

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

JOINT OFFICE: Via delle Terme di Caracalla 00100 ROME: Tel. 57971 Telex: 610181
FAO I. Cables Foodagri

ALINORM 83/16

CODEX ALIMENTARIUS COMMISSION

Fifteenth Session 1983

Rome, 4-15 July 1983

REPORT OF THE TWELFTH SESSION OF THE CODEX COMMITTEE ON PROCESSED MEAT AND POULTRY PRODUCTS

Copenhagen, 4-8 October 1982

INTRODUCTION

1. The Codex Committee on Processed Meat and Poultry Products held its Twelfth Session in Copenhagen from 4-8 October 1982. Mrs. Anne Brincker, Assistant Director (legislation), Danish Meat Products Laboratory, acted as chairman. The session was attended by representatives and observers from the following countries:

Argentina	Egypt, Arab, Rep. of	Netherlands	Sweden
Australia	Finland	New Zealand	Switzerland
Bahrain	France	Norway	Thailand
Belgium	Germany, Fed. Rep. of	Paraguay	Tunis
Botswana	Greece	Poland	United Kingdom
Brazil	Hungary	Portugal	United States of America
Canada	Ireland	South Korea	Yugoslavia.
Czechoslovakia	Italy	South Africa	
Denmark	Mexico	Spain	

The following international organizations were also represented:

- Centre de Liaison des Industries Transformatrices de Viandes de la Communauté Européenne (CLITRAVI)
- European Economic Community (EEC)
- European Vegetable Protein Federation (EUVPRO)
- International Commission on Microbiological Specifications for Foods (ICMSF)
- International Institute of Refrigeration (IIR)
- International Organization of Consumers Unions (IOCU)
- International Organization for Standardization (ISO)

The list of participants including officers from the Secretariat is set out as Appendix I to this report.

OPENING OF SESSION (Agenda Item 1)

2. The Committee was welcomed by Mr. J. Madelung, Head of the Division of the Danish Ministry of Agriculture and also Chairman of the Danish Rational Codex Committee. During his brief speech he referred to the special regard in which Denmark holds the Codex Committee on Processed Meat and Poultry Products and informed the Committee of the difficulties Denmark would face in organizing any future sessions of the Codex Committee outside the country. Against this background he noted with satisfaction that the number of participants from developing countries had increased and expressed the hope that this trend would continue. He conveyed to the Committee the greetings from the Minister of Agriculture, Mr. Niels Anker Eofoed.

3. The Chairman welcomed the delegates and in particular representatives from nine countries and one international organization, who were participating for the first time. She introduced to the Committee the members of the FAO/WHO Codex Secretariat and the Danish Secretariat

ADOPTION OF PROVISIONAL AGENDA (Agenda Item 2)

4. The Committee adopted the Provisional Agenda.

APPOINTMENT OF RAPPORTEURS (Agenda Item 3)

5. The Committee appointed Mr. I.M.V. Adams (U.K.) and Mr. M. Gambon (France) as Rapporteurs of the Session.

REVIEW OF MATTERS RELEVANT TO THE CODEX COMMITTEE ON PROCESSED MEAT AND POULTRY PRODUCTS (Agenda Item 4)

6. The Committee had before it document CX/PMPP 82/2 containing matters of interest to the Committee arising from i) the 14th Session of the Codex Alimentarius Commission and ii) Reports of other Codex Committees.

7. The Committee noted that a considerable number of matters of interest reported would be discussed later under other agenda items and agreed to defer discussion of them until then.

Matters arising from the 14th session of the Codex Alimentarius Commission (ALINORM 81/39)

8. Nutrition and the Work of the Commission

The Committee noted that the Commission at its 14th Session had considered a paper (ALINORM 81/7) which reviewed in a comprehensive way the nutritional aspects in the activities of the Codex Alimentarius Commission and had concluded that these aspects had not been neglected in the work of the subsidiary bodies and the Commission itself. Therefore, no radical changes were necessary. The Commission agreed to an extension of the terms of reference of the Codex Committee on Foods for Special Dietary Uses (CCFSDU), which would permit that Committee to examine provisions for nutritional aspects in draft Codex Standards. This would not be an automatic endorsement function and it was thought that guidelines on nutritional aspects for Codex Committees might facilitate decisions by these Committees as to the areas where nutritional aspects should be taken into account. Furthermore, CCFSDU could decide to elaborate general texts (guidelines etc.) on other nutritional matters, e.g. fortification. CCFSDU has been requested to examine the amended terms of reference to consider methods of operating within these terms of reference in order to enable the 15th Session of the Commission to finalize the proposed amendments (see Paras 115-121, ALINORM 81/39).

Revision of the Procedure for the Elaboration of Worldwide and Regional Codex Standards

9. The 7th Session of the Committee on General Principles had given consideration to streamlining the Procedure for the Elaboration of Codex Standards and introduced a number of major amendments; including the following:

- (a) Steps 1,2 and 3 have been combined, whereby subsidiary bodies may agree on the elaboration of a standard and have the first draft sent to Governments at Step 3, pending the subsequent approval by the Commission. This should eliminate undue delays arising from the timing of sessions.
- (b) At Step 8, the Commission adopts the standard as a Codex standard which is published in the Codex Alimentarius. The Procedure previously outlined as Steps 9-11 and 9-12 respectively becomes a subsequent procedure concerning Publication and Acceptance of Codex standards, i.e. it has been taken outside the Procedure. The Codex Alimentarius consists of the Codex standards and related texts and a tabulation of notifications.

The Committee was informed that the Commission (ALINORM 81/39, paras 159-165) had agreed with the above proposed amendments.

10. The Commission, at its 14th Session confirmed the decision of the Committee to suspend work on the Code of Hygienic Practice for Dry and Semi-Dry Sausages until such time as substantial evidence proved that the Code is important from the point of view of the Codex Alimentarius Commission (ALINORM 81/39, paras 437-439).

11. Whilst agreeing with the proposal of the Committee on Processed Meat and Poultry Products to elaborate draft guidelines for use of vegetable protein, the Commission proposed that the Committee also examine the question of whether there is a need for developing similar guidelines for use of other protein products such as milk powder, casein and caseinates in meat and poultry products (ALINORM 81/39, para 444).

Codex Committee on Food Additives. 15th Session (ALINORM 83/12)

12. The Committee was informed that the CCFA had considered draft guidelines for the establishment of food additive provisions in Codex standards and had decided to consider a revised version of the guidelines in the light of government comments at its next session. These guidelines were intended to be complementary to the General Principles for the Use of Food Additives and would contain Information on the sort of data required to ascertain the technological need for food additives. (Paras 38-44 of ALINORM 83/12).

13. The CCFA had considered a paper prepared by the USA on the interpretation of the Codex maximum levels for contaminants in relation to lots or consignments and on the question of elaboration of sampling procedures for verifying compliance with maximum levels for contaminants in food, The CCFA would reconsider the matter at its next session in the light of comments from governments and concerned Commodity Committees (see paras 184-187 of ALINORM 83/12).

14. The Committee (CCPMPP) noted that it had not dealt with the question of contaminants for the reason that it had considered it to be a matter which should largely

be regulated in fresh meat and not in processed meat products. It had also not made any provisions for contaminants in the standards it had so far elaborated.

15. The delegation of Australia, however, raised the need for some consideration to be given for certain contaminants like tin and lead in canned meat and poultry products. The Committee agreed to discuss this under future work (Agenda item 12).

16. The CCFA advanced the amended Codex General Standard and Code for Irradiated Foods to Step 5 and agreed to ask for comments from governments at Step 6 according to the Codex accelerated procedure. The Code contains information on the technological conditions for the Irradiation of Chicken and also Spices (see para 72, ALINORM 83/12).

Codex Committee on Food Hygiene, 17th and 18th Session (ALINORM 81/13 and ALINORM 83/13)

17. The Codex Committee on Food Hygiene decided not to proceed with the elaboration of a Code of Hygienic Practice for pasteurized foods in hermetically sealed containers (ALINORM 81/13, Paras 161-169) but, however, undertook to prepare a Code of Hygienic Practice for the Salvaging of Damaged Canned Foods (ALINORM 83/13, Paras 142-144).

Codex Committee on Food Labelling, 15th Session (ALINORM 81/22)

18. The Codex Committee on Food Labelling at its 15th session adopted revised guidelines on date marking for use in Codex Committees (ALINORM 81/22, Appendix 1?) and the Commission at its 14th session adopted the revised guidelines (ALINORM 81/39, para 195). All the Codex Commodity Committees were asked to make provisions for date marking based on the revised guidelines in all the standards so far elaborated by them.

19. The Committee (CCPMPP) recalled that such an exercise was carried out at an earlier (10th) session (ALINORM 79/16, paras 68-80). It reiterated the views it had expressed at its earlier session and asked the Secretariat to bring this to the attention of the Food Labelling Committee. The Committee decided to leave it for a future session to consider wording that should go into the provision for date marking in the standards so far elaborated.

Codex Committee on Methods of Analysis and Sampling, 12th Session (ALINORM 81/23)

20. The Codex Committee on Methods of Analysis and Sampling proposed that all Commodity Committees should report back to it on the necessary measures taken to update all the analytical methods adopted in the standards elaborated by them.

21. The Committee (CCPMPP) noted that it had not so far taken any such measures and postponed discussion on the subject to Agenda item 12 - Future work.

Other Matters

Principle for the Carry-over of Food Additives

22. At its 13th session the Commission had adopted a standard wording to be used when making provisions on Codex Commodity Standards for additives carried over from raw materials. It would hence be necessary for the Committee to reconsider in respect of the carry-over principle, standards elaborated by them and so far issued to Governments for acceptance.

23. The Committee noted that the exercise would mean a case by case study and expression of an opinion whether the carry-over principle applied or did not apply. The Committee considered that this would be a difficult exercise to carry out without proper background documentation, but agreed to do so at a future session when it would undertake revision of all the existing standards elaborated by it.

Publication of Codex Standards for Processed Meat and Poultry Products and Soups and Broths

24. All Codex standards for Processed Meat and Poultry Products and Scraps and Broths have been published as Volume IV of the Codex Alimentarius, For this purpose the amendments made at previous sessions have already been incorporated. The publication which is a non-priced one should become available for distribution before the end of 1982. The use of the loose leaf system is intended to facilitate Governments in noting amendments.

25. The WHO representative informed the Committee of the WHO current activities which were of interest to their work. The Veterinary Public Health Department of MO jointly with FAO continued its activities oriented towards the needs of developing countries. The joint WHO/FAO mission visited Rwanda and Kenya and were informed of the existing local slaughtering techniques and meat hygiene in rural conditions. A series of discussions took place with both the national veterinary and medical authorities in these countries and, in particular, were concerned with the preparation of guidelines for the design and construction of simple slaughter facilities in austere conditions and on slaughter, meat handling and meat inspection in these conditions. The first draft of this guide had already been prepared and sent to the WHO regional offices, and to the experts in this field, for comments.

26. Two practical guidelines had been issued by the Veterinary Public Health Department of WHO on Echinococcosis/Hydatidosis Surveillance, Prevention and Control and on Human Health Risks Associated with Animals in Urban Areas and many others are under preparation.

27. The WHO Guide on Paralytic Shellfish Poisoning (PSP) had been prepared and passed for publication. This guide was directed towards the prevention of outbreaks resulting from PSP and contains data on the public health significance of this poisoning, chemical and physical properties of the toxins and principles of the organization of surveillance, prevention and control.

28. The Veterinary Public Health Department which organized the WHO Food Virology Programme is preparing a manual on food virology which summarizes this successful programme and gives information in a form coherent enough to make a significant contribution to the protection of human health. All food vehicles, including drinking water, and all viruses known to be transmitted through foods are considered in this manual.

29. A short consultation was convened in Geneva (1-4 June 1982) to elaborate the first draft of the Guidelines on Salmonellosis (Prevention and Control). In these guidelines special attention would be paid to prevention of Salmonella contamination in connection with slaughter, processing of meat and meat products. The Recommended International Codes of Hygienic Practice for Fresh Meat (CAC/RCP 11-1976), for Ante-mortem and Post-mortem Inspection of Slaughter Animals (CAC/RCP 12-1976), for Processed Meat Products (CAC/RCP 13-1976) and for Poultry Processing (CAC/RCP 14-1976) served as background documents for elaboration of the main principles on

prevention and control of salmonellosis during slaughtering and processing of meat and poultry.

30. Many representatives from developing countries of the Mediterranean region, medical and veterinary authorities attended the WHO Expert Consultation on Intersectoral Coordination in Food Hygiene Programmes held in Lisbon from 16-18 November 1981. This meeting, organized by WHO Mediterranean Zoonoses Control Centre, stressed the great importance of the Joint FAO/WHO Food Standards Programme, the purposes of which include protection of the health of consumers and ensuring fair practice in trade.

31 In accordance with the decision of the 11th session of the Codex Committee on Processed Meat and Poultry Products, an informal MHO consultation on the revision of the Recommended International Code of Hygienic Practice for Processed Meat Products was held in Geneva from 17-18 Maxell 1981. The draft of the revised code in which the hazard analysis critical control points (HACCP) concept was inserted had been translated into French and Spanish and sent for Government comments (see further paras. 99-154).

32. The report of the Working Group on Microbiological Specifications for Dried Milk and Natural Mineral Water (Washington, 1980) had been issued and is available at WHO (Geneva) in English, French and Spanish. This Working Group finalized the document on the General Principles for the Establishment and Application of Microbiological Criteria for Foods (ALINORM 81/13, Appendix II). It was decided that the text of this document will be included in the future edition of the Procedural Manual of the Commission. Taking into account the urgent need for this document, the 27th Session of the Codex Committee on Food Hygiene (Washington, 1980) recommended that it be prepared separately and distributed as soon as possible to the countries.

33. The WHO European surveillance programme for control of foodborne infections and intoxications in Europe is now in action. The FAO/WHO Collaborating Centre which successfully implements this programme had already published the first report of the WHO European Surveillance System which is available at the FAO/WHO Collaborating Centre for Research and Training in Food Hygiene and Zoonoses, Institute for Veterinary medicine, (Robert von Ostertag Institute), Thielallee 88/92, Berlin (West).

34. WHO continued its training activities in the field of food hygiene. At the beginning of this year the second informal consultation on postgraduate training in food microbiology took place in Zeist from 12-13 January 1982. At the present time the Organization coordinates four courses on this subject at the University of Surrey, UK; Pasteur Institute in Lille, France; FAO/WMO Collaborating Centre for Research and Training in Food Hygiene and Zoonoses (Berlin (West)); and the Food Technological Institute in Zeist, The Netherlands.

35. The Veterinary Public Health Department of WHO actively coordinated and participated at the training courses on zoonoses for students from developing countries in Moscow, USSR. In particular a lecture was given on prevention and control of foodborne diseases, including a detailed explanation of the objectives and scope of the Codex Alimentarius Commission's activities,

CONSIDERATION OF ACCEPTANCES OF RECOMMENDED CODEX STANDARDS FOR PROCESSED MEAT AND POULTRY PRODUCTS (Agenda Item 5)

36. The Committee had before it document CX/PMPP 82/3 on Consideration of Acceptances of Recommended Codex Standards for Processed Meat and Poultry Products.
37. The Committee was informed that the Commission had agreed to an amendment of the acceptance format and to the listing of Non-acceptances. At its 14th Session (para 169 of ALINORM 81/39) the Commission adopted the proposal of the Committee on General Principles as to how to include a "Free Distribution Declaration" into the publication of Acceptances. This will be done by introducing a new section "Other information" divided into "Free Distribution Declaration" and "Non-acceptance". The former will have two sub-sections, one for declaration without conditions and the other one for declaration with specified conditions.
38. In the case where a country could not formally accept a standard, notified however, that products complying with a Codex Standard could be freely distributed in a country, this information would not be listed under "Non-acceptance". The publication on acceptances would include also a listing of specific national requirements for a product for free circulation, if that had been notified by the Government concerned. It was expected that this additional information would be very useful to Governments.
39. The Committee noted that since its last session, Cyprus had given target acceptance with the intention of giving full acceptance by 1984 to the standards for Cooked Cured KM, Cooked Cured Pork Shoulder and Cooked Cured Chopped Heat.
40. The Republic of Argentina informed the Committee that it had elaborated final definitions related to the norms for corned beef, minced and cooked meat, luncheon meat, cooked pork shoulders and description of the methods of the cutting of commercial units of meat of cattle, calves, lambs, sheep and pigs. It had also established the definitions concerning the Code of Hygienic Practice for Poultry and Egg Products. The Committee noted that Argentina had given acceptance to some of the Codex Standards that it had elaborated and was pleased to hear of further developments in the country.
41. Netherlands informed the Committee that it was in the process of examining the possibility of giving full acceptance or acceptance with certain deviations on the standard on Canned Corned Beef.
42. Brazil informed the Committee that it had organized the Codex activities in the country with a view to accept certain Codex standards before the end of 1983.
43. USA had evaluated certain standards elaborated by the Committee with a view to accept them. There are still some impediments and the country expects to take a definite position regarding acceptance of the standards before the next session of the Committee.
44. Poland informed the Committee that it is trying to harmonize its national standards with Codex standards.
45. The Secretariat informed the Committee that the "Summary of Recommended World Wide and Regional Codex Standards and Recommended Codex Maximum Limits for Pesticide Residues (CAC Acceptance/Revision 1) would be updated at the end of the year and would then be made available to Governments and to the 15th Session of the Commission. In this way Governments would have at their disposal (a) an up-to-date compilation of all acceptances received including full details of all deviations notified and (b) information concerning the position of countries which could not accept the standards

but which were prepared to permit entry of the products (i) in conformity with the standards or (ii) in conformity with the standards subject to certain specified conditions.

DRAFT CODE OF PRACTICE FOR THE PRODUCTION, STORAGE AND COMPOSITION OF MECHANICALLY SEPARATED MEAT AND POULTRY INTENDED FOR FURTHER PROCESSING (Agenda Item 6)

46. The Committee had before it two documents, CX/PMPP 82/4 and CX/PMPP 82/4 Add. 1 (Conference Room Document), which contained comments on the draft code of practice at Step 5 (ALINORM 81/16, Appendix III).

47. In order to facilitate reading of the text and understanding of the underlying principles behind the Code, the Committee agreed to insert sections on scope and to subdivide the text into minor sections with appropriate headings e.g. Treatment of bones prior to mechanical separation, Hygiene of equipment and Compositional standard.

