 (Report of the CCFH working group for the establishment of CCFH work priorities); CRD 13 (comments of Ghana); CRD 15 (comments of the United States of America); CRD 21 (comments of Egypt).

**Guidelines for Control of Specific Zoonotic Parasites in meat: *Trichinella spiralis* and *Cysticercus bovis***

133. The Committee noted the ongoing work of the OIE on zoonotic parasites and that the chapter on trichinellosis (Chapter 8.13 of the OIE *Terrestrial Animal Health Code*) was being revised, would be distributed for comments in February 2011 and that adoption was expected by 2012. The revised chapter was dealing with methods for on-farm prevention of *Trichinella* infection in pigs and for safe trade of fresh meat and meat products derived from pigs and equines and would not overlap with the proposed new work. The Committee was also informed that although *Cysticercus bovis* was not an OIE-listed disease, the OIE was considering the development of general recommendations for the control of this disease on-farm to be published on the OIE website<sup>11</sup>.

134. The Delegation of the United States of America, supported by others, expressed concern about the proposal because of the ongoing work of OIE on zoonotic parasites and because of other areas of potential work, e.g., commodity specific annexes to the *Code of Hygienic Practice for Fresh Fruits and Vegetables* which had greater public health significance. The Delegation proposed consideration of this proposal for new work on parasites after the OIE had completed its work.

135. The Committee further noted that the new work would reference OIE documents with regard to controls at primary production and focus on control measures applicable to subsequent steps of the meat chain with the aim at modernising meat hygiene systems and at optimising the use of resources by applying risk analysis principles to different types of traditional meat hygiene procedures thus ensuring the proportionality of the measure in relation to the risk. It was further stressed that the proposed new work was complementary to ongoing OIE work, that OIE test methods for *Trichinella* would be referred to in the document and that this work would strengthen Codex collaboration with OIE in line with Goal 4 “Promoting Cooperation between Codex and Other Relevant International Organizations” of the Codex Strategic Plan 2008-2013.

136. The Committee highlighted the public health and trade importance of foodborne parasites and the need to address these foodborne parasites in a horizontal manner by developing a general guidance document, which would provide a framework in which annexes on specific parasite / commodity combinations could be addressed. However, it was noted that, in order to undertake this work there was a need for a review of all available information on parasites to better assess the global problem associated with them, the commodities involved and the related public health issues and that this work could be carried out in parallel to the proposed new work.

137. Based on the recommendations of the working group, the Committee agreed to request the 34<sup>th</sup> Session of the Commission to approve new work on Guidelines for Control of Specific Zoonotic Parasites in meat: *Trichinella spiralis* and *Cysticercus bovis* and to forward the project document for new work to the 65<sup>th</sup> Session of the Executive Committee and the 34<sup>th</sup> Session of the Commission for approval as new work (*see* Appendix VI).

138. The Committee agreed to establish a physical working group, co-chaired by the European Union and New Zealand, open to all interested parties and with interpretation in English, French and Spanish, to develop proposed draft Guidelines for Control of Specific Zoonotic Parasites in meat: *Trichinella spiralis* and *Cysticercus bovis* for circulation for comments at Step 3 and consideration by the next session of the Committee, pending approval of the Commission. The physical working group was tentatively scheduled to be held in Brussels (Belgium) in the second quarter of 2011, back-to-back with the physical working Group on microbiological criteria (*see* Item 7).

**Annex to the Code of Hygienic Practice for Fresh Fruits and Vegetables**

139. The Committee noted that the working group had not made any recommendation of whether the work should focus on both tomatoes and melons and agreed that it would be preferable to start work focusing on melons only, in view of the global public health significance of this commodity, as highlighted by FAO/WHO Expert Meeting on Microbiological Hazards in Fresh Fruits and Vegetables.

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<sup>11</sup> [www.oie.int](http://www.oie.int)

140. The Committee noted that a number of public health incidents in the United States of America, as well as in other countries, justified this work and that it was necessary to identify the critical points and design preventive measures for their control. It also noted that this work was part of an overall request for the development of appendices to the *Code of Hygienic Practice for Fresh Fruits and Vegetables*, made at its 39<sup>th</sup> Session<sup>12</sup>.

141. The Committee indicated that the work could be initiated without specific scientific advice from FAO/WHO. However, it was noted that FAO and WHO had mechanisms in place to allow the collection of relevant information and for provision of specific scientific advice if needed.

