

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

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ALINORM 79/13A

CODEX ALIMENTARIUS COMMISSION

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REPORT OF THE SIXTEENTH SESSION OF THE CODEX COMMITTEE ON FOOD HYGIENE Washington, D.C., 23-27 July, 1979

INTRODUCTION

1. The 16th Session of the Codex Committee on Food Hygiene was held in the Main Conference Room, Department of State, Washington, D.C., from 23 to 27 July 1979. The Session was attended by representatives and observers from 24 countries and by observers from 2 international organizations (see Appendix I for list of participants).
2. The participants were welcomed on behalf of the Government of the United States by Dr. Rober M. Schaffner, Acting Deputy Director, Bureau of Foods, U.S. Food and Drug Administration, who stressed the importance that the Government of the United States placed on the Committee's work on microbiological criteria and Codes of Hygienic Practice. Dr. R.B. Read Jr. was Chairman of the Session.

ADOPTION OF THE AGENDA

3. The agenda was adopted with a minor change in the order of the items.

INFORMATION ON ACTIVITIES WITHIN WHO AND FAO OF INTEREST TO THE COMMITTEE

4. The representative of WHO informed the Committee of WHO activities and joint FAO/WHO activities which were of interest to the Committee. He referred to the emphasis given by the World Health Assembly at its sessions in 1978 and 1979 to the intensification of WHO activities in the field of food safety and food hygiene.

- The Joint FAO/WHO Food and Animal Feed Contamination Monitoring Programme, which had at present about twenty collaborating institutes, had been reviewed and reoriented to shift the main emphasis to collection of current data, with due regard to quality control, for example, by the exchange of standard samples and interlaboratory comparison of results.
- To date, nine comprehensive criteria documents reviewing health aspects of certain pollutants had been issued by the WHO Environmental Health Criteria programme.

- The WHO Diarrheal Diseases Control Programme had been further developed as one of the priority areas of the WHO programme on communicable diseases.
- The Organization's coordination activities in post-graduate training in food microbiology had continued; courses had been held in India, United Kingdom and the Netherlands. The services of the WHO Food Virology Programme had been increasingly used both for training of individuals and obtaining information from the data collection.
- The surveillance programme for control of foodborne infections and intoxications in the European Region of WHO was scheduled to be operational in 1980. In view of the interest that other WHO regions have shown to the programme, it was hoped that more regions would in the future institute similar programmes.
- A large scale international programme in chemical safety was becoming operational in 1980; this new programme was to be based on the active participation of national institutions guided and coordinated by a programme advisory committee and a WHO central unit.
- The Organization had convened an Expert Committee on Parasitic Zoonoses and Paralytic Shellfish Poisoning in late 1978 and, in early 1979, a Working Group on Microbiological Criteria for Foods.
- A WHO Zoonoses Control Center for the Eastern Mediterranean area was established in February 1979 which will, among other matters, deal with prevention and control of foodborne zoonoses such as hydatidosis, cysticercosis and salmonellosis.

ACTIVITIES OF ISO

5. The Committee was informed of recent progress in the work of the Sub-Committee "Microbiology" (SC9) of Committee ISO/TC 34 "Agricultural Food Products" which had held its 6th session in The Hague in February 1979.

6. The following three international standards had been finalized:

- Enumeration of microorganisms at 30° (ISO 4833)
- Enumeration of coliforms by most probably number (MPN) techniques (ISO 4831)
- Enumeration of coliforms by colony count (ISO 4832)

A draft International Standard for the detection of Salmonella (DIS 6779) had been submitted for voting by member organizations.

SC9 had reached agreement on:

- (a) preparation of dilutions;
- (b) enumeration of Staphylococcus aureus;
- (c) test for presence/absence of Staphylococcus aureus: it is expected that these will be circulated as draft international standards early in 1980.

SC9 had included in its future programme of work the following:

- (i) Enumeration of Escherichia coli (both MPN and a newly developed membrane filter procedure will be considered).
- (ii) Enumeration of Enterobacteriaceae
- (iii) Enumeration of Clostridium perfringens
- (iv) Enumeration of Vibrio parahaemolyticus

- (v) Enumeration of yeasts and moulds
- (vi) General techniques in microbiology

7. Another ISO Sub-Committee, ISO/TS 147/SC4, concerned with the elaboration of microbiological criteria for water had met in London in June 1979, and had undertaken the preparation of a general guide for the enumeration of microorganisms and was also considering methods for the enumeration of coliforms, Pseudomonas fluorescens and aeruginosa, faecal Streptococci, sulphite reducing Clostridia and Salmonella.

MATTERS RELEVANT TO THE CODEX COMMITTEE ON FOOD HYGIENE AS DISCUSSED BY CODEX COMMITTEES

8. Codex Committee on Processed Fruits and Vegetables (ALINORM 79/20)

Proposed Draft Standard for Dates

Proposed Draft Standard for Canned Apricots

9. The Committee endorsed the hygiene provisions in the above draft standards, noting that they had been amended to bring them into line with those in other Codex Standards.

Codex Committee on Fats and Oils (ALINORM 79/17)

General Standard for Fats and Oils not Covered by Individual Codex Standards

Draft Standard for Edible Low Erucic Acid Rapeseed Oil

Draft International Standard for Edible Coconut Oil

Draft International Standard for Edible Babassu Oil

Draft International Standard for Edible Palm Oil

Draft International Standard for Edible Palm Kernel Oil

Draft International Standard for Edible Grapeseed Oil

10. The Committee endorsed the following hygiene provisions which were common to the above standards: "It is recommended that the product covered by the provisions of this standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the Codex Alimentarius Commission", noting that at an appropriate time reference would be made to the revised "General Principles".

Codex Committee on Processed Meat and Poultry Products (ALINORM 79/16)

11. The Committee noted that the above Committee was preparing a document on Sampling and Inspection Procedures for Microbiological Examination of Processed Meat Products which had been revised in the light of observations made by the 2nd Joint FAO/WHO Expert Consultation on Microbiological Specifications for Food. At a later stage the document would also be harmonized with the Code of Hygienic Practice for Low Acid Canned Food and Products packed in Semi-rigid Containers and Flexible Pouches.