48. Argentina emphasized that in their view, the product "mechanically separated meat and poultry" should not be considered as a group of variety of meat, but rather as a product of meat and furthermore in case of direct consumption, the percentage of meat should be declared on the label. Referring to the four proposed alternatives of the time and temperature combinations, Argentina could not at the moment make any judgment due to lack of experience in the matter. As regards the maintenance of a conveniently low temperature in the slaughtering room, Argentina considered that it was not properly defined and that it would be more convenient to establish a fixed limit of the temperature, e.g. "The temperature of the slaughtering room should not be more than....". Argentina did not have any objections to the item concerning the calcium content of mechanically separated meat.

Title

49. A few delegations suggested that the word "separated" present in the title should be replaced by "recovered" and expressed opinion that such a change in the wording would avoid possible confusion with the process of mechanical deboning and also would be more meaningful in international trade. Other delegations felt that there should not be any change in the title and the original title retained. The delegation from USA felt that the use of the work "recovered" would convey the meaning of salvage.

50. The Committee agreed to retain the title as it is.

Scope

51. The Committee noted that it was not evident anywhere in the Code of Practice whether the code was applicable to both fresh or raw and/or cooked meat. The Committee expressed its opinion that the code of practice was applicable only to raw meat and that this should be conveyed under a scope section.

Para. 1

52. After some considerable discussion on whether to retain or exclude long bones, ends of limbs and pig tails for the mechanical separation of meat, the Committee decided to retain the original text.

53. The delegation from Canada thought that mention should be made in the code that different species of animals should be processed separately, and the product appropriately- labelled. The Committee agreed that species should be identified (see para. 3).

Para. 2

54. The delegation from Denmark informed the Committee that para, 2 of the draft code contained several examples as to the proper storage time-temperature conditions. Para. 2 covered an area, which was a critical control point in the HACCP concept now being used in the Revised Code of Hygienic Practice for Processed Meat and Poultry Products. It suggested that a similar approach should be made in the code and proposed a wording for a COP - (critical control point) note which the Committee accepted with a few minor editorial changes.

55. The UK delegation informed the Committee that in their view some of the time-temperature combinations could not be considered as examples of good commercial practice for poultry meat and moreover it would not conform with the provisions of regulation 71/118 now in force in EEC. Holding the raw material for 72 hours at +4°C would allow at least a 100 fold increase in the numbers of psychotropic spoilage bacteria. Whilst this may present little problem in relation to further processed products which are to be cooked, it was felt that the example was not one to be encouraged. Some delegations expressed their opinion that the time-temperature combinations would need modification. The Committee noted the comments from UK and other delegations but, however, agreed to retain the original time-temperature combinations, and to supplement the CCP note with a remark that these may not be stringent enough in specific cases.

56. The delegation from Federal Republic of Germany reserved its position to accept the time-temperature combinations proposed in the code since from its point of view they did not seem to provide the hygienic conditions that mechanically separated meat would require. Not only the separated meat but also the bones are highly perishable. The delegation's practical and scientific experiences with such a material show that raw material should never be kept at temperatures above +2°C. If any prolonged storage longer than the day following the day obtained is envisaged or if the raw material is collected from other premises it seemed necessary to freeze the bones immediately after they are obtained.

Para. 5

57. Some delegations expressed their opinion that the quality of frozen mechanically separated meat may deteriorate due to oxidation processes and/or microbial growth and proposed that the text in para.5 be modified so as to include clauses that would recommend action to prevent such deterioration. The delegation from UK provided a modified text which was accepted by the Committee with slight editorial changes.

Para. 7

58. The Committee noted that the different countries which commented on the level of calcium in separated meat proposed figures which ranged widely from 0.16 - 2.5 % calculated on dry matter. The Committee recalled that at its last (11th) session it considered a figure of 2.5 % for the calcium content of separated meat since such a figure was in accordance to good manufacturing practice and the capabilities of the machinery then available in different countries. The efficiency of machinery for separation of meat from bones had since improved and the Committee agreed that figures much lower than 2.5 % for the calcium content of separated meat could easily be obtained under the present conditions.

59. Calcium content of separated meat is considered a measure of the bone content. The Committee was, however, informed that the relation between calcium content and

bone content is not quantitative since the calcium content of bones from various species of animals differed significantly.

60. Canada proposed to base the calcium content of separated meat on the protein level rather than on dry matter basis. If the calcium content is based on dry matter, the quality of the product will be affected as machines set for a higher yield will increase fat and connective tissue content in preference to protein. A level of 2.7 % of calcium based on protein had been found attainable under practical conditions in Canada.

61. The Committee agreed that requirements for calcium content of separated meat should be included in the code since the title implied that the code would include compositional standards. It agreed that a maximum figure of 1.5 % for calcium content for separated meat would be fairly representative of current technology, but that levels below lower than that could be obtained by the modern machinery being presently used in different countries.

62. The delegation of UK proposed a revised text for para.7 suggesting a level of not more than 1.5 % for calcium content of separated meat, which was accepted by the Committee.

63. Federal Republic of Germany reserved its position regarding the calcium content of separated meat agreed to by the Committee. The calcium content of separated meat, it felt, should be kept under review and further efforts should be made by the Committee to collect data on the subject from different countries. The figure of 1.5 % for the calcium content of separated meat should be used only for guidance and action be taken to recommend reduced calcium content, which is technologically feasible.

Status of the Code

64. The Committee agreed to advance the Draft Code of Practice for the Production, Storage and Composition of Mechanically Separated Meat Intended for Further Processing to Step 8 of the Codex Procedure. The revised Code is attached as Appendix II to this report.

RECONSIDERATION OF THE SAMPLING AND INSPECTION PROCEDURES FOR MICROBIOLOGICAL EXAMINATION OF MEAT PRODUCTS IN HERMETICALLY SEALED CONTAINERS (Annex C of the code of Hygienic Practice for Processed Meat Products) (Agenda Item 8)

65. The Committee had before it Annex C as contained in ALINORM 81/16, Appendix II, working document CX/PMPP 82/7, with Appendix 1, 2 and 3 giving the background to discussions on Annex C which had taken place at the 14th session of the Codex Alimentarius Commission and at the 18th session of the Codex Committee on Food Hygiene (CCFH) as well as an information note on Sampling Plans from ICMSF.

66. At its 14th session, the Codex Alimentarius Commission had considered Annex C at Step 8 of the Procedure, The Federal Republic of Germany had submitted Step 8 comments to Annex C which included new proposals that had not been discussed previously by the Committee (CCPMPP) and which were regarded by the Commission to be substantial in nature.

67. The Commission decided that Annex C be held at Step 7, that it be referred to the next session of the Codex Committee on Food Hygiene and returned to CCPMPP for re-examination. (ALINORM 81/39, paras 429-434).

68. At the 18th session of the CCFH, held in February 1982, the Federal Republic of Germany submitted a more detailed proposal for amendments to Annex C.

69. The Committee on Food Hygiene had established a Working Group to examine Annex C. This Working Group listed the points which, in its opinion required clarification before the document could be properly amended and recommended that these should be passed to the CCPMPP for its consideration.

70. Concerning provisions for canned seam teardown (required in the procedure for shelf-stable products), the Working Group had been of the opinion that these required advance preparation for discussion at the next meeting is the CCFH. The delegation of USA had offered to prepare such a document (ALINORM 83/13, paras 137-141).

71. The Working Group had noted that the ICMSF was revising its sampling plan for shelf-stable canned foods and had recommended that this revised plan be consulted.

72. In order to inform countries before the 12th session of the CCPMPP the Banish Secretariat had asked the ICMSF, if possible, to supply detailed information concerning the revision of sampling plans for shelf-stable canned meats as well as for perishable products.

73. Madam chairman informed the Committee that in the opinion of both the CCFM and ICMSF, the usefulness of the sampling plans and inspection procedures for shelf-stable canned meats were considered of limited value in detecting defective lots and proposed that the Committee should, therefore, first consider part A of Annex C.

74. In the discussion that followed the delegation of the United Kingdom thought that a sampling plan which required visual inspection of such a small number of containers as 200 offered little public health protection and should not be pursued.

75. The Observer of ICMSF informed the Committee that the CCPMPP's sampling plans were originally based on sampling plans proposed by ICMSF in its book "Microorganisms in Foods 2." published in 1974. ICMSF was now revising this book and intended to publish a new edition in late 1982 or early 1983.

76. Although it was premature to give the exact text of the revised ICMSF sampling plans for shelf-stable canned meat products there was general agreement within ICMSF that indirect inplant control and hygienic post-processing handling were better measures than extensive and product examination. The Committee agreed with this point of view.

77. As far as investigational sampling was concerned ICMSF would no longer offer a definite sampling plan since different situations, for example quality determination or public health hazard, may require different factors to be controlled. Increasing sampling number was not a feasible solution since adequate control would then frequently be limited by existing laboratory facilities. For these reasons instead of a single sampling plan for 200 cans a table would be presented showing the probability of detecting one or more defective samples in relation to the proportions of the batch which were defective and to the number of sample units taken.

78. ICMSF would refer the reader to this table (see below) and leave to the judgement of the inspecting agency which number of samples should be taken depending on the hazard and the possibility of inspecting a large number of samples.

The probability of obtaining one or more defectives in a sample of (n) subsamples (sample units) with proportion (p) of the lot defective

Number of sample units (e.g. cans) examined per sample	Proportion of the lot that is defective			
	0.01	0.001	0.0001	0.00001
200	0.87	0.18	0.02	0

1000	1.00	0.63	0.10	0.01
2000	1.00	0.86	0.18	0.02
3000	1.00	0.95	0.26	0.03
4000	1.00	0.98	0.33	0.04
5000	1.00	0.99	0.39	0.05

(Slightly modified from ICMSF).

79 After some further discussion the Committee agreed that the above table should be included in the revised Annex C with a note in the preface to explain why there was no good reason to elaborate a sampling plan for shelf-stable products.

80, The Committee then considered part B of Annex C concerning non-shelf-stable products and agreed to first consider the comments made by the Federal Republic of Germany who had pointed out that the whole procedure of sampling and inspection applied only in cases where the controlling authority had reason to suspect that the lot contained defectives. The delegation expressed the view that non-shelf-stable meat products heat treated after packaging should be subjected to microbiological examination in all cases and not only in those cases where the temperature measured between the containers exceeds 10°C or any lower temperature specified by the shipper (para B (C)). The reason for this was that visual examination did not rule out the suspicion that a lot might contain microbiologically defective units and a temperature measured between the containers in excess of 10 C did not invariably give grounds for suspecting defective cans within the lot.

81. The Committee noted that international requirements for the transport of perishable food were that the temperature be checked by continuous temperature recording equipment. The generally held view of the Committee was that the measurement of air temperature between cans was not particularly informative when selecting cans for microbiological examination and it was decided to remove such provisions from Annex C and to refer to visual and microbiological inspection only.

Preface to Annex C (ALINORM 79/16 Appendix III)

82. The Committee examined the preface in the light of the revisions it had made to the Annex. It agreed that the first five paragraphs of the preface could still serve as introductory material with the following amendments to paragraph 3. The word "can" was changed to container and the last sentence referring to incubation was removed.

83. The Committee then examined the comments on non-shelf-stable products in the report of the Working Group of the Codex Committee on Food Hygiene (ALINORM 83/13, Appendix VI, section 5.2) and made the following points:

5.2.1 Products and packages to be included

84. The Committee confirmed that prepared heat treated meats in hermetically sealed flexible packaging came within the definition of non-shelf-stable products.

5.2.2 Temperature abuse

85. The Committee agreed with the Working Group that temperature abuse during storage was not the sole reason to suspect a lot.

5.2.3 Sample size

86. The Committee agreed in general with the observations of the Working Group. The delegation of Norway was of the opinion that a larger number of samples than 10 should be taken. However, if the Committee nevertheless retained the figure of 10, the

delegation considered that the difference between a sample size of 10 for examination of visual defects and 5 for microbiological examination was of no significance. The Committee decided to set the sample size for both visual and microbiological examination at 5.

5.2.4 Presence of anaerobes

87. The Working Group had commented that there was no provision for checking presence and outgrowth of anaerobes or of aerobes on long-term storage.

88. The delegation of the Federal Republic of Germany pointed out that the Annex did contain provisions for an aerobic plate count. It was also of the opinion that the presence of anaerobes would be extremely rare and would in most cases of spoilage be concealed by the outgrowth of aerobes.

89. The Observer of ICMSF explained that anaerobic growth was possible for products subjected to high temperature abuse and that such cases had occurred. There was as yet no agreed international method for the detection of anaerobes. The Observer of ISO informed the Committee that ISO Technical Committee 34 was at present developing a method for the detection of clostridial spores. The Committee agreed to add a provision for the examination of the samples for anaerobes.

5.2.5 Mesophilic Aerobic Count

90. The Working Group thought that a criteria of 10.000 mesophilic aerobes per gram might be too restrictive depending on the scope of the products to be included under this plan and asked for details concerning the origin of the microbial standards.

91. The Observer of ICMSF informed the Committee that the provision was based on an ICMSF three class sampling plan ($n = 5$; $c = 3$; $m = 1.000$; $M = 10.000$). He pointed out that perishable canned meat products under normal storage conditions will in 95 % of the cases contain under 100 mesophilic aerobes/g. The counts did not indicate severe spoilage or health hazards but were an indication of previously unsatisfactory processing or storage conditions.

92. The delegation of the United Kingdom inquired whether such counts were valid if starter cultures had been used in the preparation of the product and pointed out that sausages in vacuum packs were now on the market. The Committee agreed that if starter cultures were used other criteria for bacterial counts might apply. The Committee, however, decided not to include a reference to this in Appendix III.

Defect

93. It was pointed out that "defect" which occurred in the provisions for the microbiological examination of non-shelf-stable products would require defining. Since defect was only used in the sense of a sample or samples which failed to meet the microbiological criteria it was decided to remove the word "defect" and relate the decision to reject, accept or set aside the lot only to the Microbiological results obtained.

94. The Committee re-examined Annex C which had been extensively revised by the Secretariat in the light of the discussions at the session.

95. In view of the changes made to the provisions of the annex dealing with shelf-stable heat processed meat products, it was agreed that section 5 of the preface be expanded to explain the intention of sampling plans which were now proposed and the purposes of the sampling plans and microbiological examinations proposed for non-shelf-stable heat processed meat products.

96. On the question of defining defects the Committee agreed that this question and that of sampling multiple lots should also be referred to the Codex Committee on Food Hygiene for guidance in the light of the changes made to Annex C.

97. The Annex C is attached as Appendix III to the report.

Status of Annex C

98. The Committee decided to return Annex C to Step 6 to enable Governments and the Codex Committee on Food Hygiene to comment on the revised text (see Appendix III to this report).

REVISION OF THE RECOMMENDED INTERNATIONAL CODE OF HYGIENIC PRACTICE FOR PROCESSED MEAT AM) POULTRY PRODUCTS (at Step 3 of the Procedure) (Agenda Item 7)

99. At its 11th session the Committee had agreed that a major revision of the Recommended Code of Hygienic Practice for Processed Meat Products (CAC/RCP 13-1976) should be undertaken both with regard to technical content and layout (ALINORM 81/16, paras 132-134). The Codex Alimentarius Commission at its 14th session had approved this (ALINORM 81/39, para. 445).

100. A small working group of experts had met at the headquarters of the World Health Organization, Geneva, in March 1981 to revise the code and in doing so, had taken into account the hazard analysis critical control point system (MACCP) (see para. 31).

101. In order to facilitate the discussion of the code, the Committee appointed an ad hoc Working Group to review the revised version of the code in light of comments received (CX/PMPP 82/6 and CX/PMPP 82/6, Addenda 1 and 2), and prepare a report for the Committee to consider. The ad hoc Working Group included:

Prof. Gerigk (FRG) - Chairman
Dr. Baird (UK)
Dr. Kingcott (UK)
Mr. Büchli (The Netherlands)
Mr. Simonsen (ICMSF) - Secretary
Dr. Koulikovskii (WHO) - Secretary

102. The Committee considered the report of the ad hoc Working Group.

103. The chairman of the Working Group, Prof. Gerigk (Federal Republic of Germany) introduced the report. The report underlined that the CCP-notes had an advisory and informative nature and recommended certain modifications in specific paragraphs in the light of comments received from Governments and International Organizations. The Working Group concluded that the general remarks received from New Zealand on reference to other Codes of Practice should be taken into account.

104. Based on the recommendations of the Working Group, the Committee agreed to the following decisions.

Section II - Definitions

105. 2.10. Should read: Hermetically sealed containers mean containers which are designed and intended to protect the content against the entry of microorganisms during and after heat processing, and which are impermeable to gas.

106. 2.12. The Working Group took no position to the definition. After a short discussion where UK and other delegations wished deletion, the Committee agreed to delete.

107. 2.13. It was the general feeling of the Working Group that the word "batch" was more appropriate, but taking into account that the word "lot" had already been inserted in different Codex documents, this question was passed for consideration by the plenary session.

108. There was a "brief discussion on whether "lot" and "batch" were essentially identical terms. The Committee noted that the definition of "lot" was under examination by the Codex Committee on Food Labelling (CCFL) and agreed to bring the definition into line when it had its decision on "lot".

109. 2.17. Depending on the need for such definitions the working group proposed to insert two definitions on "wrapping" and "packaging". These should read:

"Wrapping" is the protection of the meat product by the use of an immediate wrapping or an immediate container in direct contact with the product concerned (as well as the immediate wrapper or the immediate container itself).

"Packaging" is the packaging of a wrapped meat product or products in a second container (as well as the container itself).

There was some further discussion on the meaning of the two terms wrapping and packaging. Some delegations were of the opinion that "wrapping" (corresponding to "conditionnement" in French; referred to the immediate protective covering of the product. In this sense a can could be the immediate "wrapping". "Packaging" ("emballage" in French) was a more generic term but meant in general the secondary container which held a number of primary wrapped items. The Committee agreed to insert both definitions for consideration by Governments.

110. 2.18. The words "at the point of usage" should be deleted. The Committee agreed to this.

Section III - Establishment: Registration, Design and Facilities

111. 3.4.6. The Working Group had discussed the meaning of the word "separated". It concluded that the "degree" of separation depends upon the Material that was handled. Physical separation could be either by walls or by distance. No further explanation was offered.

112. The Observer of the EEC expressed a reservation, on the definition of "physical separation". In its opinion physical separation should only be achieved by a material barrier and not by distance alone.

