

**codex alimentarius commission**

FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD HEALTH  
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ALINORM 76/16

JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX ALIMENTARIUS COMMISSION  
Eleventh Session, 1976

REPORT OF THE  
CODEX COMMITTEE ON PROCESSED MEAT PRODUCTS

Eighth Session  
Copenhagen, Denmark, 10-14 March 1975

INTRODUCTION

1. The Codex Committee on Processed Meat Products held its Eighth Session in the Conference Room of the WHO Regional Office in Copenhagen, Denmark, from 10-14 March 1975 by courtesy of the Government of Denmark. The participants were welcomed on behalf of the Danish Ministry of Agriculture by Dr. V. Enggaard, Chairman of the Committee.

2. Representatives from the following 29 countries were present:

Argentina	France	Norway
Australia	Fed. Rep. of Germany	Poland
Austria	Hungary	Senegal
Belgium	India	Spain
Brazil	Iran	Sudan
Canada	Ireland	Sweden
Congo, People's Rep. of	Italy	Switzerland
Czechoslovakia	Kenya	United Kingdom
Denmark	Netherlands	United States of
Finland	New Zealand	America

Observers from the following international organizations participated at the session:

European Economic Community (EEC)  
Centre de liaison des Industries de Traitement des Algues Marines de la C.E.E.  
(CLITAM)  
Centre de liaison des Industries Transformatrices de Viande de la Communauté  
Européenne (CLITRAVI)  
International Organization of Consumer Unions (IOCU) Internationala.1  
Commission on Microbiological Specifications for Foods (ICMSF)

A list of participants, including officers from the Food and Agriculture Organization and the World Health Organization, is given as Appendix I to this Report.

ADOPTION OF PROVISIONAL AGENDA

3. The Committee adopted the Provisional Agenda.

#### ELECTION OF RAPPORTEURS

4. The Committee appointed Mr. I. Adams (UK) and Mr. J. Rivière (France) as Rapporteurs of the Session.

#### MATTERS ARISING FROM THE REPORTS OF RECENT SESSIONS OF THE CODEX ALIMENTARIUS, COMMISSION AND VARIOUS CODEX COMMITTEES

5. The Secretariat informed the Committee that under the auspices of the Codex Committee on Pesticide Residues information had been collated from a number of countries on the officially recommended use of pesticides in good agricultural practice and on a number of selected crops and animal products important in international trade, e.g. meat. The Codex Committee on Pesticide Residues had agreed to request Canada, who had compiled the original data, to update the study at regular intervals - "Summary of Replies to the Questionnaire on Good Agricultural Practice in the Use of Pesticides for some Important Selected Foods" (January 1974)

6. The Committee agreed to consider the other issues of interest or referred to it when discussing the relevant items of the Agenda.

#### STATEMENT OF REPRESENTATIVE OF WHO

7. The representative of MHO briefly reviewed present and planned activities in areas of interest to the members of the Committee.

#### RECONSIDERATION OF DRAFT STANDARD FOR CANNED CORNED BEEF AT STEP 7

8. The Commission had decided at its 10th Session (July 1974) to return the Draft Standard once more to the Committee for reconsideration. at Step 7 of the Procedure (ALINORM 74/44, para 206), in particular for a re-examination of the compositional requirements (3.3), for a revision of the second part of the scope section and if necessary related items in the labelling section.

The following documents were taken into consideration: ALINORM 74/16, Appendix II; CX/PMP 75/2; CX/PMP 75/3 + Addenda 1, 2 and 3; and CX/PMP 75/4 + Addenda 1, 2 and 3.

9. The Commission, at its 10th Session, agreed with the Committee that the standard should be restricted to the traditional South American type of Canned Corned Beef. However, a number of delegations at the Commission's session had some misgivings about the scope section in connection with the name of the product. The Commission had requested the Committee to review the scope section, taking into account the opinion which had been furnished in writing to the Committee's Seventh Session by the FAO Legal Office in response to the question posed by the Committee on this subject and also taking into consideration the views of the countries which produced corned beef which was not of the traditional South American type.

10. At the outset of the discussion, the FAO representative referred to the views on this subject which the Codex Secretariat had put before the Tenth Session of the Commission (ALINORM 74/44) and drew attention to what seemed a possible risk to consumer protection in permitting the term "corned beef" to be used as part of the name of all the canned corned beef products which were outside the scope of the standard, and whose composition was not identified and laid down in an international standard.