12. The Committee also noted that the Committee on Processed Meat and Poultry Products had decided to recommend to the Commission that a code of Hygienic Practice for Dry and Semi-dry sausage be elaborated which would cover G.M.P. as well as microbiological specifications.

Codex Committee on Foods for Special Dietary Uses (ALINORM 79/26)

13. The above Committee had noted that the Code of Hygienic Practice on Foods for Infants and Children was now at Step 8 and had decided to seek Government opinions as to whether any of its provisions and in particular the microbiological specifications should be made mandatory in the standards for foods for infants and children.

Codex Committee on Fish and Fishery Products (ALINORM 79/18)

14. The Representative of FAO informed the Committee that the Codex Committee on Fish and Fishery Products had agreed that a working party should consider microbiological specifications for cooked shrimps and prawns peeled and ready-to-eat prior to the next session of that Committee.

Codex Committee on Food Additives (ALINORM 79/12)

15. At its 12th Session the above Committee had examined a Draft General Standard for Irradiated Foods and a Draft Code of Practice for the Operation of Radioactive Facilities used for the treatment of foods in the light of recommendations made to it by an ad hoc working group appointed by the Committee on Food Additives which had met prior to the session. There had been a general discussion in which some delegations expressed the view that the standard required further consideration by Governments because work on the acceptability of the irradiation process was still in progress.

16. The question had also been raised as to whether the standard should be sent to the Committee on Food Hygiene for endorsement. After some discussion, it had been decided that the standard should be sent both to this Committee and to the Codex Committee on Food Labelling for examination.

17. After making certain changes recommended by the Working Group, the Codex Committee on Food Additives had decided to advance the above Draft General Standard and Draft Code to Step 8 of the procedure.

18. The Delegation of the United Kingdom whilst not wishing to oppose in principle the use of irradiation repeated the concern it had expressed during the discussion at the Codex Committee on Food Additives that in its opinion the Draft General Standard had not been sufficiently examined and that the present draft would benefit from further consideration so as to clarify a number of issues. It pointed out that it had been decided that the dose ranges included in the original text should be replaced by maximum permissible dose of irradiation and that as a consequence certain provisions in the Standard were no longer relevant.

19. It also informed the Committee that work in progress in Karlsruhe was intended to result in presentation of data with a view to the Committee recommending a general toxicological clearance of irradiation to the next meeting of the Joint Expert Committee on Food Irradiation to a maximum toxicological level and that consideration of irradiation on a product-by-product basis was therefore premature.

20. It was noted that the upper limits of irradiation set by the Joint Expert Committee on Food Irradiation (JECFI) which encompassed the eight specified foods in the Draft General Standard for Irradiated Foods at Step 8, as referred to the Food Hygiene Committee, was established to represent toxicological safety. The Food Hygiene Committee noted that this upper limit also represented sub-lethal, low-dose irradiation, which raised certain concerns related to microbiological aspects and public health considerations. Among these concerns involving sub-lethal doses of irradiation were increased radiation resistance and increased pathogenicity associated with genetic changes of surviving microorganisms, and destruction of vegetative cells only, preventing competitive growth of spoilage microorganisms prior to outgrowth of C. botulinum spores.

21. A working group consisting of delegates of the Netherlands (Chairman), Australia, Canada, Sweden, United Kingdom and United States and a representative of the FAO Secretariat was appointed to consider the Draft Standard in detail.

ENDORSEMENT OF HYGIENE PROVISIONS IN THE DRAFT GENERAL STANDARD FOR IRRADIATED FOODS AT STEP 8 AND DISCUSSION OF DRAFT CODE OF PRACTICE FOR THE OPERATION OF RADIATION FACILITIES USED FOR THE TREATMENT OF FOODS (APPENDICES X AND XI TO ALINORM 79/12)

22. The Committee received the report of an ad hoc working group which had been set up at the beginning of the Session to examine the provisions related to hygiene and microbiological aspects in the Draft General Standard for Irradiated Foods at Step 8.
23. The Committee agreed with the views expressed in paragraphs 3 and 4 of the Report of the Working Group.
24. The Committee accepted the recommendation of the Report of the Working Group to endorse the provisions related to hygiene and microbiological aspects as amended in paragraphs 6 and 7 of the report of the Group.
25. Several delegations expressed their concern with the proposed rewording of Section 3 "Safety of Irradiated Foods", since, in their opinion this Committee should confine its consideration to matters related to hygiene and microbiological aspects in accordance with its terms of reference. However, the Committee noted that Section 3 dealt also with nutritional and toxicological aspects which could not be omitted from the revised text. The Committee decided therefore to include in the Report of the Working Group a footnote to advise the Codex Committee on Food Additives of the reasons for proposing provisions 3(a) and 3(c) with regard to nutritional and toxicological aspects.
26. Some delegations were of the opinion that reference to national public health requirements in Section 3(c) would not further the aim of the Codex Alimentarius Commission, i.e., to achieve harmonization of national regulations, and suggested the deletion of 3(c). It was pointed out, however, that for nutritional and certain microbiological aspects national requirements would have to be taken into consideration.
The Committee agreed to retain Section 3(c) but to clarify the meaning by amending it to include a reference to "the country in which the product is sold".
27. The Committee modified the report of the Working Group to take into account the above discussions and adopted the amended text of the report.
28. It was noted that provision 6 of Annex I to the General Standard relating to cod and red fish was limited to only one species of each and further did not indicate the type of products covered (fillets, whole fish, etc.).
29. The Committee was informed that the Codex Committee on Food Additives would meet prior to the 13th Session of the Codex Alimentarius Commission and would consider the views expressed by this Committee and its decision to endorse the standard as amended along the lines proposed above. The Committee decided to offer no comment on the Draft Code of Practice at this time. (Secretariat note: The amended report of the Working Group will be issued separately from this Report) (Appendix VI).

GENERAL PRINCIPLES FOR THE ESTABLISHMENT AND APPLICATION OF MICROBIOLOGICAL CRITERIA FOR FOODS - MICROBIOLOGICAL CRITERIA FOR CHILLED AND FROZEN RAW MEATS AND POULTRY

30. The Committee had before it the report of an FAO/WHO Working Group on Microbiological Criteria for Foods which had met in Geneva from 20-26 February 1979 which was presented by the Chairman of the Working Group, Dr. J.H.B. Christian (Australia).