113. The use of the words "inedible material" was preferred as this indirectly by definition was the same as "unfit for human consumption".

114. In the third line should be inserted "and storage" after "preparation". In the first line the word "edible" should be deleted.

115. 3.4.9. Walls and Floors

A further suggestion that the provisions should require rat proof walls and floors and that walls should be smooth up to at least two metres high, was not agreed to. The Committee considered that the present provisions were satisfactory. The reservation of EEC was noted. The requirement that walls and floors should be of non-toxic Material

was questioned but the Committee made no changes since the text was from the "General Principles" of Food Hygiene. The Committee decided to make a request to the Codex Committee on Food Hygiene with respect to the principle behind this requirement.

Under "windows" third line "insect" should be inserted between "with" and "screens".

116. 3.4.10. The enumeration should be deleted but the paragraphs should be kept.

117. 3.4.12. Delete "exclusive". Delete "meat", and delete the second sentence (appears in 6.8.1.), The square brackets were also deleted.

118. 3.5.1.1. The first sentence in the CCP-note should reads "Water should comply with the requirements contained in the WHO "International Standards for Drinking Water", and in particular those concerned with micro-organisms of enteric origin".

119. 3.5.1.2. The first paragraph of the CCP-note should reads "This provision is intended to cover water for both cleaning purposes and the destruction of micro-organisms -(especially those pathogenic to man) - on knives, utensils etc. coming into direct contact with meat and meat products. For cleaning purposes the temperature of the water should be 65°C (for details see Annex I of the General Principles of Food Hygiene (ALINORM 79/13 A, App. II). The hot water for disinfection purposes should be at 80 C and dispensed in such a way (e.g. in specially designed boxes near the working area) that blades of knives etc. can be submerged in the water for an adequate contact time (no less than 2 minutes)." The last paragraph should be deleted. The delegation of Poland expressed a reservation on the temperature of 80 C maintaining its position that the temperature of water for cleaning of knives should be 82°C. The delegation of Australia questioned whether a time requirement of 2 minutes was practicable in all circumstances.

120. 3.5.1.4. The second line should reads "steam used in contact directly with meat and meat products should be produced from potable water and contain no substances which may—".

121. 3.5.1.5. The wording from 4.4.1.4. of the "General Principles" was accepted: "Non-potable water used for steam production, cooling of refrigeration equipment, fire control and other similar purposes not connected with meat products should be carried in completely separate lines, identifiable preferably by colour, and with no cross connection with or back siphonage into the system carrying potable water".

122. 3.5.4. The word "desirable" in the penultimate line should read "preferable".

123. 3.6.1. In the second line the word "exposed" should be inserted between "with" and "meat".

Section IV. Establishment: Hygiene Requirements

124. 4.2.1. At the end of the paragraph should be added: "Working rooms should be kept clean".

125. 4.2.2. Deleted, and the following paragraphs should be renumbered.

126. 4.2.3. The word "meat" is deleted (twice).

127. 4.2.4. The beginning of the paragraph should read: "If rooms intended and most of the time used for the handling, preparation, processing, packaging or storage of meat and meat products are used for any other food preparation purposes, then--". The Observer of the EEC expressed awaiting reservation on the subject.

128. 4.4. In the third line the word should be "pests",
129. 4.7. Insert in the 4th line after meat products: ", packaging materials and ingredients".
130. 4.9. Insert a new paragraphs "Cleaning and maintenance tools and products should not be stored in a food handling area..".
131. 5.2.1. The attention of the Committee was drawn to the fact that in the "General principles" the last sentence is not included, and could therefore be omitted here. The Observer of the EEC was of the opinion that annual medical inspection of personnel should be required* The Committee however considered that the present provisions were adequate in this respect and made no changes*
132. 5.4. In the penultimate line of the CCP-note the word "blue" should be substituted by "detectable" when referring to wound dressing,
133. 5.6.1. 4th line of CCP-note should read "which may affect adversely meat—". 6th line; Delete the word "articles".
134. 5.6.3. CCP-note should reads "Such items should not be left on equipment in the working area".
135. 6.1.5. 4th line: "making it" instead of "so as it has been. made". In the CCP-note delete 2). 3) should reads "to be removed from the establishment for a specified future use". After "consumption" in the 15th line adds "In cases where only superficial contamination has taken place, trimming of the contaminated part may suffice". The attention of the Committee was drawn to the fact that not only the inspector and the manager, but also the worker may find that the raw material is no longer fit for human consumption (3rd to 6th line of the CCP-note). And further (6th line) both the inspector and the manager may have several options. The last sentence in the CCP-note should be deleted.
136. 6.2.1. The text from the "General principles" was suggested; "Effective measures should be taken to prevent contamination of meat or meat products by direct or indirect contact with material at an earlier stage of the process".
137. 6.2.2. The 3rd to 5th line should read: "until they have cleaned and disinfected all utensils used by them and have changed all protective clothing worn by them—". The CCP-note would be amended to cover reverse contamination of meat by products.
138. 6.3.2. The working group proposed to delete the last sentence regarding the use of non-potable water in specific circumstances. The delegation of Australia was opposed to the deletion pointing out that certain waters were non-potable because of mineral content in excess of the levels for potability expressed in the WHO standard but did not present a hazard to health and were suitable for certain purposes in the factory. The delegation of the EEC was of the opinion that all water used in the establishment should be potable. The Committee agreed to delete the last sentences.
139. 6.4.2. In the 10th line of the OOP-note "potentially" should be change to "potential".
140. 6.5.1. The paragraph was proposed to read: "No containers, wooden crates, wooden boxes or cartons should be assembled in those parts of an establishment in which meat or meat products are prepared, processed, handled, packed or stored. No containers, equipment or utensils should be stored in those parts of an establishment in which unwrapped meat or meat products are prepared, processed, handled, packed or

stored, unless required for immediate use in that part". It was pointed out by several delegations that restriction of assembly of cartons in parts of the establishment where processed meat products were packed was a practical impossibility. The Committee decided not to change the text at this time but to refer the provision for specific Government comments. The EEC expressed its reservation to this decision.

141. 6.5.3. 6th line should read "cleaned or cleaned and disinfected;—".

142. 6.5.6. It was suggested to insert "immediate" in front of container. There was some discussion as to the meaning of the "immediate container" and whether in all cases this could carry a code or identification mark. The Committee decided that it might not be an invariable practice and agreed instead to the following wording: "Packaged meat products should bear a permanent marking in code or in clear to identify the producing factory and the lot".

143. 6.6.2.3. Insert "air" between "adequate" and "circulation" in 3rd line and remove the second sentence to the end of the CCP-note. Insert "Rapid" in front of "Cooling" in first line of OOP-note.

144. 6.6.2.5. The penultimate line of the CCP-note should read: "results reported to the manager who will, if necessary, inform the inspector for him to—".

145. 6.7.3. In first line delete "out".

146. 6.7.4. Should read: "Meat products should not be placed in any means of transport which are not clean. If necessary it should be cleaned and disinfected before loading".

147. 6.8.1. Remove square brackets. Delete meat twice. Add "or any other appropriate laboratory" at the end of third line. The delegation of Italy expressed a reservation on these provisions. In its opinion only official laboratories should deal with meat inspection and meat hygiene.

148. 6.8.2. Remove square brackets. Change sentence to: "The inspector should have access to all information relevant to his duties and responsibilities".

149. 6.8.3. This should become 6.8.1. Subsequent paragraphs should be renumbered.

150. 6.8.4. The word "representative" should be removed and the word "quality" substituted by "hygiene". The words in square brackets should be removed.

151. 7.1. In penultimate line insert "specifications" between "methodology" and "and". The delegation of Italy expressed a reservation to the provisions of 7.1.2. It was of the opinion that the products should not contain any toxic substances produced by microorganisms.

152. ANNEX A

Preservation of Meat Products in Hermetically Sealed Rigid Containers

Annex A. d). The attention of the Committee was drawn to the necessity for chlorinating all water used for cooling with a minimum contact period of 20 minutes. The 5th line should read: "and if necessary treated by the addition of chlorine. Such water, depending—". The delegation of the United Kingdom considered that all cooling water, including re-circulated water, should be chlorinated with a contact time of 20 minutes. The Committee noted that the requirements had been taken from the Code of Hygiene Practice for Low Acid Canned Foods but decided not to specify a contact time for the

chlorination of cooling water. The Observer of the EEC reiterated its earlier statement regarding potable water (see para 138).

153. ANNEX B

Preservation of Meat Products Heat Treated Prior to Packaging

Annex B, b). The Italian delegation asked for a waiting reservation on all points particularly on the presence of spores in products. The Committee agreed to the changes in the text given below as suggested by the working group.

Annex B, b). Second sentence in CCP-note should read "To reduce this risk a heat treatment should ensure the inactivation of vegetative organisms". The last sentence should read: "This would require proper time-temperature conditions, which should be monitored".

Annex B, d). Second sentence should read: "If water is used for cooling any cooked meat product it should be of potable quality".

Annex B, e). Second lines "with" should be changed to "without". The last part of the sentence should be deleted.

154. Status of the Code

The Committee decided to advance the revised Draft Code of Hygienic Practice for Processed Meat and Poultry Products to Step 5 of the Procedure. The revised Code is attached as Appendix IV to this report. It expressed its thanks both to the Group of Experts who had met in Geneva and to the ad hoc Working Group for their excellent work which had enabled the Committee to advance the Code with a minimum of delay.

PROPOSED DRAFT GUIDELINES FOR THE USE OF VEGETABLE PROTEIN IN PROCESSED MEAT AND POULTRY PRODUCTS (Agenda Item 9)

155. The Committee had before it CX/PMPP 82/8 containing the above proposed draft guidelines and supporting documents CX/PMPP 82/8A containing the Proposed Draft General Guidelines for the Utilization of Vegetable Protein Products (VPP in Foods and CX/PMPP 82/9 with Addenda 1-3 containing comments from Governments.

156. Madam Chairman informed the Committee of the background to the elaboration of the guidelines and of the relationship between this Committee and the Codex Committee on Vegetable Proteins.

157. The Codex Alimentarius Commission at its 14th session had established the following principles for the relationship between the Codex Committee on Processed Meat and Poultry Products (CCPMPP) and the Codex Committee on Vegetable Proteins (CCVP) with respect to the elaboration of guidelines for the use of vegetable proteins: "The Commission agreed with the proposal of the Committee on Processed Meat and Poultry Products to elaborate draft guidelines for use of vegetable protein and instructed the Committee to proceed with this work in close collaboration with the Codex Committee on Vegetable Proteins. The Committee on Vegetable Proteins was developing general guidelines for the use of vegetable proteins in food. The guidelines being developed by Commodity Committees should be consistent with the general guidelines being developed by the Codex Committee on Vegetable Proteins having regard to the specific circumstances of individual products. Any departures from the general guidelines would need to be justified. The Commission further considered that the labelling aspects would be important and would have to be endorsed by the Codex Committee on Food Labelling". (ALINORM 81/39, Para 442).

158. The Codex Committee on Vegetable Proteins at its 2nd session in March 1982 had discussed the general guidelines for the utilization of vegetable protein products in foods (see ALINORM 83/30, paras 26-16).

159. The Milk Committee had discussed at its last session the use of milk proteins in other commodities and had expressed its willingness to provide other commodity committees with advice in this field. The Committee discussed whether the Guidelines should be broadened at this time to include advice on the use of other non-meat proteins in processed meat and poultry products. Milk, fish, bone and 'blood proteins were mentioned as possible sources for inclusion in the guidelines.

160. Several delegations pointed out that the critical point in the assessment of the use of non-meat protein materials was a lack of suitable methods of analysis to control their content in meat products.

161. The Observers of EUVEPRO and ISO informed the Committee that collaborative studies were in progress to reach international agreement on quantitative methods of analysis for the determination of VPP in meat products.

162. EUVEPRO had considered the various available methods of analysis and concluded that 2 methods - an SDS-PAGE (1) method and an "ELISA (2) method - show particular promise and should be tested and compared under practical conditions to find out if one of these methods could ultimately be accepted as a standard method. The results of an initial international cooperative study are expected to be available in 1983.

163. ISO had also received available methods for VPP at a meeting in September this year of ISO Technical Committee 34 on Agricultural Products Sub-Committee 6, Working Group 7 and was collaborating with EUVEPRO on the development of the ring test (ELISA and SDS-PAGE). They were also considering methods to determine meat.

164. After further discussion on the possible consequences of including other proteins in the guidelines, the Committee decided that, since it had a document before it which was written with VPP in mind and that agreed methods of analysis might be available in the near future, to confine itself to consideration of the guidelines as they stood at present.

165. It was suggested that a small group could be formed to work between sessions to identify the non-meat proteins (other than VPP) available for use in processed meat and poultry products and to prepare a document in such a way that the possible expansion of the present guidelines could be examined at the next session of the Committee. Such a group would cooperate by correspondence in producing a document for consideration by Governments. The delegation of USA agreed to coordinate this work in cooperation with Denmark, the United Kingdom and Australia and to produce a document for consideration at the next meeting of the Committee. It was agreed that this group would need to finish the work for review and comments by Governments before the next session (see also Paras, 225-226).

166. The Committee then examined the guidelines in the light of comments from 16 Governments and 2 International Organizations.

General

167. The Committee noted a statement by the delegation of the Federal Republic of Germany that products whose meat ingredients have been substituted by Vegetable Protein Products could no longer be regarded as meat products nor could they be

marketed as such. In order to maintain food quality the replacement of meat protein should be rejected.

168. Concerning the General Guidelines for the use of VPP in foods the Committee agreed that these should be consulted and the two codes should, as far as possible, move in tandem through the Step Procedure,

169. Regarding the scope of the present guidelines, the delegation of Canada observed that simulated products were not included in the Guidelines. The Committee noted that such products could be composed entirely of vegetable protein and decided not to consider them at present.

170. The Committee briefly discussed the nutritional aspects of the use of VPP in meat products. It noted that the Codex Committee on Foods for Special Dietary Uses (CCFSDU) had met very recently in Bonn-Bad Godesberg and was considering how its terms of reference might be changed to consider the nutritional aspect of products for which standards were in progress in Commodity Committees. It decided not to consider nutritional aspects until such time as the Codex Alimentarius Commission had had the opportunity to examine the new terms of reference which the CCFSDU might propose. The delegation of Argentina informed the Committee that the document CX/PMPP 82/8 had unfortunately not been received in time and hence could make no comments on the text.

Title

171. The Committee agreed to change the title to refer to "Vegetable Protein Products (VPP)" placed in square brackets to indicate that the question of including other non-meat proteins in the guidelines is still open, and to make consequent changes throughout the text.

1. Scope

172. The Committee did not favour the term "should be permitted" as being too affirmative for the intentions of the guidelines. The term was replaced by "may be added".

2. Definitions

173. The Committee agreed to adopt the text of the CCVP General Guidelines for the definition of VPP and to place it in square brackets for Government comments.

3. Field of Application

174. On a proposal by the delegation of Denmark the Committee agreed to subdivide the section into standardized products and non-standardized products on the understanding that the labelling provision applied throughout the range of products considered.

Standardized Products - 3.1. Functional purpose

175. The delegation of Switzerland was of the opinion that with regard to the functional purposes of VPP in standardized products these could only be regarded as a supplement to the declared meat content. The delegation of France agreed with this, especially for standardized almost wholly meat products.

176. The delegation of the United Kingdom thought that there was no need to make a distinction when VPP is used for optional or functional purposes. Provided the meat

content is complied with, VPP could be used by a manufacturer for other purposes, that is, its use was optional.

177. It was pointed out that beyond a certain threshold value it might be necessary to declare the amount of VPP present. The Committee noted that as currently drafted the guidelines do not show any difference in the labelling requirements for functional and optional addition. After some further discussion it was agreed to add a provision that the use of VPP for functional purposes should not result in replacement of principle protein and associated nutrients and to place both functional and optional texts in square brackets.

178. It was also agreed to remove the final sentence of 3.1. "functional purpose" referring to products consisting of whole pieces of meat or poultry and to propose a figure of [3%] VPP calculated as the ratio of dry vegetable protein product/total product. The delegation of Switzerland expressed its reservation on the deletion of 3.1.

179. An alternative text covering use as an ingredient of VPP, limited only by the established meat content, was also placed in square brackets. These changes were subject to explicit labelling when this came up for consideration.

180. The delegation of Brazil informed the Committee that in its opinion the uses of VPP for functional purposes were limited and provided no real economic benefit to the consumer. This is why VPP should be declared on the label,

3.3 Replacement

181. It was pointed out that the CCVP General Guidelines provided for the use of VPP in substitution for and extension of the original protein in foods. A cut-off value of 30% replacement (CX/PMPP 82/8) had been suggested beyond which the traditional name may not be used unless properly qualified.

182. It was pointed out that in standardized products, where the essential composition and quality of a product was described, replacement was not possible. After some discussion the Committee agreed with the statement of the delegation of the United Kingdom that where there is a compositional standard for a meat or poultry product there should be no replacement of the minimum meat or poultry content by VPP.

183. It was agreed to delete reference to replacement in the standardized products, and to consider the matter further when discussing non-standardized (including new) products, The suggestion of the USA in its written statement, - but with the last words in square brackets, - would then be inserted.

Non-standardized Meat Products

184. The delegation of Denmark summarized its proposals for provisions for non-standardized meat products. In its opinion the distinction between VPP used for functional purposes, as optional ingredients or as replacement for meat was not justified. For this category, limits for the use of VPP coupled with labelling requirements would result in fair trading practices and provide consumers with relevant information.

185. A limit should be established up to which VPP should be permitted and declared only in the list of ingredients. A maximum of 2% TOP (calculated as the ratio of dry vegetable protein product/total product x 100) was suggested as being in accordance with good manufacturing practice.

186. A limit for the addition of VPP should be established above which the traditional product name could no longer be used even if qualified. 30% (calculated as the ratio of vegetable protein/vegetable protein + meat protein x 100) was suggested.

187. For VPP added in amounts between these two limits, there should be a quantitative declaration which should make it possible to compare the amount of meat present in the product with the amount of hydrated VPP. This question might be best left to national legislation since the most informative type of declaration might depend on the way in which quantitative declarations are regulated for meat products.

188. It was also suggested that the point at which it was necessary to qualify the traditional name of a non-standardized meat product containing VPP should be when the amount of VPP exceeds 4% (calculated as the ratio of dry vegetable protein product/total product x 100). After some discussion the Committee agreed that in non-standardized products functional and optional provisions should read as follows:

3.1. Functional purpose

189. VPP may be used for functional purposes in any processed meat or poultry products where it serves a useful technological function.