142. Based on the recommendations of the working group, the Committee agreed to request the 34<sup>th</sup> Session of the Commission to approve new work on the Annex on Melons to the *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53-2003) and to forward the project document for new work to the 65<sup>th</sup> Session of the Executive Committee and the 34<sup>th</sup> Session of the Commission for approval as new work (see Appendix VII).

143. The Committee agreed to establish a physical working group, led by the Canada and co-chaired by the United States of America, open to all interested parties and with interpretation in English and French, to develop a proposed Annex on Melons to the *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53-2003) for circulation for comments at Step 3 and consideration by the next session of the Committee, pending approval of the Commission. The physical working group was tentatively scheduled to be held in Canada in the second quarter of 2011.

#### **Other matters**

144. In view of the above discussions, the Committee agreed to request FAO and WHO:

- To review the current status of knowledge on parasites in food and their public health and trade impact in order to provide the CCFH with advice and guidance on the parasite-commodity combinations of particular concern, the issues that need to be addressed by risk managers and the options available to them; and
- To issue a call for data and to evaluate the pathogen-specific hazards associated with various types of melons and the role of various agricultural and manufacturing practices in enhancing or mitigating these hazards. Consideration should be given to how these products are marketed and handled by consumers and the impact of this on foodborne illnesses.

145. The Committee further agreed to request the Codex Secretariat to include in the Circular Letter inviting proposals for new work information on requests which were assigned lower priority in previous meetings, along with the list of existing codes of hygienic practice that could be revised and/or revoked, on the basis of a proposal made at the 33<sup>rd</sup> CCFH (Ref. CX/FH 00/14).

146. The Committee noted that risk profiles should be attached to any new proposals in accordance with CCFH procedures laid down in the Procedural Manual.

147. The Committee thanked the Delegation of Finland for their excellent work in chairing the working group and accepted the offer of the Delegation of Thailand to chair the next working group, which will meet the day before the next session of the Committee.

#### **DATE AND PLACE OF THE NEXT SESSION (Agenda Item 9)**

148. The Committee was informed that the 43<sup>rd</sup> Session of the CCFH was tentatively scheduled to be held in the United States of America from 5 to 9 December 2011. The exact time and venue would be determined by the host Government in consultation with the Codex Secretariat.

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<sup>12</sup> ALINORM 8/31/13, paras 157-159.

## SUMMARY STATUS OF WORK

Subject Matter	Step	Action by:	Reference in REP11/FH
Proposed Draft Guideline for the Control of <i>Campylobacter</i> and <i>Salmonella</i> spp in Chicken Meat	5/8	Governments 34 <sup>th</sup> CAC	para. 63 and Appendix III
Proposed Draft Revision of the Recommended International Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters (CAC/RCP 33-1985) and the consequential amendment to the Standard for Natural Mineral Waters (Section 4.4)	5/8	Governments 34 <sup>th</sup> CAC	paras 116 and 115 and Appendix V
Proposed Draft Guidelines on the Application of General Principles of Food Hygiene to the Control of Viruses in Food	3	Governments Physical Working Group (The Netherlands) 43 <sup>rd</sup> CCFH	para. 86 and Appendix IV
Proposed Revision of Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997)	2/3	Physical Working Group (Finland / Japan) Governments 43 <sup>rd</sup> CCFH	para. 127
Guidelines for Control of Specific Zoonotic Parasites in Meat: <i>Trichinella spiralis</i> and <i>Cysticercus bovis</i>	1/2/3	34 <sup>th</sup> CAC, Physical Working Group (EU / NZ) Governments 43 <sup>rd</sup> CCFH	para.137 and Appendix VI
Annex on Melons to the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003)	1/2/3	34 <sup>th</sup> CAC Physical Working Group (Canada / USA) 43 <sup>rd</sup> CCFH	para.142 and Appendix VII
Discussion paper on the review of the risk analysis principles and procedures applied by the Codex Committee on Food Hygiene.	-	EU	para. 6

**APPENDIX I**

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**Appendix II****ENDORSEMENT OF FOOD HYGIENE PROVISIONS****PROPOSED DRAFT STANDARD FOR SMOKED FISH, SMOKE-FLAVOURED FISH AND SMOKE-DRIED FISH****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 recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969) and other 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/RCP 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 I). Viability of nematodes and cestodes and trematodes shall be examined according to Section 8.9 and/or 8.10.