31. The Committee noted that the general problem of relating microbiological criteria to mandatory and advisory provisions in Codex documents had led the 2nd Joint FAO/WHO Expert Consultation on Microbiological Specifications for Foods (EC/Microbiol./77/Report 2) to propose General Principles for the Establishment of Microbiological Criteria for Foods which had been discussed by the Committee at its 14th and 15th Sessions. It had been decided that these criteria should be re-examined by the Working Group in the light of comments from Governments and other sources and a revised text prepared for consideration at the present Session of this Committee. In addition, the Working Group had been instructed by the Codex Alimentarius Commission to provide advice to the Committee on Microbiological Criteria for Raw Meat and Poultry Meat (see ALINORM 78/41 para 264). The Committee noted that the criteria as previously classified into standards, specifications and guidelines as applying respectively to (a) Codex Standards, (b) Codes of Practice and situations where neither (a) or (b) existed, had been changed. The Working Group thought that it was unclear as to whether a guideline as then defined was mandatory or not and that in any case a situation calling for such a guideline would rarely arise. It therefore redefined the terms "specifications" and "guidelines" so that the former applied at importation and the latter were to be used in monitoring hygiene during processing. In the case of guidelines, the Working Group considered that three-class sampling plans were unnecessary. Both criteria were advisory. It was also decided that standards should contain limits only for pathogenic microorganisms of public health significance in food.

32. In order to obtain an indication of the utility of microbiological criteria for raw foods the Working Group studied chilled and frozen raw meats. The Working Group had reached the conclusion that "in view of the great variety of raw meats in international trade covered by the Codex Code of Hygienic Practice for Fresh Meat, and also of the large differences in the technology and microbiology of similar meats in different regions, the establishment of microbiological criteria was impracticable. Furthermore, for reasons given above, it appeared that no benefit would result in respect of either public health or quality from the application of such criteria".

33. For chilled and frozen raw poultry, the Working Group concluded that "the extent of the contamination of live birds with pathogenic and other bacteria is such that adherence to the Draft Code of Hygienic Practice for Poultry Processing cannot effectively reduce the level of contamination on the final carcass nor be monitored effectively using indicator organisms. Hence, there appears to be no justification for establishment of a microbiological criterion for raw poultry. Furthermore, no benefit in respect of either public health or quality could be expected to result from the application of such a criterion."

34. The general conclusions of the Working Group were relating to the utility of criteria for chilled and frozen raw meat and poultry:

"(1) Raw meats and poultry are important sources of Salmonella, Clostridium perfringens and Staphylococcus aureus, all of which are commonly incriminated in outbreaks of foodborne diseases.

(2) Most foodborne diseases attributed to the consumption of meats and poultry are a consequence of inadequate cooking of the products and/or improper handling of the products after cooking.

(3) The prevalence of Salmonella in raw meats and poultry is more likely to reflect the incidence of Salmonella in the live animal prior to slaughter than adherence to a code of hygienic practice.

(4) The eradication of Salmonella from raw meats and poultry cannot be achieved by the imposition of microbiological criteria on the finished product, but only by the elimination of Salmonella from the live animal prior to slaughter or by an approved post-slaughter treatment to kill these microorganisms.

(5) If eradication of Salmonella from the live animal proves impracticable and if a large proportion of the world's raw meat and poultry production is not to be condemned by the imposition of severe microbiological criteria, human salmonellosis from these sources may need to be controlled by effective consumer education in the cooking and handling of raw meat and poultry products.

(6) Staphylococcus aureus and C. perfringens occur commonly, but in low numbers, on raw meats and poultry. Neither grows on chilled meats and poultry and they normally constitute a hazard only after substantial multiplication on cooked and mishandled products. Therefore microbiological criteria including these organisms seem not to be justified.

(7) Estimation of the number of indicator organisms in meats does not appear to reflect adherence to a code of hygienic practice, or to indicate presence or absence of pathogens. For certain poultry products estimates of levels of indicator organisms may reflect the standard of processing hygiene, but there are better methods for monitoring adherence to a code of hygienic practice. Hence criteria based on indicator organisms are not justified for raw meat and poultry.

(8) For some raw meats under particular situations Aerobic Colony Counts obtained from a large number of samples may serve to monitor hygienic practices and to predict potential shelf-life. However, variations in technology and microbiology between products and processes in different regions and even in different abattoirs make their use in criteria inadvisable. For poultry meat high Aerobic Colony Count values do not necessarily reflect insanitary practices because they may be caused by the contamination introduced with the live bird. Moreover, the Aerobic Colony Count as normally obtained cannot be used to predict shelf-life of chilled poultry meat. Criteria containing Aerobic Colony Count are, therefore, not applicable to raw poultry.

(9) The example of raw meat and poultry has shown that the establishment of microbiological criteria for raw foods in general cannot serve the purpose of protecting the health of the consumer when the main source of pathogenic organisms is the raw food itself and when processing does not include steps which will eliminate or substantially reduce numbers of these organisms".

35. The Delegation of Sweden expressed regret that the Working Group had been unable to come to more positive conclusions. It pointed out that Sweden had for many years exercised a control of Salmonella in

- (i) feeding stuffs
- (ii) live cattle
- (iii) fresh meat and meat products and pork at the import control
- (iv) different foodstuffs on the production and/or retail level
- (v) faecal samples from foodhandlers coming home from abroad and believed strongly that they had diminished the risk for Salmonella outbreaks in Sweden. The Delegation agreed with the conclusion of the Working Group that present methods in animal husbandry and meat processing could not eliminate the risks of Salmonella infections but thought that microbiological criteria for food should be instituted so as to inspire and enforce control programmes against Salmonella infection. The delegations of Belgium and Norway expressed similar views.

36. The Committee noted that the Working Group had considered microbiological criteria as applied to Codex Codes of Hygienic Practice, and in this context agreed with their conclusions concerning raw meat and poultry.

37. The Committee then examined the recommendations of the Working Group and the majority of the Committee accepted them with the following amendments:

6.1 General recommendations

- (1) That Annex II, "General Principles for the Establishment and Application of Microbiological Criteria for Foods", as reviewed, be considered by the Codex Committee on Food Hygiene for inclusion in the Procedural Manual of the Codex Alimentarius Commission.