3.2. Optional

190. VPP may be used as an optional ingredient in any processed meat or poultry product without any specific limitation". It was also agreed to add the amended provision supplied by the USA under 3.3. Replacement (see Appendix V).

4. labelling requirements Name of the Product

191. The Committee agreed that the guidelines should make provision for the qualification of the name of the product in circumstances where VPP had been used.

192. The delegation of Denmark pointed out that there were already on the market non-standardized products with well-established names containing a proportion of VPP. The composition of such products could be altered without altering the known name. The delegation of the USA pointed out that when labelling guidelines are set for the use of VPP and the amounts of that use in non-standardized products, they became to a larger extent standardized.

193. The Committee agreed that for Codex purposes such products would come under the General Standard for the labelling of Prepackaged Foods in which case manufacturers would have to label them in a way which was not misleading. In this case a threshold value for the VPP content of mixed products would be necessary.

194. It was suggested that the following provision might cover such cases. "When VPP is added to a non-standard meat product in amounts which exceed the meat content then the name should be changed to indicate that it is a VPP and meat product".

195. After some further discussion on the basis for calculation and declaration of the VPP content the Committee decided to establish an ad hoc Working Group to review the whole labelling section.

196. The Committee then examined the labelling section which had been proposed by this Working Group consisting of representatives of the delegations of Denmark, UK and USA and the observer from EUVEPRO. The Working Group had taken into account the previous discussion of the Committee and had divided the text into provisions for standardized and non-standardized products and had also made reference to new

products. Whenever possible the CCVP General Guidelines for the Use of VPP in Food had been taken into account.

197. There was some discussion on how products under (b) could be accurately described. The delegation of the United Kingdom proposed that products which had the appearance of being whole meat products should, if VPP had been added, declare the presence of the non- meat protein in the name of the food.

198. Other delegations thought that technological adjustments of a product could make appearance a subjective and notional idea and that it was better to use the name of the food.

199. It was agreed to insert in (b) in both categories, "when VPP is used in any processed meat or poultry product whose name indicates that it consists wholly of "

200. The Committee also agreed that in (e) the source of the particular VPP used should be included.

List of Ingredients

201. The delegation of Norway was of the opinion that the non-meat protein content including source should be listed in order of proportion of hydrated protein and the delegate of Finland pointed out that because of the possibility of allergic reactions some proteins would require specific labelling, for example wheat gluten. The Committee agreed with this but thought that the form in which the protein was used did not need declaration. The other usual labelling provisions would apply.

202. The Committee was opposed to percentage ingredient labelling and agreed that it was satisfactory to list ingredients, including if necessary water content, in descending order of proportion.

Nutritional Adequacy

203. The Committee agreed not to discuss this matter until such time as it had more information on the range of non-meat proteins in current use for replacement and fortification (see also para. 170).

Status of the Guidelines

204. The Committee agreed to attach the labelling section as amended and to retain the Proposed Draft Guidelines for the Use of [Vegetable Protein Products (VPP)] in Processed Meat and Poultry Products at Step 3 for a further round of Government comments. The amended draft guidelines are attached as Appendix V to this report.

205. The Committee thanked the Working Group for their valuable assistance in re-drafting the labelling section of the guidelines.

CONSIDERATION OF LABELLING INCLUDING QUALIFYING DESCRIPTIONS OF PRODUCTS SIMILAR TO THOSE COVERED BY THE STANDARDS FOR PROCESSED MEAT AND POULTRY PRODUCTS (Agenda Item 10)

206. The Committee had before it a document CX/PMPP 82/10 which contained Government Comments on the above subject.

207. The Committee was informed that certain products existed which did not comply with all of the requirements for Codex standards, especially the compositional standard but which nevertheless were traded under names which were similar to those laid down by the standard. The scope of the standards was worded to contain a provision, which

would continue to permit such products to be traded under the name laid down in the standard provided that it was properly qualified.

208. The Committee noted that cooked cured ham and cooked cured pork shoulder which did not comply with the Codex standard requirements concerning protein on a fat free basis fell into the category referred to in the above paragraph and recalled that it had suggested as its last (11th) session "with water added" as a qualifying description to be added to the name of such products.

209. The delegation from Netherlands supported by Federal Republic of Germany and Sweden expressed an opinion that any qualifying description including the one like "with water added" did not provide adequate information and was misleading the consumer. The delegations felt that national food laws directed to the problem differed significantly and that any attempts of the Committee to harmonize the national laws would defy solution by countries whose legislative basis was different.

210. Australia suggested that the problem could be overcome by elaborating standards for these two products (see para. 205) since the discussion had indicated that there was a substantial quantity of these products moving in international trade.

211. Argentina and Federal Republic of Germany suggested that proper labelling could be considered to provide adequate information to the consumer.

212. USA informed the Committee that a qualifying statement was, in their view, the best approach but often the product name could also be changed, for example, ham and x % water.

213. The United Kingdom supported by Denmark felt that one solution to the problem would be to add a footnote to the scope section of the standards to illustrate by means of examples or qualifying statements which may appear on products traded internationally.

214. Another possible solution, the Committee considered, was to include an annex to the standard as in the Codex Standard for Quick-Frozen Shrimps or Prawns (Codex Standard 92-1981) giving information on possible qualifying statements used in different countries to cover such products which are marked in the name of the Codex standard but which did not comply with all the Codex requirements.

215. The Committee saw that both of the above proposals would pose problems. Inclusion of a footnote to the scope would mean an attempt by the Committee to harmonize national legislation directed to the problem and this would not be acceptable to many countries, resulting in an increased number of acceptances qualified with specified deviations. Providing an annex as in the standard for quick frozen shrimps and prawns (Codex Standard 92-1981) would be difficult since such information is not at present available.

216. The Committee could not come to any conclusion and postponed further discussion on the subject until such time as it was appropriate to consider the matter again. The appropriate time, the Committee felt, would be when the Committee undertook revision of the Standard.

EVALUATION OF ALTERNATIVE TREATMENT OF SPICES TO BE USED IN MEAT PRODUCTS (Agenda Item 11)

217. The Committee had before it a document CX/PMPP 82/11 which contained information received from Governments on i) Methods presently used for sterilizing spices, ii) Methods permitted for sterilizing spices and changes to be foreseen in present legislation if any and iii) Methods of sterilizing spices which are considered to be

preferable for future legislation, and supplemented by similar information from current literature.

218. The Committee noted that the document was prepared by the Danish secretariat in response to its request at its last session. The use of ethylene oxide for sterilizing food had received heavy criticism due to toxicological aspects as ethylene oxide, and one of its metabolites, ethylene chlorohydrin, are considered to cause mutagenic and other chronic or delayed toxic effects.

219 The document also covered other methods for treatment of spices to be used in meat products such as irradiation and extraction of the essential oils (spice extracts). Use of spice extracts though advantageous from the microbiological point of view could suffer from the defect that they may contain mycotoxins and solvent residues.

220. The delegate of Argentina expressed his reservations and the delegation of Tunisia said that they were in need of further information on the topic.

221. The Committee noted that irradiation of spices at an average radiation dose of up to 10 KGy which received unconditional acceptance by the FAO/WHO/LAEA Joint Expert Committee on Food Irradiation in 1981 could be an efficient method for reducing the microbial load and the number of pathogenic micro-organisms in spices. Norway had already permitted irradiation of spices for food manufacturing purposes and provisional acceptance had also been given by certain countries.

222. The attention of the Committee was directed to the opinion expressed by the Codex Committee on Food Hygiene (ALINORM 79/13A, para. 20) that irradiation at sublethal doses could result in radical changes in the bacterial flora of the products including the outgrowth of mutated strains. The Committee was informed that WHO (under the auspices of the International Union of Microbiological Societies) would be convening a consultation before the end of 1982 to study the problem.

223. The Committee noted that there was a need for spices of good bacteriological quality for use in processed meat and poultry products that moved extensively in international trade. The microbiological quality of spices, the Committee felt, was an important problem especially in meat products which were only mildly heat treated and also in other products.

224. The Committee noted that sterilization of spices was also of concern to other Codex Commodity Committees and agreed to recommend that methods for sterilizing spices be harmonized internationally. The Committee also agreed to ask the Commission to consider the elaboration of a code of practice for production, handling and treatment of spices, a task which could be entrusted to the Codex Committee on Food Hygiene. The Committee regarded this matter as one of urgency.

FUTURE WORK (Agenda Item 12)

225. The Committee expected that the Code of Practice for the Production, Storage and Composition of Mechanically Separated Meat and Poultry Intended for Farther Processing, which had been advanced to Step 8 by the present session, would be adopted by the Commission at its next session. This would leave to the Committee for its consideration at its next session the following items arising from the present session:

1. Draft Code of Hygienic Practice for Processed Meat and Poultry Products - Step 7.

2. Sampling and Inspection Procedures for Microbiological Examination of Meat Products in Hermetically Sealed Containers - Annex C of Code of Practice for Processed Meat and Poultry Products - Step 7.
 3. Proposed Draft Guidelines for the Use of Vegetable Protein Products (VPP) in Processed Meat and Poultry Products - Step 4.
226. In addition the Committee undertook the following additional work:
1. To develop guidelines for use of non-meat proteins other than vegetable proteins in processed meat and meat products.
227. The Committee set up a small working group consisting of i) USA, ii) Australia, iii) Denmark and iv) UK with the following terms of reference:
- a) To find a suitable definition for the term non-meat proteins,
 - b) Identify the range of products that could be considered as non-meat proteins other than vegetable protein products,
 - c) Look at the revised guidelines for the use of VPP in processed meat and poultry products and elaborate similar guidelines for the use of non-meat proteins other than VPP,
 - d) Consider the possibility of merging both the specific guidelines into general guidelines.
228. It was agreed that it may be difficult for the working group to meet and prepare a document and the Committee felt that such an exercise could be worked out by correspondence. The working group agreed to prepare a document prior to the next session of CCPMPP for seeking government comments (see para. 165)
2. Methods of analysis
229. The Danish secretariat in association with FAO and ISO will prepare a document for the next session updating all the methods of analysis in the standards elaborated by the Committee (see para. 20).
3. Data marking provisions
230. The Danish secretariat in the light of decisions taken at the 10th session of the Committee (ALINORM 79/16, paras. 68-80) (see paras. 18 and 19), will prepare a document for the next session *on* provisions for date marking in all the standards elaborated by the Committee.
4. Provision for contaminants
231. The Committee noted that the Commission had requested all the commodity committees to include provisions for contaminants in their standards and it agreed to carry out a similar exercise as had the Codex Committee on Processed Fruits and Vegetables, to collect data from different countries on i) the actual levels of contaminants present in processed meat and poultry products and ii) legislative control in the different countries on contaminant levels in processed meat and poultry products. Based on the information obtained a background document would be prepared for discussion at the next session by the Danish Secretariat (see paras. 13-15).
5. Carry-over principle

232. FAO would prepare for the next session a document on the application of carry-over principle for food additives to processed meat and poultry products (see paras 22-23).

6. Process requirements of Annex A to the Code of Hygienic Practice for Processed Meat and Poultry Products

233. The representative of the ICMSF referred to the provision in Annex A of the Code of Hygienic Practice for Processed Meat and Poultry Products, in which it is stated under paragraph a) that "the temperature and duration of processing of specific formulations should be based on the recommendation of technical specialists competent in canning technology". In his opinion there was a need for recommendations - either general or specific - on processing shelf-stable canned cured meats where safety and stability were based not only on heat processing but also other important parameters such as the content of salt and nitrite, the microbial load of the raw material, and the nature of the other ingredients.

234. The representative of ICMSF suggested to the Committee that the elaboration of recommendations, guidelines or a code of practice on heat processing of shelf-stable canned cured meats would not only be of assistance to processors but also to legislators. The Committee agreed that a real need exists for a technical consideration of the subject, but, however, felt that it should not take up the responsibility of the task since it did not have the required specialist expertise. The problems involved in the exercise were not only microbiological but also technological; and the possible interactions between preservation factors and microbial load poses a complex problem.

235. The Committee noted that the Milk Committee had initiated work on defining heat treatments related to milk products. It also noted that Annex A was directed only to rigid containers and felt that it would need to be extended to flexible packages. The Committee was of the firm opinion that there was a need to review the current situation with regard to both the technology and the microbiological aspects of the processing of canned, cured, heat treated meat products and strongly recommended that a consultant be sought to prepare a paper for consideration by the Committee at its next session.

OTHER BUSINESS (Agenda Item 13)

236. The Spanish Delegation, on behalf of the "Comisión Interministerial de la Ordenación Alimentaria" and supported by Argentina, Mexico, Paraguay, Portugal and Brazil, proposed that Spanish may be adopted as an additional working language for the future sessions of the Codex Committee on Processed Meat and Poultry Products. The Danish secretariat explained that this would involve additional financial and administrative burdens on them and asked the Spanish delegation to reconsider its proposal. The delegation of Spain agreed to this proposal

DATE AND PLACE OF NEXT MEETING (Agenda Item 14)

237. The next session of the Committee would be held in Copenhagen before the 16th session of the Codex Alimentarius Commission at a date to be determined by the Danish Government in consultation with the Codex Secretariat.

LIST OF PARTICIPANTS

LISTE DES PARTICIPANTS

LISTA DE PARTICIPANTES

ARGENTINA

ARGENTINE

Mr. Roberto F. Read
Economic & Commercial Councillor
Argentine Embassy
Economic Section
Kastelsvej 15
DK-2100 Copenhagen Ø, Denmark

AUSTRALIA

AUSTRALIE

Mr. Laurie Erwin
Principal Executive Officer
Department of Primary Industry
Canberra, ACT, Australia

Dr. Boris Dobrenov
Technical Coordinator
'National Meat Cannery Association of
Australia
Blunder Rd., Brisbane, Australia

Mr. Ralph Hood
Director European Region
Australian Meat & Livestock Corp.
9 Kingsway
London WC2B GXF, England

Dr. Miles Cooper
Counsellor (Veterinary Services)
Australian Embassy
Ave. Des Arts 51/52
B-1040-Brussels, Belgium

BAHRAIN

Mr. Ali Al-Askari
Superintendent of Food Hygiene
Ministry of Health
P.O. Box No. 42
Bahrain

BELGIUM

BELGIQUE

BELGICA

Dr. Gabriel Vandenbrande
Inspecteur van de Vleeshandel,
Ministerie van Volksgezondheit
Driekoningenstraat 75
B-8100 Tourhout, Belgium

Mr. Marcel Meyers
Premier Adjoint Technique Ministere
des Affaires Economiques de
Meeussquare 23 B-1040 Brussels,
Belgium

Mr. Arnold van Hecke
Manager Regulatory & Legal Affairs
Purina Protein Europe
391, Avenue Louise
B-1040 Bruxelles, Belgium

BOTSWANA

Mr. Daniel Bolaane
Cannery Manager
Botswana Meat Commission
Box 400
Lobatse, Botswana

Mr. William T. Harvey
General Manager
Botswana Meat Commission
P/Bag 4
Lobatse, Botswana

Mr. Ian MacLauchlan
Veterinary Officer
Botswana Government
P/Bag 12
Lobatse, Botswana

BRAZIL

BRESIL

BRASIL

Mr. José Augusto Peixoto
Veterinarian
Secretaria de Inspecao de Produto
Animal
Ministerio da Agricultura
Anexo 4 Andar Ala Leste
70.000-Brasilia, Brazil

Mr. V. Carneiro Sobrinho
Veterinarian
Secretaria de Inspecao de Produto
Animal
Ministerio da Agricultura
Anexo 4 Andar Ala Leste
70.000-Brasilia, Brazil

CANADA

Dr. Frank Tittiger
Chief, Meat Safety
Canada Agriculture
2255 Carling Avenue
Ottawa, Ontario K1A 0X9, Canada

CZECHOSLOVAKIA

Mr. Drahoslav Klima
Research Worker
Min. of Agriculture of CSSR
Meat Research Institute Brno
Palackeho 1-3
612 00 Brno, CSSR

DENMARK DANEMARK DINAMARCA

Mr. Borge Sorensen
Food Technologist
Danish Meat Research Institute
Maglegaardsvej 2
DK-4000 Roskilde, Denmark

Mr. Kaj Haaning
Senior Veterinary Officer
Veterinaer direktoratets Laboratorium
Postbox 93
DK-4100 Ringsted, Denmark

Mr. Knud Pedersen
Chief Technologist
Danish Meat Products Laboratory
Howitzvej 13
DK-2000 Copenhagen F, Denmark

Mr. N.J. Damm Rasmussen
Head of Dep.
ESS-FOOD
Axelborg, Axeltorv 3
DK-1609 Copenhagen V, Denmark

Mr. Finn Ove Sørensen
Veterinarian
ESS-FOOD
Axelborg, Axeltorv 3
DK-1609 Copenhagen V, Denmark

Mr. K.B. Jørgensen
Food Technologist
Danish Meat Canners Association
Axelborg, Axeltorv 3
DK-1609 Copenhagen V, Denmark

Tove Kjeldsen
Food Technologist
Royal Dane Ltd.
Postbox 156
DK-7500 Holstebro, Denmark

Mr. Anton K. Petersen
Head of Office
Axelborg, Axeltorv 3
DK-1609 Copenhagen V, Denmark

Birthe Lykke Sørensen
Food Technologist
Forsoegsfjerkraeslagteriet
Smoerkildevej 8
DK-3400 Hillarøed, Denmark

Mr. Finn Gaarden Jensen
Food Technologist
Danish Home Economic Council
Amagerfaelledvej 56
DK-2300 Copenhagen S, Denmark

EGYPT, Arab rep. Of
EGYPTE, Rep. arabe d'
EGYPTO, Rep arabe de

Mr. Ezzat Ismail
General Manager
General Poultry Company
Ministry of Agriculture
Misr Insurance Building
P.O. Box 2131 Dokki,
Cairo, Egypt

Mr. Salah El Din El Mahdy
Chairman of General Poultry Co.
Ministry of Agriculture
General Poultry Company
Giza - Dokki Street
Cairo, Egypt

FINLAND
FINLANDE
FINLANDIA

Dr. Esko Nurmi
Director National Veterinary Institute
P.O. Box 368
00100 Helsinki 10, Finland

Dr. Kalevi Salminen
Head of Food Division
National Board of Trade and Consumer
Interests
Box 9
00531 Helsinki 53, Finland