11. The Committee wished to make it clear that the composition of those products to which the standard did not apply was quite different from the product to which the

standard applied, as was the technology of producing them, so that there would be no question of the corned beef component of these products being able to meet the requirements for the traditional South American type product.

12. The Committee reaffirmed its previous decision that canned corned beef products having compositional characteristics different from those laid down in the standard for the traditional South American type of product ought not to be prevented from using the designation "Corned Beef" provided that this designation was suitably qualified. In this connection, the Committee decided to amend the scope section in such a way as to make it clear that the canned corned beef products to which the standard did not apply were products whose names, although they included the term "corned beef", were so qualified that the true nature of the products was described, that the consumer was not misled and that there was no confusion with the product covered by the standard.

13. Having amended the scope section in this way, the Committee saw no reason for retaining the provision in sub-section 6.1 of the labelling section which expressly permitted the use of the term "corned beef" for products not complying with the standard if accompanied by a suitable qualifying statement, more especially as the Committee thought, in any event, that this provision allowed too much latitude of interpretation.

#### Description

14. Subsequent to a discussion on the function of nitrites in the manufacture of Corned Beef in relation to eliminating *Clostridium botulinum* spores (see paras 21-23 of this Report) the Committee agreed that this provision should not only require that the product be shelf-stable but also that the product "presents no hazard to public health". A similar provision was already contained in the Draft Standard for Cooked Cured Ham.

15. The Committee did not consider it necessary to include in the hygiene section a specific provision on *Clostridium botulinum* or to define  $F_0$  values as the additional wording in the Descriptive Section of the Standard was considered to provide sufficient safeguard.

#### Essential Ingredients

16. The question was raised on whether to delete sodium or potassium nitrite from the list of essential ingredients as the substances were also listed under food additives. It was pointed out, however, that the use of the nitrite salts was indeed an integral part of the manufacture of corned beef; without this substance the product would just be boiled beef.

#### Composition

17. A number of governments had provided data on the composition of corned beef traded in their countries. In particular the data made available by the UK was extensive with regard to the number of samples and the period covered. From the figures recorded there appeared to be a tendency towards a decrease in protein content.

18. In addition to discussing the level for the total protein content and the relative merits of an average value with a tolerance or of a cut-off limit the Committee also considered a proposal to take into account and limit the amount of connective tissue. A large number of delegations expressed themselves as being in agreement with, or willing to accept as a compromise, a minimum cut-off value for total protein content in canned corned beef of 21%. The delegation of Argentina stated that in its view the average value for the protein content should be 25% with an absolute minimum of

23.75%, thus allowing a tolerance of 5%. The delegation of the Fed. Rep. of Germany reserved its position with regard to setting the limit for total protein content at 21%.

19. The Committee held the view that by laying down the minimum requirement for protein the fat percentage did not have to be specified; the two values were interrelated. The limit for fat was thus deleted in the provision.

20. The delegation of Switzerland supported by the delegations of Austria, Fed. Rep. of Germany and Senegal stated that at a future date the Committee should reconsider the need to include also a minimum level for muscle protein (see also para 10 of this Report).

#### Food Additives

21. Several delegations pointed out that the present limit of 200 mg total nitrite/kg in the end product was not realistic in the light of good manufacturing practice. Nitrite salts were added in the manufacture of corned beef to provide the characteristic flavour and colour of the product. Residues found in a product subjected to a full heat treatment would normally be in the range of 5-15 mg/kg after a ten day holding period.

22. The delegation of Argentina stated that substantially higher usage of nitrites would lead to flavour deterioration and loss of vacuum, and possibly to a deformation of the cans.

23. On the basis of the above discussions the Committee agreed to reduce the limit for nitrite salts to 50 mg/kg in the end product. It was further agreed that there was no need for nitrate as an additive in the manufacture of corned beef; the substance was deleted from the list.

#### The Name of the Food

24. As a consequence of the revision of the scope section, the sentence dealing with the designation of corned beef products not covered by the standard was deleted.

#### Methods of Analysis and Sampling

25. As no limit was set for fat in the product the reference to a method of analysis for fat was deleted. The Secretariat undertook to insert provisions for methods of analysis for nitrite salts and ascorbic acid and its sodium salt.

#### Status of the Standard

26. The Committee agreed to advance the standard to Step 8 of the procedure for consideration by the 11th Session of the Commission. The revised Standard is contained in Appendix II to this Report.