The Committee agreed to amend the text in Annex II as follows:

2.1 Mandatory criterion

- 2.1.1 A microbiological standard is a criterion contained in a Codex Alimentarius Standard. Wherever possible it should contain limits only for pathogenic microorganisms of public health significance in food. In some cases limits for non-pathogenic microorganisms may be necessary and when these are included the provisions of paragraph 6.1 shall apply. Microbiological standards shall not be introduced de novo but shall be derived from microbiological end-product specifications which have accompanied Codes of Practices through the Codex Procedure and which have been extensively applied to the food.

2.2 Advisory criterion

An advisory criterion is one of two types contained in Codes of Practice.

- 2.2.1 A microbiological end-product specification serves as a guide to the official agency having jurisdiction and is intended to increase assurance that the provisions of hygienic significance in the Code have been met. It may include microorganisms which are not of direct public health significance.
- 2.2.2 A microbiological guideline is applied at the establishment at a specified point during or after processing to monitor hygiene. It is intended to guide the manufacturer and is not to be used for official control purposes. It may include microorganisms other than those regarded in 2.1.1 and 2.2.1.

The Committee made the following recommendations based on those of the Working Group:

- 6.1 (2) That microbiological criteria should not be included at this time in Codex Codes of Hygienic Practice for raw meats or poultry.
- (3) That WHO encourages the development of a standardized international system for the investigation and reporting of foodborne diseases. Such a system would provide data on which decisions could be made in respect of the need for microbiological criteria for foods.
- (4) That the Codex Committee on Food Hygiene considers the need for microbiological criteria for those raw foods other than raw meat and poultry for which Codex Codes of Hygienic Practice exist. The relevant foods include Fresh Fish, Frozen Fish, Shrimps and Prawns, Lobsters, Froglegs, Peanuts, Treenuts and the Quick Frozen Fruits and Vegetables for which Standards exist.
- (5) That WHO compares by cost/benefit analysis possible programmes which might lead to the reduction or elimination of Salmonella in foods and selects those programmes, if any, which could be economically justified.

The most appropriate programme may be different for different foods and for the same food in different countries.

6.2 Specific recommendations

- (1) That Member States undertake the development of acceptable methods for the destruction of Salmonella on meat and poultry carcasses.
- (2) That WHO and Member States introduce programmes to educate the consumer in correct procedures for the cooking and handling of foods of animal origin to minimize the number of outbreaks of foodborne diseases.

- (3) That data should be collected on the occurrence and types of Yersinia enterocolitica and Campylobacter fetus sub-species jejuni in raw meat and poultry and that epidemiological studies should be carried out to determine their relationship to public health.
- (4) That the Codex Committee on Processed Meat and Poultry Products considers the Working Group's conclusion that a microbiological criterion is not justified for mechanically separated meat and poultry.
- (5) That the Codex Committee on Processed Meat and Poultry Products considers the Working Group's suggestion that the Code of Hygienic Practice for Dry and Semi-Dry Sausages be finalized and applied before considering the need for microbiological criteria.
- (6) That rapid methods to be used in establishments be developed to determine the microbiological status of food and food processing equipment.
- (7) That quick and reliable methods should be developed for testing rapidly perishable foods so that the results of microbiological examination could be available before the foods are consumed.
- (8) That the undesirable biochemical changes brought about by microorganisms in raw meat and poultry be identified with a view to the development of non-microbiological methods for estimation of shelf-life.

38. The delegation of Belgium, Norway and Sweden referred to their views expressed earlier (see para. 35) and based on these views reserved their positions as to the recommendations concerning raw meat and poultry mentioned under 6.1.

39. The Committee expressed its appreciation to the members of the Working Group for their valuable work and to those governments and sponsoring agencies who had made the meeting of the Working Group possible.

40. It was agreed that the conclusions and recommendations of the Committee relating to the report of the Working Group should be brought to the attention of the Codex Committee on Processed Meat Products, the Codex Committee on Meat Hygiene, the Codex Alimentarius Commission and to any other interested bodies. The Committee took note of the fact that no conclusion had been reached by the Working Group as to the need for microbiological specifications for raw food generally.

Code of Practice-General Principle of Food Hygiene

Consideration of Annex I - Cleaning and Disinfection at Step 3

41. The Committee had before it the above Annex I as contained in Appendix II to ALINORM 79/13 and a working document prepared by an ad hoc Working Group (Canada, Netherlands, United Kingdom, United States) which had met prior to the Session. Working document GP 5.2.1 (ALINORM 79/13) contained proposed amendments based on government comments received from the Netherlands, Czechoslovakia, Finland, Federal Republic of Germany, Sweden, New Zealand, the United Kingdom and the United States.

42. The Chairman of the ad hoc Working Group, Dr. R.H.G. Charles of the United Kingdom, pointed out that the proposed amendments were mainly of an editorial nature in order to clarify the meaning of the provisions concerned.

43. The Committee fully discussed Section 1.4 - General Principles and decided to amend the section to make it clear that the duties of the person responsible for cleaning and disinfection procedures and for supervision should preferably be independent of production. The Committee noted that this was consistent with the decision taken on the relevant provisions at the previous Session. It was therefore also agreed to make a consequential amendment to Section 5.3 of the Revised Code of Practice - General Principles of Food Hygiene.

44. The Committee was informed of research which was being carried out in the Federal Republic of Germany on the temperature of water used for cleaning purposes. Tests had shown that water at 65°C was adequate for the proper removal of fats and proteins. However use of water at 80°C might under certain conditions result in coagulation of proteins which would bake on the surface of equipment and would thus enclose microorganisms. It was therefore proposed that it would be appropriate to include a water temperature of 65°C, where applicable, in Codex codes. The Committee was of the opinion that the above considerations did not apply to hot water used for disinfection which would always be preceded by a cleaning procedure and agreed not to make changes to the water temperature in Sections 3.2.1 and 3.2.1.1.