FRANCE
FRANCIA

M. Marcel Gambon
Vétérinaire Inspecteur en Chef
Ministere de l'Agriculture
Direction de la Qualité
44 Boulevard de Grenelle
75732 Paris Cedex 15, France

M. André Terral
Inspecteur de la Repression de Fraudes
et du Controle de la Qualité
Ministere de la Consommation
44 Boulevard de Grenelle
75732 Paris Cedex 15, France

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

Dr. Heinrich Winter
Oberregierungsrat
Federal Ministry of Youth,
Family and Health
Deutschherrenstr. 87
5300-Bonn 2, Germany Fed. Rep. of

Dr. Gerhard Baumgartner
Regierungsdirektor
Federal Ministry of Food,
Agriculture and Forestry
Postfach 14 02 70
D-5300 Bonn 1
Germany, Fed. Rep. of

Dr. Klaus Gerigk
Director und Professor
Federal Health Officer
P.O. Box 330013
D-1000 Berlin West 33, Germany, Fed.
Rep. of

Dr. Wolfgang Armeth
Wissenschaftlicher Oberrat
Federal Meat Research Center
E.-C.-Baumann-Strasse 20
D-8650 Kulmbach, Germany, Fed. Rep.
of

GREECE
GRECE

Dr. Marie Georgouli
Chimiste
Laboratoire Generale de Chimie
Ministere de Finances
16, rue Anast. Tsocha
Athenes-602., Greece

Mr. Costantino Lardas
Dz. Technology Food Veterinary
Science
Fonctions Min. Agricultur
Achonnou 2, Athens, Greece

HUNGARY
HONGRIE
HUNGARIA

Mr. Otto Noske
Chemical Engineer
Central Laboratory for Meat and Meat
Products
1397 Budapest
V. Szechenyi rkp. 6, Hungary

Mr. Laszlo Felsö
Director
Teriapex Foreign Trading Company
Budapest V Karolyi M.u. 9
Hungary

IRELAND
IRLANDE

Mr. Francis Kenny
Veterinary Inspector
Dep. of Agriculture
Veterinary Research Laboratory
Abbotstown, Co. Dublin, Ireland

ITALY

Mr. Leonello Urbanelli
Dirigente Superiore Veterinario
Ministero Sanita
Direzione Generale Igienealimentie
Nutrizione
I-00 144 Roma, Italy

MEXICO

Dr. José Luis Perez-Gil Chanona
President of the Mexican Food
Industries Council
Canacindra
Ay. San Antonio 256
Mexico 18, D.F.
Mexico

NETHERLANDS

PAYS-BAS

PAISES BAJOS

Dr. Frederik H. Pluimers
Senior Veterinary Officer
Veterinary Service
Ministry of Agriculture and Fisheries
Bezuidenhoutseweg 73
2500 EK The Hague, Netherlands

Dr. Klaas Büchli
Ministry of Public Health and
Environmental Hygiene
Dr. Reyersstr. 10
Leidschendam, Netherlands

Dr. Wouter C.M. Van den Heuvel
Ministry of Agriculture & Fisheries
Direktie Voedings en Kwaliteits-
aangelegenheden
P.O. Box 20401
2500 EK The Hague, Netherlands

Dr. Johannes Schouwenburg
Dutch Meat and Livestock Board
P.O. Box 5805
2280 HV Rijswijk (Z.H.), Netherlands

Dr. Nicolaas G. Westerink
Chief of Laboratory
B.V. Export Centrale "Boxtel"
P.O. Box 1
2580 AA Boxtel
The Netherlands

NEW ZEALAND
NOUVELLE-ZELANDE
NUEVA ZELANDIA

Dr. A.I. McKenzie
Veterinary Attaché
New Zealand High Commission
New Zealand House
Haymarket, London, England

NORWAY

NORVEGE

NORUEGA

Mr. John Race
Head of Section
Norwegian Codex Alimentarius
Committee
P.O. Box 8139 Dep.
Oslo 1, Norway

Mr. Knut Framstad
Senior Scientific Officer
Directorate of Health
P.O. Box 8128 Dep.
Oslo 1, Norway

PARAGUAY

Mr. Bernardo Garcete Saldívar
Cónsul
Ministry of Foreign Affairs
Asuncion, Paraguay

POLAND

POLOGNE

POLONIA

Mr. Stanislaw Piechota
Meat Expert
Ministry of Foreign Trade
Quality Inspection Office
32/34 Zurawia str.
Warsaw 00-950, Poland

PORTUGAL

M. Joao Manuel Verissimo Cavaco
Chef de Division
Institut de Qualité Alimentaire
R. Sociedade Farmaceutica, 39
1100 Lissabon, Portugal

SOUTH KOREA

Mr. Shin Chung
First Secretary
Embassy of the Republic of Korea
Dronningens Tvaergade 8
DK-1302 Copenhagen K, Denmark

Mr. Yoo Kyung Shin
Manager of the Korea Trade Center
Noerregade 40, 1st
DK-1165 Copenhagen K, Denmark

SPAIN

ESPAGNE
ESPANA

Mr. Francisco Montalvo
Jefe Servicio Alimentos Origen Animal
Ministerio Sanidad y Consumo
Paseo Del Prado 18-20
Madrid 14, Spain

Mr. Justo Nombela
Servicio Mercado Productos Origen
Animal
Min. Agricultura & Alimentacion
Paseo Infanta Isabel 1
Madrid 7, Spain

Mr. Jesus Nicolau Medina
Director Gral. Control de Calidao
Ctra. Masia del Juez, KM.3 - N°60
Apartado Correos N. 21
Torrente (Valencia), Spain

Margarita Rivera
Commercial Attaché
Spanish Embassy
Commercial Office
H.C. Oerstedsvej 7 B
DK-1879 Copenhagen V, Denmark

SWEDEN

SUEDE
SUECIA

Mr. Olof Ågren
Deputy Head Food Standards Division
Codex Secretariat
National Food Administration
Box 622
751 26 Uppsala, Sweden

Mr. Sven Jansson
Chief Government Inspector
Swedish National Food Administration
Box 622
S-751 26 Uppsala, Sweden

Dr. Bengt Eriksson
Veterinarian
Co-operative Union and Wholesale
Society
Box 15200
S-104 65 Stockholm, Sweden

Mr. Christian Nickels
Section Leader, Quality Control
Manager
Swedish Meat Research Inst.
P.O.B. 504
S-244 00 Kävlinge, Sweden

Mr. Lars Rune Wahlstedt
Managing Director
Co-operative Union and Wholesale
Society
Box 15200
S-104 65 Stockholm, Sweden

SWITZERLAND

SUISSE
SUZA

Mr. Pierre Rossier
Head of Codex Alimentarius Section
Federal Office of Public Health
Haslerstrasse 16
CH-3008 Berne, Switzerland

Mr. Friedrich von Beust
Technical Adviser
Société d'assistance Technique
pour Produits Nestle S.A.
Case Postale 88
CH-1814 La Tour-de-Peilz, Switzerland

THAILAND

Mr. Tim Bhannasiri
Director General
Dept. Livestock Development
Ministry of Agriculture and Cooperatives
Bangkok,10400, Thailand

Dr. Wipit Chaisrisongkram
Chief, Vet. Public Health Section
Dept. Livestock Development
Ministry of Agriculture and Co-
operatives
Phya Thai Road
Bangkok 10400, Thailand

TUNIS
TUNISIE

Dr. Khaled Zarrouk
Chef du Service d'Experimentation
Animale
Institut de Nutrition
Bab Sadoun
Tunis, Tunisie

Mr. Mohamed Ali Essaied
Vétérinaire de la Societé
EL LOUHOUM
Route de Zafhouan
Tunis, Tunisie

Mrs. Amel Essaied
Docteur Veterinaire de la Societé
EL LOUHOUM
Route de Zafhouan
Tunis, Tunisie

UNITED KINGDOM
ROYAUME-UNI
REINO UNIDO

Mr. Brian Harding
Principal
Ministry of Agriculture, Fisheries & Food
Horseferry Road
London SW 1, England

Mr. I.M.V. Adams
Principal Scientific Officer
Ministry of Agriculture, Fisheries & Food
Great Westminster House
Horseferry Road
London SW1P 2AE, United Kingdom

Mr. Norman Baird
Regional Veterinary Officer
Ministry of Agriculture, Fisheries & Food
Tolworth Tower, Surbiton, Surrey
United Kingdom

Mr. Edmund William Kingcott
Environmental Health Officer-DHSS
Dep. of Health and Social Security
Room. C 603, Alexander Fleming House
Elephant & Castle
London SE1 6BY, United Kingdom

Mr. Ronald Sawyer
Superintendent Food & Nutrition
Laboratory of the Government Chemist
Cornwall House
Stamford Street
London SE1 9NQ, United Kingdom

Mr. Peter O. Dennis
Food Technologist
Brooke Bond Group
Trojan Way, Purley Way
Croydon, Surrey CRO 4XL. United
Kingdom

Mr. John Locke
Executive Chairman B.M.M.A.
Bacon & Meat Manufacturers
Association
19, Cornwall Terrace
London NW1 4QP, United Kingdom

Dr. Alfred McMullon Taylor
Technical Consultant
C Shippam Ltd.
East Walls
Chichester, Sussex, United Kingdom

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

Mr. L.L. (Lou) Gast
Associate Administrator
Food Safety and Inspection Service
U.S. Department of Agriculture
Washington D.C. 20250 USA

Mr. Russel Cooper
Soy Protein Council
835 South 8th Street
St. Louis
Missouri 63164, USA

Mr. Irwin Fried
Consultant
American Meat Institute
Pacific Coast Meats Beehive Machinery
905 N.E. Bethany Beach
D.E. 19930, USA

YUGOSLAVIA
YUGOSLAVIE

Miss Gordana Vojinović
Research fellow
Yugoslav Institute of Meat Technology
Kaéanskog 13
11000 Beograd, Yugoslavia

OBSERVER
OBSERVATEUR
OBSERVADOR

SOUTH AFRICA, Rep. of
AFRIQUE DU SUD, Rép. de l'
SUDAFRICA, Rep. de

Mr. Gideon Johannes Joubert
Principal Scientist
Food Inspection Division
South African Bureau of Standards
Private Bag X191
Pretoria 0001, South Africa

INTERNATIONAL ORGANIZATIONS
ORGANISATIONS INTERNATIONALES
ORGANIZACIONES
INTERNACIONALES

CENTRE DE LIAISON DES
INDUSTRIES TRANS-FORMATRICES
DE VIANDES DE LA COMMUNAUTE
EUROPEENNE (CLITRAVI)

M. Hendrik Willem Hesselink
c/o Centre de Liaison des Industries
Transformatrices de Viandes de la CEE
(CLITRAVI)
Avenue de Cortenberg, 172
B-1040 Bruxelles, Belgium

M. Etienne de Vos
c/o Centre de Liaison des Industries
Transformatrices de Viandes de la CEE
(CLITRAVI)
Avenue de Cortenberg, 172
B-1040 Bruxelles, Belgium

EUROPEAN ECONOMIC
COMMUNITIES (EEC)

Mr. Willem Daelman
Veterinary Administrator
EEC
Rue de la Loi 170
1048 Bruxelles, Belgium

M. Luciano Robotti
Administratur
Secretariat General du Conseil des C.E.
Rue de la Loi 170
1048 Bruxelles, Belgium

EUROPEAN VEGETABLE PROTEIN
FEDERATION (EUVEPRO)

Mr. Michael Martin
Secretary-General
EUVEPRO
19 Rue de L'Orme
B-1040 Bruxelles, Belgium

INTERNATIONAL COMMISSION ON
MICROBIOLOGICAL
SPECIFICATIONS FOR FOODS
(ICMSF)

Dr. Bent Simonsen
Veterinarian
Danish Meat Products Laboratory
Ministry of Agriculture
Howitzvej 13
DK-2000 Copenhagen F, Denmark

INTERNATIONAL INSTITUTE OF
REFRIGERATION (IIR)

Dr. Mogens Jul
Institut International du Froid
177, Bd. Maiesherbes
F 75017 Paris, France

INTERNATIONAL ORGANIZATION OF
CONSUMERS UNIONS (IOCU)

Mrs. Jette Juul Jensen
Cand.. pharm.
International Organization of Consumers
Unions
Koebmagergade 7
DK-1150 Copenhagen K, Denmark
INTERNATIONAL ORGANIZATION
FOR STANDARDIZATION (ISO)

Dr. Herman Schipper
International Organization for
Standardization (ISO)
P.O. Box 5059
2600 GB Delft, Netherlands

DANISH SECRETARIAT
SECRETARIAT DANOIS
SECRETARIADO DANES

Mrs. Anne Brincker x)
Assistant Director (Legislation)
Danish Meat Products Laboratory
Ministry of Agriculture
Howitzvej 13
DK-2000 Copenhagen F, Denmark

x) Chairman
President
Presidente

Mrs. Bente Rasmussen
Food Scientist
Danish Meat Products Laboratory
Ministry of Agriculture
Howitzvej 13
DK-2000 Copenhagen F, Denmark

FAO

Mr. N. Rao Maturu
Food Standards Officer
Food and Agriculture Organization
Viandelle Terme di Caracalla
00100 Rome, Italy

Mr. James M. Hutchinson
Food Standards Officer
Food and Agriculture Organization
Via delle Terme di Caracalla
00100 Rome, Italy

WHO

OMS

Dr. A. Koulikovskii
Food Hygienist, WHO, Ph. D.
Avenue Appia
1211 Geneva, Switzerland

Mrs. Barbro Blomberg
Regional Officer for Food Safety
WHO Regional Office for Europe
Scherfigsvej 8
DK-2900 Copenhagen Ø, Denmark

DRAFT CODE OF PRACTICE FOR THE PRODUCTION, STORAGE AND
COMPOSITION OF MECHANICALLY SEPARATED MEAT AND POULTRY MEAT
INTENDED FOR FURTHER PROCESSING

(At Step 8 of the Procedure)

NOTE

1. In the preparation of this Code recognition has been given to the need to avoid precluding the adoption of new technical developments provided these are consistent with the hygienic production of wholesome meat
2. This code should be read in conjunction with the Recommended International Code of Hygienic Practice for Processed Meat Products (CAC/RCP 13-1976).

Scope

This code of practice describes the procedure for mechanical separation of raw meat and raw poultry meat from bones, carcasses or parts of carcasses including the conditions for storage and handling of raw materials and separated meat as well as the composition of the separated meat to be used for further processing in meat products.

Raw material

1. Only bones, carcasses or parts of carcasses from slaughter animals or from poultry which have been approved for human consumption should be used. Skulls should not be used.

Treatment of bones prior to mechanical separation

2. Bones, carcasses or parts of carcasses should be kept or transported at time/temperature combinations that will ensure their hygienic acceptability when used for mechanical separation.

CCP-note: From the time of boning to the time of mechanical separation, bones should be kept under such conditions that they would be of good microbiological quality and fit for separation. This would normally include storage under temperature controlled conditions. To allow for variation in technology and since different time-temperature combinations may be suitable, no single time-temperature requirement is suggested. The following offers a choice of acceptable time-temperature conditions; however, other intermediate combinations may be used:

- (a) maintained at 10°C and mechanically separated within 5 hours of boning; or
- (b) chilled to 4°C and mechanically separated within 72 hours of boning; or
- (c) chilled to -2°C and mechanically separated within 120 hours of boning; or
- (d) immediately placed in a freezer and frozen within 48 hours of boning.

For microbiological reasons the combinations under (a) and (b) may not be stringent enough for poultry carcasses and bones, and for some other

carcasses or bones where the meat after separation is not heat-treated. The time and temperature during storage before separation should be regularly monitored.

Mechanical separation process

3. The separation process should be carried out in such a way that bones and mechanically separated meat do not accumulate in the processing room in excess of good manufacturing practice. The temperature in the processing room should be controlled and held suitably low. The separated meat should be identified according to the species.
4. Unless mechanically separated meat is used directly after the separation process as an ingredient of a meat product, it should be cooled down to a maximum of +4°C in conjunction with the deboning process or immediately afterwards.

Treatment of mechanically separated meat

5. Frozen Mechanically separated meat should be kept in a manner to prevent microbial growth and retard oxidative deterioration. Mechanically separated meat should be stored or transported in a hygienically acceptable manner. If it is not frozen immediately the material should be kept at a temperature of +4 C or 'below measured in the meat and should be used for further processing within 48 hours.

Hygiene of equipment

6. Dismantling, cleaning and disinfection of separation equipment should be carried out in accordance with section 34(f) of the Recommended International Code of Hygienic Practice for Processed Meat Products (CAC/RCP 13-1976).

Compositional standard

7. The bone content should be reduced to the minimum level consistent with current technology. On this basis the calcium content expressed on dry matter should not exceed 1.5%.

SAMPLING AND INSPECTION PROCEDURES FOR MICROBIOLOGICAL
EXAMINATION OF MEAT PRODUCTS IN HERMETICALLY SEALED CONTAINERS

(At Step 6 of the Procedure)

(Annex C of Code of Hygienic Practice for Processed Meat Products (Ref. No.
CAC/RCP 13-1976))

Preface

1. To control the safety and stability of large consignments of meat products in hermetically sealed containers by microbiological tests would require examination of more containers than laboratory facilities and personnel are likely to be able to handle, and would lead to considerable wastage of product. Detection of botulism through microbiological testing is unlikely.
2. Better knowledge of safety and stability can be gained from data on production, control and heat treatment provided by the processing establishment, and of the water supply. Reliance may also be placed on knowledge of the product of an establishment gained from experience of previous shipments from that source. If such data are adequate and satisfactory, testing may be dispensed with. The controlling authority might nevertheless decide to carry out periodic examinations of shipments presented at the port of entry in cases where factory data are satisfactory.
3. The integrity of hermetically sealed containers is critical to the safety of the product. Where shipments are examined, a careful examination should therefore be made for container integrity.
4. Where shipments are examined care should be taken not to damage the containers, as this could place safety of the consignment at risk. Damage to the containers in a sample could lead to unjustified rejection of a consignment.
5. As indicated in 1. the probability of finding a microbiological hazard leading to a public health risk (e.g. botulism) by sampling is remote. For shelf-stable heat-processed meat products this document merely indicates the probabilities of obtaining defective samples in lots with different proportions of these being defective. The sampling procedures are investigational, i.e. when there is a reason to suspect improper processing or risk of post-processing contamination. Examinations could be performed on cans taken directly from the lot on arrival in a port of entry or after an adequate incubation period. For non-shelf-stable heat-processed meat products a sampling plan involving microbiological examinations and guidelines is proposed. This is also to be used when there is reason to suspect improper processing or risk of post-processing contamination. As the main reason for suspicion for these products is temperature abuse after processing during transportation and storage, a sampling plan involving a smaller number of samples will suffice.