**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 minimize the risk of *Clostridium botulinum*.~~

**6.6 Histamine**

The product shall not contain histamine that exceeds 20 mg/100g fish flesh. This applies only to susceptible species (e.g. *Scombridae*, *Clupeidae*, *Engraulidae*, *Coryfenidae*, *Pomatomidae*, *Scombrosidae*).

**6.7 Other Substances**

The products shall not contain any other substances 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.

## **ANNEX 1 (to the Proposed Draft Standard for Smoked Fish, Smoke-flavoured fish and Smoke-dried fish)**

### **PROCEDURES SUFFICIENT TO KILL PARASITES**

Any method used to kill parasites shall be acceptable to the competent authority having jurisdiction.

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  $-20^{\circ}\text{C}$  at the thermal centre of the product for 24 hours (for *Anisakis* species and *Pseudoterranova decipiens* only);<sup>1</sup>
- Freezing at  $-35^{\circ}\text{C}$  at the thermal centre of the product for 15 hours (all parasites)<sup>2-5</sup>;
- Freezing at  $-20^{\circ}\text{C}$  at the thermal centre of the product for 168 hours (7 days)<sup>1-42-5</sup> (all parasites).

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

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

<sup>3</sup> 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.

<sup>4</sup> 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.

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

## **ANNEX 2 (to the Proposed Draft Standard for Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish)**

### **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.), and the level of protection that the country chooses for itself for this particular risk. 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 any temperature over  $3^{\circ}\text{C}$ . This table does not apply to smoke-dried fish because the required water activity of 0.85 or below 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 below  $3^{\circ}\text{C}$  or below a water activity of 0.94. Other time/temperature combinations exist that similarly control the formation of toxin<sup>1</sup>. 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.

~~However, in countries where consumer acceptance and regulatory enforcement of shelf life are not norms, continuous monitoring, such as that provided by time/temperature integrators on consumer packages can be~~

<sup>1</sup> 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.

an important adjunct to shelf life monitoring in the country where the product will be consumed. The necessity for time/temperature integrators exists because, unlike freezing, temperature control through refrigeration is not a visual condition and cannot be determined without an additional monitoring control.

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	WATER ACTIVITY CONTROLLED BY AQUEOUS PHASE SALT ( <i>NaCl</i> )	COMMENTS
<del>(0°C to 3°C)</del> <u>Below 3°C</u>	<del>Reduced Oxygen (including vacuum packaging and modified atmosphere packaging)</del> <u>Any packaging</u>	<del>No maximum water activity is needed.</del> <u>Not applicable</u>	<del><i>C. botulinum</i> toxin cannot form below 3°C. Temperature monitoring is needed for each package, e.g. time temperature integrators, to ensure that the temperature does not exceed 3°C. The country where the product is consumed may require temperature monitoring for each package to ensure that the time temperature combination does not permit the production of <i>Clostridium botulinum</i> toxin.</del>
<del>≥3°C to 5°C</del>	<del>Aerobically Packaged*</del>	<del>No maximum minimum water activity is needed.</del> <del>Nonetheless, where there is a reasonable 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.</del>	<del>When these products are packaged aerobically, 5°C is the maximum recommended storage temperature for the control of pathogens generally and for quality. <u>The purpose of the aerobic packaging is not to provide sufficient oxygen to prevent growth and toxin formation of <i>C. botulinum</i>.</u> In air-packaged products, aerobic spoilage organisms provide sensory signs of spoilage before the formation of toxin by <i>C. botulinum</i>. <del>However, even</del> <u>In addition</u>, 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 may still require aqueous phase salt as a barrier to growth of non-proteolytic strains of <i>C. botulinum</i> if there are concerns about the ability of transporters, retailers or consumers to maintain time/temperature control.</del>
<del>Frozen (&lt; or = -18°C)</del>	<del>Reduced Oxygen (including vacuum packaging and modified atmosphere)</del> <u>Any packaging</u>	<del>No maximum water activity is needed.</del> <u>Not applicable</u>	<del><i>C. botulinum</i> 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. The country where the product is consumed may require temperature monitoring for each package to ensure that the time temperature combination does not permit the production of</del>



























































































































