45. As regards Section 3.4 - Chemicals Suitable for Disinfection in Food Premises - it was agreed that the provision dealing with the requirements for rinsing after application of the disinfectants should be included in Section 3.4.1 as it was applicable to all sub-sections of 3.4.1 and consequential changes were made to these sub-sections.

46. It was proposed to substitute the term "water in compliance with Section 7.3 of the Code of Practice - General Principles of Food Hygiene" for the wording "clean potable water" or "potable water" in the text of the Code of Practice and in Annex I whenever applicable. The view was expressed that the provisions in 7.3 of the Code of Practice would safeguard the consumer and would provide a microbiologically safe water supply although it would permit the use of water having a high mineral content.

47. The Committee agreed with the above proposal, and the delegation of Australia undertook to review and amend the Code of Practice - General Principles of Food Hygiene in the light of the above decision.

48. The Committee agreed to include new sections on foam cleaning and the disinfectant activity of strong acids and alkalis. (Sections 2.2.2.5 and 3.4.1.5).

49. The Committee thanked the ad hoc Working Group for its valuable work.

Status of Annex I

50. The Committee agreed to advance Annex I to the Code of Practice - General Principles of Food Hygiene to Step 5 of the Procedure and to submit it to the next session of the Codex Alimentarius Commission. In view of the fact that major agreement had been reached on Annex I and of the nature of the amendments, the Committee agreed to recommend to the Commission that Steps 6 and 7 be omitted and that Annex I be adopted at Step 8. (Secretariat Note: The revised text of Annex I will be issued separately from this Report) (Appendix II).

Code of Hygienic Practice for Food and Beverage Vending Machines

51. The Working Group considered the need and the appropriateness of a Code of Practice to cover Vending Machines. To this end, the United States had provided copies of their current requirements for vending machines.

52. It was recognized that such machines did not play a role in the international movement of foods, but that the machines themselves were sold on an international basis. For this reason, it appeared that perhaps some standardization of machine design and construction was necessary.

53. It was recognized that such was not the purpose of the Food Hygiene Committee, and should, instead, be considered by some other international body, for example ISO. The variety of vending machines for differing specific uses, e.g., for hot soups, drinks both hot and cold, potato chips, sandwiches, etc., would require engineering applications. However, the Working Group was of the opinion that if such standardization was undertaken food hygienists should be represented to deal adequately with specific hygiene requirements.

54. A paper distributed by the Delegation of Japan also indicated that concern was primarily with the actual construction parameters for vending machines.

DRAFT CODE OF HYGIENIC PRACTICE FOR PEANUTS (GROUNDNUTS)

55. The Committee had before it ALINORM 79/13, Appendix III, containing the above draft code and CX/FH 78/8 containing Government comments from the Netherlands, Sweden and the United States. The delegation of the United States, author country of the code, acted as rapporteur.

56. The following were the main points discussed.

Water Activity

57. Some delegations were of the opinion that provisions for the measurement of water activity would present great difficulties in many establishments and that a simpler expression, e.g., of water content at a level of 8% should be used. Other delegations pointed out that this question had been discussed on several previous occasions and that the Committee had come to the conclusion that because the relationship between the water activity and the water content of peanuts was to some extent dependent on the varieties of peanuts, provision for a water activity value was essential to avoid the risk of mould growth.

58. To make this clear, it was agreed to include the following text in section 7.8.2.1, Control of Mould Growth.

"A single water activity value may correspond to different moisture levels in different varieties of peanuts. Producing countries should therefore determine for each of their own varieties of peanut the moisture level that corresponds to the safe water activity value given in the Code. These moisture levels can then be used as local standards for field control".

59. The text was also amended to assure that moisture did not condense on peanuts when changing storage temperature.

Handling Procedures

60. The Committee considered a proposal to provide for refrigerated transport or storage of peanuts with an unsafe water activity value. In view of the changes made above, it was decided not to add such provisions to sub-section 3.2.2 but to refer instead to the amended text of 7.8.2.1.

End Product Specifications

61. Several delegations referred to the limits for aflatoxins in peanuts which were in force in their countries and proposed that the end product specifications should include suggested limits for government consideration.

62. The Committee recognized, however, that the maximum allowable levels for aflatoxins varied considerably in different countries and examination of such levels was still in progress. Under these circumstances the Committee agreed not to delay the progress of the Code further by such an amendment for the end product specifications.

Status of the Code

63. The Committee noted the observations of the delegation of Nigeria that because of difficulties of communications, the developing producing countries in Africa had not had the opportunity to prepare comments in time for consideration by the Committee. The delegation of Nigeria requested the Committee to retain the Code on Step 6 of the procedure to allow for a further round of comments and undertook to collate and prepare comments at the time of the 4th session of the Codex Coordinating Committee for Africa which would meet in Dakar, Senegal in early September 1979. Any such comments would be forwarded to the Codex Alimentarius Commission for consideration at its 13th Session in December 1979.

64. The Committee decided to advance the Code to Step 8 of the Procedure noting that other countries still had the opportunity to discuss the Code during the thirteenth session of the Codex Alimentarius Commission in December 1979. (Secretariat Note: The amended Code will be issued separately from this Report). (Appendix III).

65. The Committee expressed its appreciation to the delegation of the United States for its valuable work in elaborating the Code.

CODE OF PRACTICE FOR ICE MIXES AND EDIBLE ICES

66. The Committee noted that at its previous session (ALINORM 79/13 paras 118-123) the above had been discussed but that a decision on whether a Code of Practice should be elaborated had been deferred until such time as the Geneva Working Group on Microbiological Specifications for food had further discussed microbiological criteria in Codex Standards and Codes of Practice.

67. The Committee noted that there was general agreement that international trade in Ice Mixes and Edible Ices was somewhat restricted and for this reason the application of microbiological criteria to, or the elaboration of a Code of Practice for such products had a low priority. It was decided not to proceed with the Code of Practice for Ice Mixes and Edible Ices at this time.

CODES OF PRACTICE FOR FISH AND FISHERY PRODUCTS

68. As requested by the Committee an ad hoc Working Group comprising at various times members of the delegations of the Federal Republic of Germany, Finland, New Zealand, Norway, Sweden, United Kingdom and the USA under the chairmanship of the representative from FAO reviewed the lists of substantive changes made to the draft codes of practice for lobsters, salted fish, smoked fish and minced fish by the Codex Committee on Fish and Fishery Products (CX/FH 79/9) in the light of government comments and further comments made by those present at the meeting. The working group concurred with the desire expressed by the Codex Committee on Fish and Fishery Products that the codes should stand on their own with as few cross references to different codes as possible and that similar sections within the codes should be harmonized.