SECTION I - Scope

1. These sampling and inspection procedures are guidelines to be used in international trade for investigational purposes for lots of meat products in hermetically sealed containers, which have been heat-treated after packaging.

2. The procedures apply, where the controlling authority has reason to suspect that the lot is unsatisfactory. The procedures under A. apply to shelf-stable products, and those under B. to non-shelf-stable products.

SECTION II - References

1. Recommended International Code of Hygienic Practice for Low-Acid and Acidified Low- Acid Canned Foods. (ALINORM 79/13A, Appendix IV).
2. Annex A of Recommended International Code of Hygienic Practice for Processed Meat Products: Preservation of Meat Products in Hermetically Sealed Rigid Metal Containers (CAC/RCP 13-1976).

SECTION III - Definitions

1. "Lot" is a quantity of food produced under essentially the same conditions, all containers of which would normally bear a lot number that identifies the production during a particular time interval, and usually from a particular line, retort or other critical processing unit.
2. "Reject" shall be interpreted in the sense described in General Principles for the Establishment and Application of Microbiological Criteria for Foods (Codex Alimentarius Food Hygiene Committee)*

* When a product is rejected there are in principle several options as to the action to be taken, depending on the findings and the circumstances. Such options include sorting, reprocessing (e.g. by heating), and destruction, and may need to be specified. In deciding on the option the major consideration should be to keep to a minimum risk that unacceptable food reaches the consumer. However, food must not be needlessly destroyed nor declared unfit for human consumption.

SECTION IV - Procedure

A. Shelf-stable meat products, heat-treated after packaging

1. The inspecting agency will assess the number of samples to be taken according to the expected hazard and the feasibility of inspecting the number of samples required. The following table is meant to guide the inspecting agency in its choice of sampling plans, but is in no way restrictive, as numbers of samples outside the range given, or between the numbers may be useful for different purposes, where investigational sampling is employed.

The probability of obtaining one or more defectives in a sample of (n) subsamples (sample units) with proportion (p) of the lot defective

Number of sample traits (e.g. one) examined per staple	Proportion of the lot that is defective			
	0.01	0.001	0.0001	0.00001
	Probability of detecting one or more defectives			
200	0.87	0.18	0.02	0
1000	1.00	0.63	0.10	0.01
2000	1.00	0.86	0.18	0.02
3000	1.00	0.95	0.26	0.03
4000	1.00	0.98	0.33	0.04
5000	1.00	0.99	0.39	0.05

B. Non-shelf-stable meat products, heat-treated after packaging

1. For non-shelf-stable meat products five containers are inspected visually and the contents subjected to microbiological examination. Depending on the results obtained

and any other relevant information on the lot it may be passed, rejected or set aside for further investigation.

2. Technique:

- (a) Sample 5 containers from the warmer places in the lot and examine for visual defects.
- (b) Identify the 5 sample containers mentioned under (a) in a proper manner and send them to a laboratory for microbiological examination. The transportation should take place under refrigeration, 10 C or less.
- (c) In the laboratory draw test portions from the 5 sample containers with aseptic precautions, so as to obtain one test portion from the centre of each container and one test portion from the periphery of each container.
- (d) Examine the 2x5 test portions for aerobic plate count. Use ISO Standard (IS 2293) - Aerobic Count at 30°C (Reference Method).
- (e) Examine the 2x5 test portions for anaerobes (method to be developed).
- (f) Reject if any of the 10 test portions has an aerobic plate count exceeding 10.000 per gramme. Also reject if test portions from the centre or the periphery of 3 or more of the containers show an aerobic plate count higher than 1000 per gramme.
- (g) Also reject if anaerobic count is higher than [.....].
- (h) In case of rejection an investigation for specific organisms might be indicated.

Proposal for revised version of the
Recommended International Code
of Hygienic Practice for Processed
Meat Products (CAC/RCP 13-
1976)

PROPOSED DRAFT CODE OF
HYGIENIC PRACTICE FOR PROCESSED MEAT AND POULTRY PRODUCTS

(at Step 5 of the Procedure)

Explanatory Preface

- A. The Code has, as far as possible, been made consistent with the lay-out and content of the General Principles of Food Hygiene.
- B. The Hazard Analysis Critical Control Point (HACCP) System has been applied to the Code.

The HACCP System consists of: (1) an assessment of hazards associated with growing harvesting, processing/manufacturing, marketing, preparation and/ or use of a given raw material or food product; (2) determination of critical control points required to control any identified hazard(s); and (3) establishment of procedures to monitor critical control points.

The critical control points have been identified in the Code and explanatory notes describing the risk and giving the type and frequency of controls to be applied have been inserted in connection with the relevant paragraphs (marked as CCP-Notes).

- C. In the preparation of this Code recognition has been given to the need to avoid precluding the adoption of new technological developments provided these are consistent with the hygienic production of wholesome meat and meat products.
- When introducing new technology, care should be taken to ensure that it does not create hazards to health, e.g. new rapid methods for production of fermented sausages require special controls to prevent staphylococcal toxin formation.
- D. Properly trained inspectors and personnel and an adequate sanitary infrastructure are necessary in order to implement the Code satisfactorily.
- E. It should be noted that many small manufacturers, supplying a limited number of retail outlets only, do not package their meat products before sale. It is not possible for the Code to make special provisions for such premises and the application of the code to such manufacturers is left to the discretion of the special agency having jurisdiction in each country.
- F. If poultry meat and/or game meat is used in the manufacture of meat products, the provisions of this Code equally apply to such products.

SECTION I - SCOPE

This Code of Hygienic Practice, including the Annexes, applies to processed meat products. It contains the minimum requirements of hygiene in the production, handling,

packing, storing and transportation of processed meat products to assure a healthful and wholesome supply of such products.

SECTION II - DEFINITIONS

2.	For the purpose of this Code:	GP/PMP*
2.1	"Abattoir" means premises approved and registered by the controlling authority used for the slaughter of animals for human consumption.	/1
2.2	"Brand" means any mark or stamp approved by the controlling authority and also includes any tag or label bearing such mark or stamp.	/2
2.3	"Cleaning" means the removal of soil, food residues, dirt, grease or other objectionable matter.	2.2/3
2.4	"Contamination" means the direct or indirect transmission of objectionable matter.	/4
2.5	"Controlling authority" in relation to an establishment means the official authority charged by the government with the control of hygiene including inspection of meat and meat products.	/5
2.6	"Disinfection" means the reduction, without adversely affecting the food, by means of hygienically satisfactory chemical agents and/or physical methods, of the number of microorganisms to a level that will not lead to harmful contamination of meat and meat products.	2.4/
2.7	"Edible" means fit for human consumption.	/7
2.8	"Establishment" means any premises approved and registered by the controlling authority in which meat products are prepared, processed, handled, packed or stored.	/9
2.9	"Game meat" means any edible part including offals, derived from a game carcass processed in a game packing house, and passed by an inspector as fit for human consumption.	Game Code 11
2.10	"Hermetically sealed containers" mean containers which are designed and intended to protect the content against the entry of micro-organisms during and after heat processing, and which are impermeable to gas.	/10
2.11	"Ingredient" means any substance including food additives used in the manufacture or preparation of a meat product.	/11
2.12	"Inspector" means a properly trained officer appointed by the controlling authority of a country for the purpose of inspection of meat and meat products and supervision of meat hygiene	/12
2.13	"Lot" means a quantity of food produced under identical conditions, during a particular time interval, and usually from a particular line, retort or other critical processing unit.	/Annex C*
2.14	"Manager" in relation to an establishment includes any person for the time being responsible for the management of the establishment.	/13

2.15	"Meat" means the edible part of any mammal slaughtered in an abattoir.	/14
2.16	"Meat product" means a product intended for human consumption containing meat from mammals and/or poultry and/or game meat.	/15
2.17	"Packaging ¹¹ is the packaging of a wrapped meat product or products in a second container (as well as the container itself)	28/
2.18	"Packaging material" means containers such as cans, bottles, cartons, boxes, cases and sacks, or wrapping and covering material such as foil, film, metal, paper, wax-paper and cloth.	28/
2.19	"Potable water" means water that is pure and wholesome in accordance with WHO requirements contained in the "International Standards for Drinking water".	/18
2.20	"Poultry meat" means the edible part of slaughtered domesticated birds including chickens, turkeys, ducks, geese, guinea-fowls or pigeons.	/16
2.21	"Processed" includes all methods of manufacture and preservation but does not include prepackaged fresh, chilled or frozen meat cuts or joints.	/17
2.22	"Protective clothing" means special garments intended to prevent the contamination of meat and used as outer-wear by persons in an establishment and includes head coverings, footwear and gloves.	/19
2.23	"Unfit for human consumption", in relation to meat and meat products, means an article that would normally be edible but is not edible because of disease, decomposition or any other reason.	/20
2.24	"Wrapping" is the protection of the meat product by the use of an immediate wrapping or an immediate container in direct contact with the product concerned (as well as the immediate wrapper or the immediate container itself)	

* GP refers to paragraphs in the General Principles of Food Hygiene (ALINORM 79/13, App. II). PMP refers to paragraphs in the Code of Hygienic Practice for Processed Meat Products.

* modified version of definition in Annex C to PMP-Code. (ALINORM 81/16, App. II). This definition of lot will be brought into line with the CCPL definition of lot when decided.

SECTION III - ESTABLISHMENT; REGISTRATION, DESIGN AND FACILITIES

GP/PMP

3.1 Registration

Establishments should be approved and registered by the controlling authority.

/25

3.2 Location

Establishments should be located in areas not subject to regular and frequent flooding and free from objectionable odours, smoke, dust and other contaminants.

4.1/26(a)

3.3 Roadways and Areas Used by Wheeled Traffic

- 3.3.1 Such roadways and areas serving the establishment which are within its boundaries or in its immediate vicinity should have a hard paved surface suitable for wheeled traffic. There should be adequate drainage and provision should be made to allow for cleaning.

4.2/

- 3.3.2 Where appropriate, establishments should be so designed that access can be controlled.

. 4.3.10/

3.4 Buildings and Facilities

- 3.4.1 Establishments should provide adequate working space for the satisfactory performance of all operations.

4.3.2/26(b)

- 3.4.2 The construction should be sound and ensure adequate ventilation, good natural or artificial lighting and easy cleaning.

4.3.1/26(c)

- 3.4.3 The establishment should be laid out and equipped so as to facilitate proper supervision of meat hygiene including performance of inspection and control.

4.3.3/26(e)

- 3.4.4 The establishment should be of such construction as to protect against the entrance and harbouring of insects, birds, rodents or other vermin, as well as the entry of environmental contaminants such as smoke, dust etc.

4.3.4/26(f)

- 3.4.5 Buildings and facilities should be designed to provide separation, by partition, location or other effective means, between those operations which may cause cross-contamination.

4.3.5/26(g)

- 3.4.6 Every department in which meat products are prepared, processed or stored should be used at that time only for that purpose or for the preparation and storage of other edible products subject to the same conditions of hygiene. It should be physically separated from every area used for the handling of inedible material or for other purposes. If the departments are used for processing of non-meat products, the arrangements should be such that it can be ensured that there is no resultant contamination of the meat product.

/28(a)

- 3.4.7 Establishments should be laid-out and equipped so as to

/28(b)

ensure, that meat and meat products do not come into contact with floors, walls or other fixed structures, except those which are specifically designed for contact with meat.

3.4.8 The construction and lay-out of any chilling room, freezing room, freezer store or freezer should satisfy the requirements of this Code.

/27

3.4.9 In meat handling areas:

- Floors should be of water-proof, non-absorbent, washable, non-slip and non-toxic materials, without crevices, and should be easy to clean and disinfect. Where appropriate, floors should slope sufficiently for liquids to drain to trapped outlets.
- Walls should be of water-proof, non-absorbent, washable and non-toxic materials and should be light coloured. Up to a height appropriate for the operation they should be smooth and without crevices, and should be easy to clean and disinfect. Where appropriate, angles between walls, between walls and floors, and between walls and ceilings should be sealed and coved to facilitate cleaning.
- Ceilings should be so designed, constructed and finished as to prevent the accumulation of dirt and minimize condensation, mould development and flaking, and should be easy to clean. 4.3.7/26(h)
- Windows and other openings should be so constructed as to avoid accumulation of dirt and those which open should be fitted with insect screen. Screens should be easily movable for cleaning and kept in good repair. Internal window sills, if present, should be sloped to prevent use as shelves. 4.3.7/28(i)
- Doors should have smooth, non-absorbent surfaces and, where appropriate, be self-closing and close fitting. 4.3.7/28(j)
- Stairs, lift cages and auxiliary structures such as platforms, ladders, chutes, should be so situated and constructed as not to cause contamination to meat. They should be capable of being effectively cleaned. Chutes should be constructed with inspection and cleaning hatches. 4.3.7/28 (k, l, m)

3.4.10 The use of construction materials which cannot be adequately cleaned and disinfected, such as wood, should be avoided unless its use would clearly not be a source of contamination. 4.3.11/

3.4.11 Office accommodation should be provided for the use of the inspection service /30

3.5 Sanitary Facilities

3.5.1 Water Supply

- 3.5.1.1 An ample supply of potable water under adequate pressure should be available with adequate facilities for its storage, where necessary, and distribution, and with adequate protection against contamination.

4.4.1.1/28(d)

CCP-Note: Water should comply with the requirements contained in the WHO "International Standards for Drinking Water", and in particular those concerned with micro-organisms of enteric origin.

Samples should be taken regularly, but the frequency should depend upon the origin and the usage of the water, e.g. more frequent from private supplies than from public supplies, and more frequent from water used for cooling of canned meats than from water used for cleaning purposes. If chlorination has been employed checks should be made daily by chemical tests for available chlorine. The point of sampling should preferably be at the point of usage, but occasionally it would be useful to sample at the point of entry of the water in the establishment.

- 3.5.1.2 An adequate supply of hot potable water should be available at all times during working hours.

/28(f)

CCP-Note: This provision is intended to cover water for both cleaning purposes and the destruction of micro-organisms (especially those pathogenic to man), on knives, utensils etc. coming into direct contact with meat and meat products. For cleaning purposes the temperature of the water should be 65°C (for details see Annex I of the General Principles of Food Hygiene, ALINORM 79/13A, Appendix II). The hot water for disinfection purposes should be at 80 C and dispensed in such a way (e.g. in specially designed "boxes near the working area) that blades of knives etc. can be submerged in the water for an adequate contact time (no less than two minutes).

Often this water supply is separate from other hot water supplies used for cleaning, hand-washing etc. But if there is only one hot water supply the term "adequate" should mean that even at times where large amounts of hot water is used (e.g. during cleaning operations) the water supply from any tap in the establishment should not be decreased.

		GP/PMP
3.5.1.3	<u>Ice</u> should be made from potable water and should be manufactured, handled and stored so as to protect it from contamination.	4.4.1.2/28(e)
3.5.1.4	<u>Steam</u> used in contact directly with meat and meat products should be produced from potable water and contain no substances which may be hazardous to health or may contaminate the food.	4.4.1.3/
3.5.1.5	<u>Non Potable Water</u> used for steam production cooling of refrigeration equipment, fire control and other similar purposes not connected with meat products should be carried in completely separate lines, identifiable preferably by colour and with no cross connection with or back siphonage into the system carrying potable water.	4.4.1.4/28(d)(i)
3.5.2	<u>Effluent and Waste Disposal</u> Establishments should have an efficient effluent and waste disposal system. All effluent lines (including sewer systems) should be large enough to carry peak loads and should be constructed in such a manner as to avoid contamination of potable water supplies.	4.4.2/26(i)
3.5.3	<u>Facilities for Storage of Waste and Inedible Material</u> Facilities should be provided for the storage of waste and inedible material prior to removal from the establishment. These facilities should be designed to prevent access to waste or inedible material by pests and to avoid contamination of food, potable water, equipment or buildings on the premises.	4.4.8/26(g)
3.5.4	<u>Changing Facilities and Toilets</u> Adequate, suitable, and conveniently located changing facilities and toilets should be provided in all establishments. Toilets should be so designed as to ensure hygienic removal of waste matter. These areas should be well lit, ventilated and where appropriate heated and should not open directly on to food handling areas. Hand washing facilities with warm or hot and cold water, a suitable hand-cleaning preparation, and with suitable hygienic means of drying hands, should be provided adjacent to toilets and in such a position that the employee must pass them when returning to the processing area. Where hot and cold water are available mixing taps should be provided. Where paper towels are used, a sufficient number of dispensers and receptacles should be provided near to each washing facility. Taps of a non-hand operable type are preferable. Notices should be posted directing personnel to wash their hands after using the toilet.	4.4.3/29 (a, b)
3.5.5	<u>Hand Washing Facilities in Processing Areas</u> Adequate and conveniently located facilities for hand	4.4.4/29 (a, b)

washing and drying should be provided wherever the process demands. Where appropriate, facilities for hand disinfection should also be provided. Hand washing facilities should be equipped as under 3.5.4. The facilities should be furnished with properly trapped waste pipes leading to drains.

- 3.5.6.1 All rooms used for de-boning, preparing, packing or other handling of meat and meat products should be equipped with adequate facilities for cleaning and disinfecting implements, conveniently located for the use of personnel during operations. These facilities are for use exclusively in the cleaning and disinfection of knives, steels, cleavers, saws and other implements.
- 3.5.6.2 All facilities for cleaning and disinfecting implements should be of such nature and size as to permit proper cleaning and disinfection of implements. These facilities should be constructed of corrosion-resistant materials and should be capable of being easily cleaned.
- 3.5.6.3 All facilities for cleaning and disinfecting of implements should be fitted with suitable means of supplying hot water in sufficient quantity at all times while meat or meat products are being handled in that part of the establishment. 4.4.5/28(p)
- 3.5.7 Lighting
Adequate natural or artificial lighting should be provided throughout the establishment. Where appropriate, the lighting should not alter colours and the intensity should not be less than:
540 lux (50 foot candles) at all inspection points.
220 lux (20 foot candles) in work rooms.
110 lux (10 foot candles) in other areas.
Light bulbs and fixtures suspended over meat in any stage of production should be of a safety type and protected to prevent contamination of meat and meat products in case of breakage. 4.4.6/28(h)
- 3.5.8 Ventilation
Adequate ventilation should be provided to prevent excessive heat, steam condensation and dust and to remove contaminated air. The direction of the air flow should never be from a dirty area to a clean area. Ventilation openings should be provided with an insect screen or other protective enclosure of non-corrodible material. Screens should be easily removable for cleaning. 4.4.7/28(i)
- 3.6 Equipment and Utensils
- 3.6.1 Materials
All equipment, implements and utensils used in establishments which come into contact with exposed meat 4.5.1/31

and meat products should present a smooth impervious surface and be resistant to corrosion and should be made of material which is non-toxic, does not transmit odour or taste, is free from pits and crevices, non-absorbent and capable of withstanding repeated exposure to normal cleaning and disinfection. Such equipment should be so constructed that it may be easily cleaned.

- 3.6.2 Sanitary Design, Construction and Installation
- 3.6.2.1 All equipments and utensils should be so designed and constructed as to prevent hygienic hazards and permit easy and thorough cleaning and disinfection and, where practicable, be visible for inspection. Stationary equipment should be installed in such a manner as to permit easy access and thorough cleaning. 4.5.2.1/
- 3.6.2.2 Containers for inedible material and waste should be leak-proof, constructed of non-corrosive metal or other suitable impervious material which should be easy to clean or disposable and, where appropriate, able to be closed securely. 4.5.2.2/
- 3.6.2.3 All refrigerated spaces should be equipped with temperature measurement or recording devices. 4.5.2.3/
- 3.6.3 Equipment Identification
Equipment and utensils used for inedible materials or waste should be so identified and should not be used for edible products. 4.5.3/32

SECTION IV - ESTABLISHMENT: HYGIENE REQUIREMENTS

4.1 Maintenance

The buildings, rooms, equipment and all other physical facilities of the establishment, including drains, should be maintained in good repair and in orderly condition. Except for rooms where heat processing or cleaning operations are performed they should be free from steam, vapour and surplus water.

5.1/34(a)

4.2 Cleaning and Disinfection

- 4.2.1 Cleaning and disinfection should meet the requirement of this code. For further information on cleaning and disinfection procedures, see Annex I of the General Principles of Food Hygiene (ALINORM 79/13 A, App. II). Working rooms 5.2.1/34(g) should be kept clean.
- 4.2.2 Amenities provided for the use of employees and the inspection service including changing facilities, toilets and the inspection office space should be kept clean at all times. 5.2.5/34(b)
- 4.2.3 If rooms intended and most of the time used for the handling, preparation, processing, packaging or storage of meat and meat products are used for any other food preparation 5.2.2/34(c)

purposes, then cleaning and disinfection are necessary immediately before and after such use.

CCP-Note: Handling other foods in a room intended for handling of meat or meat products may adversely affect the microbiology of meat and meat products, and the handling of meat in a room that subsequently is used for a different food may adversely affect that food. Therefore it is advisable to separate these operations by cleaning and disinfection. The inspector in charge should satisfy himself that the cleaning and disinfection procedures are carried out every time there is such a change of use.

4.2.4 The temperature in rooms for boning-out and trimming should be controlled and held suitably low, unless cleaning practices of equipment and utensils are carried out at least every four hours.

/28(c), 34(d)

CCP-Note: Experience has shown that when unwrapped meat is handled on cleaned and disinfected surfaces, as will be the case at start of operation, the meat will contaminate the surfaces. If the temperature of the room is relatively high (above 10 C), microorganisms on the surface of the equipment will start to multiply and after some period of time (1-4 hours) the number of microorganisms on the surface will be contaminating the meat. To interrupt that cycle the surfaces should be cleaned at intervals of not more than 4 hours, unless room temperature is held below 10 C. Disinfection could be employed as well, provided residues of disinfectant is removed promptly. Inspection should ensure that the cleaning, the possible application of disinfectant, and the removal of such disinfectant is performed at the appropriate intervals. The temperature in temperature controlled rooms should be checked regularly.

4.2.5 To prevent contamination of meat and meat products, all equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws, mechanical instruments and containers should be cleaned at frequent intervals during the day and immediately cleaned and disinfected whenever they come into contact with diseased material, infective material or other wise become contaminated. They shall also be cleaned and disinfected at the conclusion of each working day.

5.2.2/34(f)

CCP-Note: Equipment, utensils etc. in constant contact with meat will be contaminated with microorganisms and proliferation of microorganisms on these will soon take place. This may adversely affect meat or meat products handled subsequently. Therefore cleaning is

necessary at frequent intervals during the day, at least after every break. A particular situation exists if e.g. a knife comes into contact with diseased material. Here a risk of infecting subsequent pieces of meat with pathogenic organisms is evident, and cleaning and disinfection should immediately be carried out. The purpose of cleaning and disinfection at the conclusion of each working day is i. a. to hinder the building-up of an undesirable, possibly pathogenic flora in the establishment. Monitoring should be done by regular inspection, preferably aided by microbiological testing.

- 4.2.6 If any skip or trolley or any container used in a department where edible material is handled enters an area where inedible material is handled it should be cleaned and disinfected immediately before re-entering the edible department. /34(j)

CCP-Note: Such practice should be restricted, but if it happens the inspector should check that cleaning and disinfection is carried out.

- 4.2.7 Immediately after the cessation of work for the day or at such other times as may be required, the floors and walls should be cleaned to remove contamination. Floor drains should be kept in good condition and repair with strainers 5.2.4/34(i), in place. 28(n)
- 4.2.8 Roadways and yards in the immediate vicinity of and serving the establishment should be kept clean. 5.2.6/

- 4.2.9 Adequate precautions should be taken to prevent meat and meat products from being contaminated during cleaning or disinfecting of rooms, equipment or utensils by water and detergents or by disinfectants and their solutions. Detergents and disinfectants should be suitable for the purpose intended and should be acceptable to the official agency having jurisdiction. Any residues of these agents on a surface which may come in contact with food should be removed by rinsing with potable water before the area or equipment is again used for handling meat and meat products. 5.2.3/34(k)

4.3 Hygiene Control Programme

It is desirable that each establishment in its own interest designates a single individual, whose duties are divorced from production, to be held responsible for the cleanliness of the establishment. His staff should be a permanent part of the organization or employed by the organization and should be well trained in the use of special cleaning tools, methods of dismantling equipment for cleaning and in the significance of contamination and the hazards involved. A permanent cleaning and disinfection schedule should be drawn up to ensure that all parts of the establishments are cleaned

5.3/50

appropriately and that critical areas, equipment and material are designated for cleaning and/or disinfection daily or more frequently if required.

4.4 Storage and Disposal of Waste

Waste material should be handled in such a manner as to exclude contamination of food or potable water. Precautions should be taken to prevent access to waste by pest Waste should be removed from the meat and meat products handling and other working areas at intervals and at least daily. Immediately after disposal of the waste, receptacles used for storage and any equipment which has come into contact with the waste should be cleaned and disinfected. At least daily the waste storage area should also be cleaned and disinfected.

5.5/28(g)

4.5 Exclusion of Domestic Animals

No animals are allowed to enter establishments.

5.6/36

4.6 Pest Control

4.6.1 There should be an effective and continuous programme for the control of insects, birds, rodents or other vermin. Establishments and surrounding areas should be regularly examined for evidence of infestation.

5.7.1/35 (a, b)

4.6.2 Should pests gain entrance to the establishment or surrounding areas, eradication measures should be instituted. Control measures involving treatment with chemical, physical or biological agents should only be undertaken by or under direct supervision of personnel who have a thorough understanding of the potential hazards to health resulting from the use of these agents, including those which may arise from residues retained in the product. Such measures should only be carried out in accordance with the recommendations of the official agency having jurisdiction and with the full knowledge of the inspector.

5.7.2/35(c)

4.6.3 Pesticides should only be employed if other precautionary methods cannot be used effectively. Only pesticides approved for use in an establishment by the competent authority should be used and the greatest care should be exercised to prevent any contamination of the meat or meat products, equipment or utensils. Before pesticides are applied all meat and meat products should be removed from the room and all equipment and utensils should be thoroughly washed prior to being used again.

5.7.3/35 (d, e)

4.7 Handling and Storage of Hazardous Substances

Pesticides or other substances which may represent a hazard to health should be labelled with a warning about their toxicity and use. Except as required for purposes of hygiene such substances which may contaminate meat and meat products, packaging materials and ingredients should be handled and stored in a part of the establishment which is

5.8/34(m),
35(f)

not used for the preparation, processing, handling, packing or storage of meat and meat products. They should be handled and dispensed only by authorized and properly trained personnel or by persons under strict supervision of trained personnel. Extreme care should be taken to avoid contamination of meat and meat products. However, materials employed in the construction and maintenance of an establishment may be used at any time with the approval of an inspector.

CCP-Note: Many substances used for the purpose of pest control, disinfection, painting etc. may contain substances harmful for man, and if they contaminate meat and meat products they may present a public health danger. The inspector should learn the potential danger of such substances to man, the storage of them and their use. He should discourage the use of such substances during operation, and satisfy himself that they -when used - do not leave any residues on meat and meat products or on surfaces or utensils that meat and meat products may contact.

4.8 Personal Effects and Clothing

Personal effects and clothing should not be deposited in food handling areas.

5.9/37(i)

4.9 Maintenance tools

Cleaning and maintenance tools and products should not be stored in a food handling area.

SECTION V. PERSONNEL HYGIENE AND HEALTH REQUIREMENTS

5.1 Hygiene Training

Managers of establishments should arrange for adequate and continuing training of every handler of meat and meat products in hygienic handling of meat and meat products and in personal hygiene so that they understand the necessary precautions to prevent contamination. Instructions should include relevant parts of this Code. For this purpose material elaborated by the controlling authority or the establishment in cooperation with the inspector should be used.

6.1/37(a)

5.2 Medical Examination

5.2.1 Persons who come into contact with meat and meat products in the course of their work should have a medical examination prior to their employment if the official agency having jurisdiction, acting on medical advice, considers that this is necessary, whether because of epidemiological considerations, the nature of the meat product prepared in a particular establishment or the medical history of the prospective meat or meat product handler. Medical examination of a meat or a meat product handler should be

6.2/37(b)

carried out at other times when clinically or epidemiologically indicated.

- 5.2.2 The manager of any establishment should, if required to do so by an inspector, produce for perusal by the inspector any medical certificate produced to the manager by an employee of the establishment.

/37(e)

5.3 Communicable Diseases

The management should take care to insure that no person, while known or suspected to be suffering from, or to be a carrier of a disease likely to be transmitted through meat and meat products or while afflicted with infected wounds, skin infections, sores or with diarrhoea, is permitted to work in any area in any capacity in which there is any likelihood of such a person directly or indirectly contaminating meat or meat products with pathogenic micro organisms. Any person so affected should immediately report to the management that he is ill.

6.3/37(c)

CCP-Note: Persons with infected wounds or skin infections may contaminate meat and meat products - even such in cans immediately after retorting - with staphylococci. Persons with diarrhoea and even symptomless carriers of microorganisms causing gastroenteritis may contaminate meat and meat products with salmonellae or other gastrointestinal pathogens. Such persons should not be allowed to handle meat and meat products even in closed containers, until the responsible medical authority has declared that they do not create a hazard to health.

5.4 Injuries

Any person who is cut or injured should discontinue working with meat and meat products and until he is suitably bandaged should not engage in any establishment in the preparation, handling, packing or transportation of meat and meat products. No person working in any establishment should wear exposed bandage unless the bandage is completely protected by a waterproof covering which is conspicuous in colour and is of such a nature that it cannot become accidentally detached. Adequate first-aid facilities should be provided for this purpose.

6.4/37(d)

CCP-Note: If unprotected, wounds become easily infected with pathogenic microorganisms like staphylococci. These may then subsequently contaminate meat and meat products. To prevent infection and contamination wounds should immediately be dressed with e.g. detectable bandage. Workers should be encouraged to report such accidents to the inspector.

5.5 Washing of Hands

Every person engaged in a meat and meat products handling area should wash his hands frequently and thoroughly with a suitable hand cleaning preparation under running warm potable water while on duty. Hands should always be washed before commencing work, immediately after using the toilet, after handling contaminated material, and whenever else necessary. After handling diseased or suspect materials hands should be washed and disinfected immediately. Notices requiring hand-washing should be displayed.

6.5/37(f)

CCP-Note: It should be the responsibility of management to arrange for easy access to hand-washing facilities - outside toilets, near the working area etc. Also management should motivate and instruct the employees in proper hand-washing. There should be adequate supervision to ensure compliance with this requirement.

5.6 Personal Cleanliness

5.6.1 Every person engaged in an area in an establishment where meat and meat products are handled should maintain a high degree of personal cleanliness while on duty, and should at all times while so engaged wear suitable protective clothing including head covering and foot-wear, all of which should be washable unless designed to be disposed of and which should be maintained in a clean condition consistent with the nature of the work in which the person is engaged.

6.6/37(g)

CCP-Note: In the establishment clothing may easily become contaminated with meat scraps, fat and blood. Besides being unaesthetic such contamination may give rise to microbial proliferation, which may affect adversely meat and meat products. At the end of a shift all protective clothing should be thoroughly washed and dried.

5.6.2 Aprons and similar items should not be washed on the floor. /37(g)

5.6.3 Such items should not be left on equipment in the working area. /37(j)

CCP-Note: Such items should preferably be deposited in locked safes, protected against vermin. Under no circumstances should they be left on implements in the working area.

5.7 Personal Behaviour

Any behaviour which can potentially contaminate the meat and meat products, such as eating, use of tobacco, chewing, spitting, should be prohibited in any part of an establishment used for the preparation, handling, packaging or transportation of meat and meat products.

6.7/37(k)

5.8 Gloves

Gloves if used in the handling of meat and meat products should be maintained in a sound and clean condition. The wearing of gloves does not exempt the operator from having thoroughly washed hands. Gloves should be made of an impermeable material except where their usage would be inappropriate or incompatible with the work involved. 6.8/37(1)

CCP-Note: Disposable gloves are to be preferred - to be changed as often as the work involved requires or at least after every break. Special care should be given to metal gloves. Such gloves should be cleaned and disinfected at least once a day.

5.9 Visitors

Every person who visits an area in an establishment where meat and meat products are handled should wear clean protective clothing. Visitors should observe the provisions recommended in paragraphs 4.8, 5.3, 5.4 and 5.7. 6.9/

5.10 Supervision

Responsibility for ensuring compliance by all personnel with all requirements of paragraphs 5.1 - 5.9 inclusive should be specifically allocated to competent supervisory personnel. 6.10/37(m)

SECTION VI - ESTABLISHMENT: HYGIENIC PROCESSING REQUIREMENTS

6.1 Raw Material Requirements

- 6.1.1 All meat used in the manufacture of meat products should have been produced in compliance with the provision of the Code of Hygienic Practice for Fresh Meat and should have been subjected to the inspection processes prescribed therein and in the Code for Ante-Mortem and Post-Mortem Inspection of Slaughter Animals. It should have been passed by an inspector as fit for human consumption. 7.1.2/21
- 6.1.2 Poultry meat should have been produced in compliance with the Code of Hygienic Practice for Poultry Processing and should have been passed by an inspector as fit for human consumption. 7.1.2/21
- 6.1.3 Game meat should have been produced in compliance with the Recommended Code of Hygienic Practice for Game, and should have been passed by an inspector as fit for human consumption. 7.1.2/
- 6.1.4 All other raw materials and ingredients - whether of animal, vegetable or other origin - should be fit for human consumption, and - if applicable - should have been produced in compliance with the provisions of a relevant Code of Hygienic Practice. 7.1.2/

CCP-Note: The provisions in 6.1.1 - 6.1.3 should ensure that a competent authority has inspected the origin and production of the meat, poultry meat or game meat to be used for the production of meat products. If he has

found that the raw material is fit for human consumption, he will mark it accordingly and may issue a certificate that should follow the consignment of the meat, poultry meat or game meat. The inspector or the manager in the establishment producing meat products should convince himself of the acceptability of the raw material by inspecting the marking, the accompanying certificate, if any, and the raw material itself. For other raw material, as referred to under 6.1.4 no previous inspection or certification may have taken place. In this case the inspector or the manager may accept the ingredient, if it is acceptable for human consumption or if it is found hygienically acceptable after testing as recommended under 6.1.5.

- 6.1.5 No meat, poultry meat, game meat or other ingredient which has undergone deterioration or any other process of decomposition or which has been contaminated with foreign matter, making it unfit for human consumption should be used for the processing and manufacture of meat products. Where necessary, laboratory tests should be made of the ingredients prior to their being moved into the production area of the establishment.

7.1.1
7.1.2/22-24

CCP-Note: Although passed for human consumption by an inspector the raw material may have undergone such changes, e.g. during transportation, that the inspector, the worker or the manager in the establishment producing meat products, may find that it is no longer fit for its intended use or for human consumption. He may then have several options: 1) to require it to be used for a different purpose; 2) to be removed from the establishment for a specified future use or 3) to require it to be destroyed in such a way that it never should be fit for inclusion into a food for human consumption} in cases where only superficial contamination has taken place, trimming of the contaminated part may suffice. For his decision the inspector or the manager may be guided by microbiological, chemical or physical analysis relative to the changes observed or suspected.

- 6.1.6 Raw materials and ingredients stored on the premises of the establishment should be maintained under conditions that will prevent spoilage, protect against contamination and minimize damage. Stocks of raw materials and ingredients should be properly rotated.

7.1.3/23

6.2 Prevention of Cross-Contamination

- 6.2.1 Effective measures should be taken to prevent contamination of meat or meat products by direct or indirect contact with material at an earlier stage of the process

7.2.1/40

- 6.2.2 Any persons handling raw materials or semi-processed meat products capable of contaminating the end product should not come into contact with any finished products unless and until they have cleaned and disinfected all utensils used by them and have changed all protective clothing worn by them during the handling of raw materials and semi-processed products which have come into contact with or have been soiled by the raw materials or semi-processed products. Hands and arms should always be washed thoroughly and disinfected after handling raw materials and semi-processed products prior to handling finished products. 7.2.2/
7.2.3/37(n)

CCP-Note: In most cases finished products have been subjected to a process that will reduce its microbial count, but e.g. after heat processing there could be a possibility for microorganisms contaminating the meat products. In this case microorganisms contaminating the meat product after heat processing will lack the competition from the meat's "natural" flora and may proliferate quickly. Such contamination may be derived from utensils and from hands, arms or clothing of personnel that have been working with raw materials or semi-processed meat products. For that reason it is important that they take any precautions for preventing the contamination of the finished, especially un-packaged product. In certain cases, e.g. after handling of a finished product as sausages with mould growth, workers should preferably not handle raw materials or semi-processed meats.