Draft Code of Practice for Lobster, ALINORM 78/18A, Appendix XI, LIM. 5, at Step 7

69. The Working Group considered in detail the changes made to the Draft Code of Practice for Lobsters which were of a hygienic nature recognizing that many of the changes would be reflected in all the other Codes of Practice. The substantive changes proposed by the 16th Session of the Codex Committee on Fish and Fishery Products (CX/FH 79/9) were generally accepted with a few amendments of a non-substantive nature. The Working Group also felt that Annex I to the Revised Code of Practice - General Principles of Food Hygiene (Cleaning and Disinfection) as revised by the Committee should be attached to the codes as a new appendix. There was some discussion over paragraph 5.1.3.4. regarding the minimum temperature of a hot water supply for a plant. It was felt that the temperature of 65°C would not be in conflict with the new appendix as the appendix contains several options for disinfection and in general hot water disinfection is not used in fish processing.

70. The Committee concurred with the Working Group's recommendation that the Draft Code of Practice for Lobsters as amended be sent to the Codex Alimentarius Commission for adoption at Step 8.

Draft Code of Practice for Salted Fish, ALINORM 78/18A, Appendix X, LIM. 4, at Step 7

71. The Working Group concurred with the substantive changes proposed by the 16th Session of the Codex Committee on Fish and Fishery Products (CX/FH 79/9) and recommended the Draft Code of Practice for Salted Fish be sent to the Codex Alimentarius Commission for adoption at Step 8 to which this Committee agreed.

Proposed Draft Code of Practice for Minced Fish (CX/FFP 79/4) at Step 5

72. The Working Group concurred with the substantive changes proposed by the 16th Session of the Codex Committee on Fish and Fishery Products (CX/FH 79/4) and made a few minor editorial amendments.

73. During the discussion the possibility of direct sale to the consumer was mentioned. The delegation of the United States noted that parasites may occur in fish and for the purposes of killing parasites most regulations defined freezing as -20°C , not -18°C , as indicated under "freezing process" in this document.

74. The Committee agreed with the recommendation that the code be sent to the Codex Alimentarius Commission for adoption at Step 5.

Draft Code of Practice for Smoked Fish, CX/FFP 77/6 at Step 7

75. The Working Group concurred with the substantive changes proposed by the 16th Session of the Codex Committee on Fish and Fishery Products (CX/FH 79/9) and made a few minor editorial changes. It noted particularly that references to "food grade salt" be changed to "salt of an appropriate quality and otherwise suitable for the purpose" as food grade salt may well be inferior for salting fish. The Working Group recommended that the Draft Code of Practice for Smoked Fish as amended be sent to the Codex Alimentarius Commission for adoption at Step 8 and this was agreed to by the Committee.

CODE OF PRACTICE FOR DRIED FOODS AND DRIED FOOD INGREDIENTS

76. The Committee noted the report of the ad hoc Working Group which consisted of delegates from the following countries: Australia, Canada, Federal Republic of Germany, Netherlands, United Kingdom, United States. Dr. R.H.G. Charles, of the United Kingdom acted as Chairman and rapporteur of the Working Group.

77. The Working Group considered a paper prepared by Dr. K. Buchli of the Netherlands.

78. The Working Group thought that no general code of practice for dried foods was practicable in view of the diversity of these products. It noted that codes of practice already existed, or were being developed for a number of dried foods such as dried milk.

79. The Working Group did not wish to recommend codes of practice for any other groups of dried food but suggested that the Committee on Food Hygiene should consider any requests from the Commodity Committees for codes of practice as they arose.

80. The Working Group did not think there was any indication for the development of microbiological criteria or codes of practice for dry soups and bouillons.

81. The Committee agreed with the conclusions of the Working Group and decided to take no further action at this time.

PROPOSED DRAFT CODE OF HYGIENIC PRACTICE FOR FROGLEGS AND REPLIES TO THE QUESTIONNAIRE ON SALMONELLA CONTAMINATION

82. A Working Group, comprising members of the delegations of Australia, Canada, the Netherlands, the United Kingdom and the United States (Chairman), and the representative of FAO (Rapporteur) considered the Code of Hygienic Practice for Froglegs in the light of Government comments and comments made by the delegates. It made some changes to the text but had great difficulty with Section 7.4 and 7.5, processing and packaging. It noted that the Code at present follows procedures involving the use of high concentrations of chemicals for controlling pathogens on the product and it disagreed with this approach in principle. Further, the Code introduced several

methods to process froglegs. It thought the document would be clearer if it contained well defined methods for processing froglegs which accomplished the hygienic requirements of the Code. It suggested that Section 7.4 and 7.5 be rewritten by the delegation of the Netherlands in consultation with FAO, and that this new Section be sent for Government comments and be again considered by this Committee at its next Session.

83. The Working Group considered the problem of salmonella in froglegs and recognizing the fact that a code of hygienic practice for froglegs would not eliminate all salmonella from processed froglegs, recommended that microbiological criteria should not be included at this time in the Codex Code of Hygienic Practice for Froglegs.

84. The delegation from the U.K. proposed that FAO study humane and hygienic methods of slaughter and include the best methods in the Code of Practice. The delegate from the Netherlands further suggested FAO should study the ecological effects of overharvesting of frogs especially in relation to the insect population which affected directly food hygiene and might affect indirectly public health through the increased use of pesticides. These views were strongly supported by other delegations.

Status of the Code

85. The Committee concurred with the Working Group's recommendation that the code be retained at Step 3. (Secretariat Note: The above Code will be issued separately from this Report) (Appendix VII).

Draft Code of Practice for Dried Milk

86. The Committee had before it the report of an ad hoc Working Group comprising representatives of Australia, Finland, Federal Republic of Germany, Netherlands, New Zealand, Switzerland, United Kingdom, United States and the International Dairy Federation. Mr. L.J. Erwin (Australia) acted as Chairman and Dr. R.H.G. Charles (U.K.) as rapporteur.

87. In reviewing the draft code contained in Appendix VI of CX 5/70-19th Session (Milk Report), the Working Group made a number of changes. (Secretariat Note: The revised Code will be issued separately from this Report) (Appendix V).

88. The Working Group agreed that the following matters should be brought to the attention of the Committee:

- (i) Under Section 2.9, the definition for pasteurization, the delegation of the United States, proposed that a temperature of 75°C in (i) and (ii) was necessary to control Q fever. The delegation of the United Kingdom felt that in order to ensure adequate heat treatment in milk with a higher fat content or added sweeteners, the time and temperature in (ii) should be changed to either "72°C for 25 seconds" or "75°C for 15 seconds". The Working Group noted these two proposals but agreed not to make any changes to the temperatures given in the draft code.
- (ii) In Section 3 of Annex 1, an alcohol lamp is listed as part of the equipment for sampling. It was pointed out that the use of naked flames in some areas of dried milk product establishments could cause explosions.
- (iii) In regard to the Sampling Plans and Microbiological Limits in Annex 1, there could be difficulty in interpreting "m" and "M" due to uncertainty as to whether "lot" used in Section 2 referred to manufacturing lot or a trading lot for commercial sale.

It was noted that a definition for a manufacturing lot was included as a footnote.

- (iv) The Sampling Plans and Microbiological Limits in Section 1 of Annex 1 might need to be reviewed in the light of the definitions of "microbiological end product specifications" and "guidelines" and the interpretation of the results detailed in the General Principles for the Establishment of Microbiological Criteria for Foods in Annex II of the Report of the FAO/WHO Working Group on Microbiological Criteria for Foods, Geneva 1979. In this regard, special reference was made to the values allocated to "c".

89. In discussing the above report, it was pointed out that time/temperature pasteurization requirements appeared to be identical in Sub-section 2.9 (i) and (ii) in spite of the different nature of the products. The Committee was informed that the Secretariat of the Milk Committee had already invited Governments to comment on pasteurization procedures and agreed that their attention should also be drawn to the comments of the Working Group under 3.1.

90. The question was raised as to whether elaboration of a Code of Practice for Raw Milk and Heat Treated Milk Products should be considered so that the raw materials used in the production of dried milk were adequately covered.

91. The Committee was informed that the International Dairy Federation (IDF) has prepared a General Code of Hygienic Practice for the Dairy Industry which would be ready for acceptance for the September meeting of IDF. It was agreed that the elaboration of the suggested Code of Hygienic Practice was a matter for decision by the Milk Committee when it met in 1981. (See para. 90).

92. The Committee endorsed the report of the Working Group. It agreed that no changes should be made to the Sampling Plans and Microbiological Limits in Annex I of the Code of Hygienic Practice for Dried Milk and decided that para. 87 (ii), (iii) and (iv) should be considered by a future meeting of a Working Group on Microbiological Criteria for Food.

Status of the Code

93. The Committee agreed to advance the Draft Code of Hygienic Practice for Dried Milk to Step 5 of the Procedure. (See Appendix V).

CONSIDERATION OF DRAFT CODE OF PRACTICE FOR LOW-ACID AND ACIDIFIED LOW-ACID CANNED FOODS AT STEP 7

94. An ad hoc Working Group considered the above draft code (Appendix IV to ALINORM 79/13) prior to the Session in the light of Government comments. The Working Group prepared a revised version of the code which was distributed to the Committee as Conference Room Document together with a list of additional editorial amendments.

AMENDMENTS TO THE CODE OF PRACTICE

95. The Chairman of the Working Group Mr. I.E. Erdman, introduced the amendments elaborated by the Working Group and the Committee considered the revised Code section by section.

96. The question was raised as to whether there was a need to mention Annex II dealing with analytical methodology for pH measurement in the Scope Section. The Committee decided not to change the Scope Section as Annex I was referred to in the appropriate sections of the Code.

97. The delegation of France pointed out that the French versions of Sections 2.1 and 2.6 did not coincide with the English versions, in particular with regard to the term "soil" in section 2.6. The Committee discussed section 7.6.8.1 on cooling water quality and agreed that the requirement concerning chlorination was important to assure a safe water supply; therefore, it was agreed to delete the term "preferably". With regard to the post-process contamination the Committee was informed that handling of wet cans should be done with caution, independently of whether the cans had been cooled down or not. However, handling of warm cans provided a higher risk and the Committee agreed to amend section 7.7 to include the terms "warm and/or wet".

98. The delegation of the United States reiterated its view that Annex I should not apply to fermented foods as public health data from a large number of countries did not indicate health hazards from commercially fermented foods. The Working Group, however, had not proposed any change in this respect of Annex 1.

Status of the Code

99. The Chairman of the Working Group informed the Committee that the majority of the members of the Working Group had agreed to advance the Code to Step 8, whereas a minority group would prefer to have another round of comments. The delegation of the United Kingdom asked to place it on record that the representative of the United Kingdom had supported the view that the Code should proceed to Step 8. The Committee decided to advance the Draft Code of Practice for Low Acid and Acidified Low-Acid Canned Foods to Step 8 of the Procedure. (Secretariat Note: The above Code of Practice will be issued separately from this report). (Appendix IV).

Refrigerated Low Acid Foods

100. The Working Group had also considered the question of refrigerated low acid foods and the Chairman of the Working Group informed the Committee of the following:

101. The United States had been asked to prepare a draft position paper on whether these foods might be included in a Code of Practice appended to the Low-Acid Canned Food Code, whether a separate code should be prepared for them, or whether they might best be dealt with in some other fashion.

102. The United States had concluded that the variety of products to be covered would not make it practical to prepare an appropriate annex for the Low-Acid Canned Food Code. For similar reasons it would not be possible to draft a separate code for them.

103. The delegation of the United States felt that the Low-Acid Canned Food Code covered all the products of concern. They further prepared a draft of a few specific alterations (additions) to the document to obtain a more defined control over these products.

104. The Working Group had considered this position paper and agreed that refrigerated low acid foods were covered under the Code of Practice - General Principles of Food Hygiene.