- 6.2.3 Equipment such as trays, vats, tables etc. should not be used interchangeably for raw products and processed products unless it is completely cleaned and disinfected before moving to the area designated for processed meat products. Exposed ready-to-eat or cooked products should not be stored in the same room with raw meat. 7.2.4/42

CCP-Note: The same situation as described in the note to 6.2.2 applies here.

- 6.2.4 The operation of de-boning and trimming should always be carried out as rapidly as possible and meat should not be allowed to accumulate in rooms used for de-boning and trimming. /43

CCP-Note: De-boning and trimming involve exposure of meat surfaces to contamination - from other meat and from equipment and utensils. Such contamination could be kept to a minimum by prompt removal of de-boned or trimmed meat - either to a cold store or to further processing.

- 6.2.5 Any cooking or smoking of meat products should be done in /34(e)

separate areas equipped for this purpose.

6.3 Use of Water

- 6.3.1 Without prejudice to 6.3.2 and 6.3.3 only potable water should be used in meat processing. 7.3.1/
- 6.3.2 Non-potable water may be used, with acceptance of the official agency having jurisdiction, for steam production, cooling of refrigeration equipment, fire control and other similar purposes not connected with meat products. 7.3.2/28(d)(ii)
- 6.3.3 Water re-circulated for re-use within an establishment should be treated and maintained in a condition so that no health hazard can result from its use. The treatment process should be kept under constant surveillance. Alternatively re-circulated water which has received no further treatment will be used in conditions where its use would not constitute a health hazard and will not contaminate either the raw material or the end-product. Re-circulated water should have a separate distribution system which can be readily identified. The acceptance of the official agency having jurisdiction should be required for any treatment process and for the use of re-circulated water in any process for meat products. 7.3.3/

6.4 Processing

- 6.4.1 Processing should be supervised by technically competent personnel. 7.4.1/
- 6.4.2 All steps in the production process, including packaging, should be performed without unnecessary delay and under conditions which will prevent the possibility of contamination, deterioration, or the development of pathogenic and spoilage microorganisms. 7.4.2/41

CCP-Note: Ideally a production process should be so designed that all steps are performed immediately after each other - in a continuous flow. If, however, for some reason delays are necessary, semi-manufactured products should during the delay be chilled to and held at temperatures below 10 C. Processing of meat often means a change of the state of the meat product so that it will be more susceptible to microbial attack. Exceptions are e.g. controlled drying and curing, processes that will reduce the potential for microbial growth. Otherwise time and temperature, under certain circumstances water activity, oxidation-reduction potential and the microbiology of the meat product should be regularly monitored.

- 6.4.3 Methods of preservation and necessary controls should be such as to protect against contamination or development of a public health hazard and against deterioration within the limits of good commercial practice. 7.4.4/

6.5 Packaging

- 6.5.1 No containers, equipment or utensils should be stored in any part of an establishment in which unwrapped meat or meat products are prepared, processed, handled, packed or stored, unless required for immediate use in that part. , /33
- 6.5.2 All packaging material should be stored in a clean and hygienic manner. The material should be appropriate for the meat product to be packed and for the expected conditions of storage and should not transmit to the product objectionable substances beyond the limits acceptable to the official agency having jurisdiction. The packaging material should be sound and should provide appropriate protection from contamination. 7.5.1/46 (a, b)
- 6.5.3 Meat product containers should not have been used for any purpose which may lead to contamination of the product. If necessary according to their origin containers should be inspected immediately before use to ensure that they are in a satisfactory condition and are cleaned or cleaned and disinfected; when washed they should be well drained before filling. Only packaging material required for immediate use should be kept in the packaging or filling area. 7.5.2/
- 6.5.4 Rough treatment of the containers should be avoided to prevent the possibility of contamination of the finished meat product. 7.4.3/
- 6.5.5 Meat products should be packaged in a manner which will protect them from contamination and deterioration under normal conditions of handling, transportation and storage. 7.5.3/46(c)
- 6.5.6 Lot Identification
Packaged meat products should bear a permanent marking in code or in clear to identify the producing factory and the lot 7.5.4/
- 6.5.7 Processing and Production Records
Permanent legible and dated records of pertinent processing and production details should be kept concerning each lot. These records should be retained for a period that exceeds the shelf life of the product, but unless a specific need exists they need not be kept for more than two years. Records should also be kept of the initial distribution by lot. 7.5.5/
- ## 6.6 Storage
- 6.6.1 Meat and meat products should be stored under such conditions as will preclude the contamination with and/or proliferation of microorganisms and protect against deterioration of the product or damage to the container. During storage, periodic inspection of the meat and meat products should take place to ensure that only meat products which are fit for human consumption are dispatched and that end product specifications should be 7.6/

complied with when they exist. The product should be dispatched in the sequence of the lot numbers.

- 6.6.2 The following provisions should apply where meat or meat products are placed in chilling rooms: /44(a)
 - 6.6.2.1 Entry should be restricted to personnel necessary to carry out operations efficiently. /44(a)(i)
 - 6.6.2.2 Doors should not be left open for extended periods and should be closed immediately after use. /44(a)(ii)
 - 6.6.2.3 Meat or meat products should not be stacked directly on the floor. /44(c)(i)
- CCP-Note: Rapid cooling down of all parts or all packages of meat products and maintaining them at chill temperature are essential. They should be placed on pallets or on dunnage in such a way that there is adequate air circulation.
- 6.6.2.4 No chilling room should be loaded beyond its designed capacity. /44(a)(iii)
- 6.6.2.5 Where refrigerating equipment is not manned, automatic temperature recorders should be installed. If no automatic device is installed, temperatures should be read at regular intervals and the readings recorded in a log book. /44(a) (iv, v)

CCP-Note: Maintenance of the desired temperature in chilling rooms is extremely important. Accidentally the cooling equipment may fail with consequent temperature rise in the room and in the products. To detect such temperature failures, records -automatic or manual - should be taken and the results reported to the manager who will, if necessary, inform the inspector for him to decide what action to be taken.

6.7 Transport of the End Product

- 6.7.1 Means of transport or containers should comply with the following conditions: 7.6/45(d)
 - 6.7.1.1 All internal finishes should be made of corrosion-resistant material, be smooth, impervious and easy to clean and disinfect. Joints and doors should be sealed so as to prevent the entry of pests and other sources of contamination. /45(d)(i)
 - 6.7.1.2 The design and equipment should be such that the required temperature can be maintained throughout the whole period of transport. /45(d)(ii)
 - 6.7.1.3 Vehicles intended for the transport of meat products should be equipped in such a manner that the meat products do not come into contact with the floor. /45(d)(iii)
- 6.7.2 Meat products should not be carried in any means of transport which is used for conveying live animals. /45(a)
- 6.7.3 Meat products should not be carried in the same means of /45(b)

transport as other goods in a way which may adversely affect the meat products.

- 6.7.4 Meat products should not be placed in any means of transport which are not clean. If necessary it should be cleaned and disinfected before loading. /45(c)
- 6.7.5 Every effort should be made to prevent changes in temperature of frozen meat products at any time during storage and transport but where accidental thawing takes place, the meat products should be examined and evaluated by the inspector before any further step is taken. /45(e)
- 6.8 Sampling and Laboratory Control Procedure
- 6.8.1 In addition to the routine control carried out by the meat inspection services, it is desirable that each establishment should have access to laboratory control of the meat products processed. The amount and type of such control will vary with the type of meat product as well as the needs of management. Such control should reject all meat products that are unfit for human consumption. 7.7.1/IV F
- 6.8.2 Laboratory facilities should be available for the purpose of inspection and hygiene. This could be the establishment's own laboratory or an official laboratory or any other appropriate laboratory. /30
- 6.8.3 The inspector should have access to all information relevant to his duties and responsibilities.
- 6.8.4 Samples of the production should be taken to assess the safety and hygiene of the meat product 7.7.2/
- 6.8.5 Laboratory procedures used should preferably follow recognized or standard methods in order that the results may be readily interpreted. 7.7.3/
- 6.8.6 Laboratories checking for pathogenic microorganisms should be well separated from meat production area. 7.7.4/

SECTION VII - END PRODUCT CRITERIA

7.1. Criteria such as microbiological, chemical or physical may be required depending on the nature of the meat product. However, application of the hazard analysis critical control point concept should be more effective than intensive end product testing in ensuring that the requirements of this Code are followed and its purpose achieved. If end product testing is carried out criteria should include sampling procedures, analytical methodology specifications and limits for acceptance. The following specifications should be met: 8/

- 7.1.1 The products should be free from foreign matter to the extent possible in good manufacturing practice, as well as free from toxic substances in a concentration believed to constitute a public health hazard. /51(a)
- 7.1.2 The products should not contain pathogenic microorganisms /51(b)

in amounts that would constitute a public health hazard and should not contain any toxic substances produced by microorganisms in a concentration believed to constitute a public health hazard.

- 7.1.3 The products should comply with the requirements for pesticide residues and food additives laid down by the Codex Alimentarius Commission.

/51(c)

ANNEX A

PRESERVATION OF MEAT PRODUCTS IN HERMETICALLY SEALED RIGID CONTAINERS

For details concerning preservation of shelf-stable meat products in hermetically sealed metal containers, see: Recommended International Code of Hygienic Practice for Low-Acid and Acidified Low-Acid Canned Foods. (ALINORM 79/13 A, App. IV).

In preserving meat products in hermetically sealed rigid containers the critical control points are:

- a) Heat processing. The products should be processed so that they present no public health hazard and withstand spoilage during subsequent storage, transport and sale. The temperature and duration of processing of specific formulations should be based on the recommendations of technical specialists competent in canning technology. /A (a)
- b) Supervision of processing. Processing should be supervised by technically competent personnel and be subject to check by the inspector.
- c) Seam control. Control of can seams should be made regularly during production, and this, with processing records adequate to identify the processing and history of each batch of product, should be kept by the management and made available to the inspector. /A (b)
- d) Water control. Only potable water should be used for washing of empty containers or for the cooking and cooling of any hermetically sealed container. Where re-circulated water is used for cooling heat processed containers it should be filtered and if necessary treated by the addition of chlorine. Such water, depending upon the potential degree of non-potability, should contain from one to two parts per million of residual chlorine at the discharge end of the cooler. Any other acceptable disinfectant may be used in effective concentration in place of chlorine. /A (c)
- e) Treatment of containers. Rough treatment of containers both before and after processing should be avoided to prevent the possibility of contamination of the processed products. If it is essential to handle wet cans, personnel should do so exercising hygienic precautions. Belts, runways, and other can conveying equipment should be maintained in a clean condition and good repair. /A (d)
- f) Storage of meat products. Canned meat products not subjected to a heat treatment that will make them shelf-stable at ambient temperature should always be stored, transported and sold under chilled conditions.

ANNEX B

PRESERVATION OF MEAT PRODUCTS HEAT TREATED. PRIOR TO PACKAGING

a) In establishments in which meat products are heat treated prior to packaging a chill-room should be available for holding raw unprocessed meat on its reception and for storing boned, cut or otherwise raw unprocessed meat which is not transferred directly to the sections in which it is cooked or otherwise processed. /B (a)

Adequate means for rapidly chilling and storing any cooked meat product to an internal temperature of not more than 7 C should be available. /B (e)

b) After preparation the product should be kept chilled until final cooking. The temperature and duration of the cooking process for these heat treated meat products should be such that the heat treatment alone or in combination with other preserving processes is sufficient to eliminate the health risk from vegetative forms of pathogenic organisms. Processes should be supervised by technically competent personnel and checked as necessary by the official agency having jurisdiction. Processing records adequate to identify the processing and history of each batch of products should be kept by the management and made available to the official agency having jurisdiction. /B (b, a)

CCP-Note: Experience has shown that the main risk to public health from such meat products is due to food-poisoning organisms such as salmonellae, staphylococci and Clostridium perfringens. To reduce this risk a heat treatment should ensure the inactivation of vegetative organisms. This would require proper time-temperature conditions, which should be monitored.

c) At all stages following cooking manual handling of exposed meat products should be kept to an absolute minimum and, if at all possible, should be replaced by mechanical methods. /B (f)

CCP-Note: After heat processing the meat product is especially sensitive to microbial contamination from hands and from surfaces with which they come into contact. Particularly important will be contamination from hands with e.g. staphylococci. Use of disposable gloves by personnel handling such meat products should be encouraged.

d) Cooked meat products should be rapidly chilled in a hygienic manner to an internal temperature of not more than 7 C. If water is used for cooling any cooked meat product it should be of potable quality. /B (e)

CCP-Note: Rapid cooling is essential to inhibit growth of any organisms that have survived cooking, e.g. Clostridium perfringens, or that have contaminated the meat product after cooking. The potability of the water should be checked in accordance with CCP-Note to

para. 3.5.1.1. Cooling temperatures should be frequently, if not continuously, monitored.

- e) Packaging of meat products preserved by heat treatment should be carried out without undue delay in a separate room. Particular care must be taken to prevent cross-contamination from raw, un processed meat. Where primary packaging follows slicening and cutting these operations should preferably take place in the same room under satisfactory conditions of hygiene. Packaged finished products should be inspected to ensure the detection and rejection of visibly defective packages. /B (g)
- f) Meat products heat treated prior to packaging should be stored in chilled accomodation and protected from contamination. /B (h)

CCP-Note: Only chill storage and protection from contamination of meat products packaged after heat treatment will ensure the expected shelf-life and protect against public health hazards. Temperatures in cooling rooms should be frequently, if not continuously, monitored.

- g) Adequate laboratory facilities should be available for the purpose of making regular microbiological examinations. /B (i)

CCP-Note: Such microbiological monitoring would not only include the meat products itself, but also meat contact surfaces to ensure that cleaning and disinfecting procedures are satisfactory.

PROPOSED DRAFT GUIDELINES FOR THE USE OF [VEGETABLE PROTEIN PRODUCTS (VPP)] IN PROCESSED MEAT AND POULTRY PRODUCTS

(At Step 3 of the Procedure)

1. Scope

These guidelines apply to the use of [Vegetable protein products (VPP)] in processed meat and poultry products. They provide guidance for:

- the types of processed meat and poultry products to which [vegetable protein products (VPP)] may be added,
- the amounts in which [vegetable protein products (VPP)] may be added to processed meat and poultry products,
- labelling requirements for processed meat and poultry products containing [vegetable protein products (VPP)].

2. Definitions

2.1 [Vegetable Protein Products (VPP)]: Primary forms of vegetable proteins which have been processed in a manner which results in a significant degree of concentration in the final product, and that conform to applicable standards described by the Codex Committee on Vegetable Proteins.

2.2 [Vegetable Protein Products (VPP)] used as replacement: [Vegetable protein products] used for the purpose of substituting the original protein in meat or poultry meat products.

3. Field of Application for [Vegetable Protein Products (VPP)]. for which Standards have been elaborated, in Processed Meat and Poultry Products

A Standardized products

3.1 Functional purpose

[VPP] may be used for functional purpose in any processed meat or poultry product, where it serves a useful technological function. The amount added should not exceed [3%] calculated as the ratio of dry [vegetable protein product] total product x 100.

Use of [VPP] for functional purposes should not result in any replacement of principal protein and associated nutrients in the food to which they are added.

3.2 Optional

[VPP] may be used as an optional ingredient in any processed meat or poultry product without any specific limitations except those established by the meat or poultry content required by a standard of composition.

or

3.1 Use as an ingredient

[VPP] may be used as an ingredient in any standardized processed meat or poultry product without specific limitations except those established by the meat content required in the standard.

B Non-standardized products

3.1 Functional purpose

[VPP] may be used for functional purpose in any processed meat or poultry product, where it serves a useful technological function.

3.2 Optional

[VPP] may be used as an optional ingredient in any processed meat or poultry product without any specific limitations.

3.3 Replacement

Where [VPP] are used to replace a portion of the meat and poultry in any meat or poultry meat product, which has a standard of composition or identity the resulting product is a new product, [and the name of the standardized product is not appropriate without qualification].

4. labelling Requirements for [Vegetable Protein Products (VPP)] in Processed Meat and Poultry Products

Standardized and non-standardized processed meat and poultry products containing [VPP] should be labelled in accordance with the Codex General Standard for the Labelling of Prepackaged Foods, subject to the following provisions:

A Standardized products

- a) The presence of [VPP] as an ingredient in any processed meat or poultry product in low relative amounts in order to serve a technological function need only be declared in the list of ingredients;
- [b) When [VPP] is used in any processed meat or poultry product whose name indicates that it consists wholly of meat or poultry, whether or not cured, the name of that product should be qualified to indicate the presence of [VPP];
- c) the presence of [VPP] in any standardized processed meat or poultry product which allows for its use as an optional ingredient need only be declared in the list of ingredients;
- d) new products resulting from the replacement of meat or poultry meat by [VPP] in a standardized meat or poultry product may bear either the name of the standardized product appropriately qualified to indicate the presence of [VPP], or any other name provided that it does not mislead the consumer;
- e) [VPP] added to any processed meat or poultry product should be indicated in the list of ingredients by specific name (including source) in order of weight of the dry [VPP].

B. Non-standardized products

- a) The presence of [VPP] as an ingredient in any processed meat or poultry product in low relative amounts in order to serve a technological function need only be declared in the list of ingredients;
- [b) when [VPP] is used in any processed meat or poultry product whose name indicates that it consists wholly of meat or poultry, whether or not cured, the name of that product should be qualified to indicate the presence of [VPP];

- c) non-standardized processed meat or poultry products which contain [VPP] in excess of the low relative amounts necessary to achieve a technological function should be labelled in such a way that the name of the food does not mislead the consumer and does not lead to confusion with products covered by compositional standards;
- d) new products resulting from the replacement of meat or poultry by [VPP] in a standardized meat or poultry product may bear either the name of the standardized product appropriately qualified to indicate the presence of [VPP] or any other name provided that it does not mislead the consumer;
- e) [VPP] added to any processed meat or poultry product should be indicated in the list of ingredients by specific name (including source) in order of weight of the dry [VPP].