105. The Working Group had further noted that the specific additions would require the Code of Practice - General Principles of Food Hygiene to be returned from its present Step 8 in the Codex procedure. Since there is an urgent need for the Code of Practice to be completed as soon as possible, the Working Group had felt that this should not be done. In addition, the Working Group had felt the additional details provided in the addition proposed by the United States to the Code of Practice - General Principles of Food Hygiene Code should more properly appear in specific product codes. To this end, the Working Group had recommended that the position paper prepared by the United States be attached as an appendix to the report of this meeting for possible future reference.

106. Several delegations expressed concern with the above proposal of the Working Group to attach the position paper to the report as they felt they could not agree with a number of points of the document. It was proposed that the document should be retained by the Secretariat for further reference, and that a working paper should be prepared for the next session of the Committee.

107. The Committee further discussed which types of refrigerated low acid food should be covered by the code, as it would be impossible to include all types of refrigerated low acid foods in one code.

108. The Committee agreed that the establishment of a code of practice was most important for pasteurized low-acid food products in hermetically sealed containers that required refrigeration and decided to limit the scope to such products.

109. The Committee further agreed that the first draft of the new code should be drawn up by the Working Group which had elaborated the Code of Practice for Low-Acid and Acidified Low-Acid Canned Foods and that work would be coordinated by the delegation of Canada. The delegations of Norway and the Federal Republic of Germany offered to participate in the Working Group.

Microbiological Criteria for Natural Mineral Waters

110. The Committee had appointed an ad hoc Working Group to consider microbiological criteria contained in the Hygiene Section of the Recommended European Regional Standard for Natural Mineral Water (see CX/FH 79/4 and CX/FH 79/4 Add. 1).

111. The Working Group consisted of representatives from the following delegations: Canada (Rapporteur), Federal Republic of Germany, France, Switzerland, United Kingdom, United States and representatives of WHO and FAO. The report of the Working Group was presented by the Chairman, Dr. R.H.G. Charles (United Kingdom).

112. The Working Group had noted that the hygiene section of the present standard contains microbiological criteria and expressed regret that no code of practice existed at present on which a standard might be based.

113. In addition, no sampling scheme had been developed and while general agreement was reached relative to criteria proposed in 5.2.2 (document CX/FH 79/4, Add. 1, June 1979) that such criteria should become mandatory, no sampling scheme was provided. It was noted that development of a sampling scheme was currently in progress. The Working Group expressed some doubt that all the criteria proposed in 5.2.2 were necessary, and wished to draw this to the attention of the Coordinating Committee for Europe.

114. The criteria proposed in 5.2.3 and 5.2.4 would be useful as a guideline to determine faulty practices during bottling, and should only be considered as a guideline since they would be of no value in international movement of mineral water because they required access to the bottling plant. Similarly, 5.2.5 would have no significance at the international level.

115. Only two methods for the criteria proposed in 5.2.2 were under development at the international level (Aerobic Colony Count and coliform). The remaining criteria required internationally accepted methods, and ISO should be asked to consider such methods.

116. The Working Group noted the lack of a Code of Hygienic Practice. The majority felt that rather than developing a code specifically for mineral waters, such a code should more properly be developed for all bottled drinks with an annex for mineral waters.

117. However, some members of the Working Group felt that a specific code for Natural Mineral Waters was required, giving emphasis to proposals a, b and f in Section 1 of CX/FH 79/4.

118. The Committee approved the principles of the hygiene section of the standard subject to the following comments:

- | | |
|---------------|--|
| Section 5.2.2 | Consideration should be given to reducing the number of tests required and evidence should be presented to justify the necessity for these requirements. |
| Section 5.2.4 | Should be advisory and not mandatory. |
| Section 5.2.5 | Should be deleted. |

This Committee required full information on sampling plans and methods of microbiological analysis and the information requested regarding 5.2.2, before the standard could be endorsed. The Committee agreed to the elaboration of a Code of Hygienic Practice for the Collecting, Processing and Marketing of Natural Mineral Waters as requested by the Coordinating Committee for Europe in document CX/FH 79/4 Add. 1.

119. The delegation of Switzerland agreed to prepare a first draft of such a code of hygienic practice for consideration by the Committee at its next session.

Other Business

Working Group on Microbiological Specifications

120. The Committee recalled that it had considered earlier during the Session that further expert advice was required on microbiological criteria for dried milk and for natural mineral water. The Committee thought that this could best be done by convening a Working Group to consider specifically the microbiological requirements for the above products.

121. The Committee agreed to recommend to the Codex Alimentarius Commission the approval of the establishment of the above Working Group which should meet prior to the next session of this Committee. It was recommended that the procedures for establishing the Working Group be similar to those used in the establishment of the Working Group which convened in Geneva, in February 1979. (See para. 264 of ALINORM 78/41).

Nature of Codes of Practice

122. The view was expressed that it might be useful for the understanding of the nature of Codex codes of practice to include a preamble in such codes to indicate that they were advisory only and did not intend to exclude other means of achieving the same hygienic requirements. Some delegations held the opinion that the nature and meaning of Codex codes of practice were clearly defined in the Procedural Manual of the Codex Alimentarius Commission (page 19). It was noted that the Codex Alimentarius Commission had given attention to the matter.

123. The Committee agreed that this was a general issue which could not be resolved by this Committee. Therefore it was further agreed that a background paper should be prepared for consideration by the Executive Committee taking also into account information contained in the Procedural Manual and the reports of previous sessions of the Commission.

Hygienic Conditions in Airplanes

124. The delegation of the Netherlands drew the attention of the Committee to the need for advice on water disposal and other hygienic aspects of airplanes. It was recognized that the recommendations made by WHO and IATA were not comparable to Codex documents. It was pointed out however that this matter should be considered by some other international body, for example ISO. However the Committee was of the opinion if such standardization was undertaken, food hygienists should be represented to deal adequately with specific hygiene requirements. The representative of WHO informed the Committee that the guide to Aviation Hygiene had been revised and contained an extensive section dealing with foods.

125. The Committee agreed not to take any action on the matter.

Date and Place of Next Session

126. The Committee noted that the 17th Session would take place in Washington, D.C., in November 1980 at a date to be agreed between the Government of the United States and the Codex Secretariat.

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