#### RECONSIDERATION OF DRAFT STANDARD FOR COOKED CURED HAMS AT STEP 7

27. The Committee reconsidered the above Draft Standard as contained in Appendix III of ALINORM 74/16 in the light of government comments at Step 6 of the Procedure (CX/PMP 75/5 + Add. 1 and 2) and of the Report from the meeting of the ad hoc Working Group on Cooked Cured Ham and Cooked Cured Pork Shoulder held in Washington D.C. from 15-18 October 1974 (CX/PMP 75/6).

28. There was extensive discussion on the scope of the standard and consideration of a proposal for a revised text as follows:

"The provisions of this standard shall apply to products designated as "Cooked Ham" packaged in any suitable packaging material as defined in section 5 below.

The standard does not apply to ham products with compositional characteristics different from those specified in the standard and which are designated with a qualifying statement to this effect in connection with the term "cooked ham" in such a way that it describes the true nature of the product, that it does not mislead the consumer and that it does not lead to confusion with products covered by the standard".

29. The Committee then decided that as the standard was being returned to Step 6 the original scope section should be retained and that amendments made in the provision for the name of the food would deal with the problem (see also paras 51-53 of this Report).

#### Essential Ingredients

30. After discussion it was agreed that the essential curing ingredients were potassium and/or sodium salts of nitrite and nitrate singly or in combination and the provision was amended to include nitrate. The delegation of the Fed. Rep. of Germany stated that its country would only allow the use of nitrite or nitrate singly and not in combination.

#### Expression of Meat Content

31. At its 7th Session the Committee had requested an informal working group consisting of the delegations of Austria, Denmark, the Netherlands, Switzerland, United Kingdom and U.S.A. to look further into the figures for minimum protein content on fat-free basis which had been proposed at the 7th Session for the various products covered by the scope of the standard and to look at the consequential linking with the requirements in the labelling section.

32. This informal working group had convened in Washington D.C. in October 1974 and a report of that meeting had been issued as a working document (CX/PMP 75/6).

33. Mr. M. Osse, the Netherlands, who had chaired the meeting of the working group, presented the report to the Committee and pointed out that the working group had initially based its considerations on the concept of an average and a minimum percentage protein on fat-free basis (PFF) and a sampling plan which included the assumption of a standard deviation of 0.7%.

34. Following on these concepts, the working group had elaborated a proposal for canned hams which contained an absolute minimum of 16.5% PFF and an average value of 18.0% PFF combined with a zonal sampling system.

35. The Committee expressed its appreciation of the work done by the informal working group and proceeded to discuss the proposal and its principles.

36. The delegation of Denmark pointed out that on their calculations the value of 18% PFF when combined with the proposed sampling plan implied that a lot having an average value of 18% PFF basis would have 30% risk of rejection which in the view of the delegation had not been the intention of the working group and that it therefore would force the manufacturer to produce to an average of 18% + 1 standard deviation, i.e. 18.7%, and that this average would have the consequence of prohibiting a large part of the existing international trade in canned hams to be designated as "cooked hams". The delegation of Denmark supported by the delegation of Australia therefore suggested

that a lot having an average of 18% PFF should be considered acceptable with a risk of rejection of about 3% and that the sampling plans should be adjusted accordingly.

37. The other delegations who had participated in the working group, however, supported the proposal put forward by the working group. The delegation of Australia supported by the delegation of the Netherlands suggested that perhaps the s-value of 0.7 was too small and that 1.0 probably would be more realistic while the delegation of the United Kingdom considered that the absolute minimum was the most important figure. The delegation of the Netherlands concurred with this.

38. In line with the decision taken in connection with the standard for Canned Corned Beef, the Chairman proposed that only an absolute minimum figure for protein on fat-free basis be inserted in the standard. However, a majority of the delegations found that it would be preferable to combine the absolute minimum with a zonal sampling system as proposed by the working group.

39. The delegation of India held the view that the sequential system of sampling proposed would need statistical study as it had far-reaching effects on sampling procedures for other foods.

40. The Committee finally decided to accept the proposal of the working group for canned hams. The delegations of Australia and Denmark reserved their position with respect to this decision.

41. As regards the question of cooked cured hams other than canned hams, the working group had suggested that in the absence of analytical data, it could tentatively be proposed that these products should have PFF-values of at least those required for the canned product. The Committee was of the opinion that the same figures should apply as for canned hams and that this decision could be revised as soon as sufficient data were available.

42. The Committee noted that the question of collagen-free meat protein was not of major importance in relation to cooked hams as this product only contained small amounts of collagenous material such as sinews and tendons, but that for pork shoulder the situation was different (see para 101 of this Report).

43. The delegation of Australia pointed out that merely specifying the minimum protein content on a fat-free basis did not fully control the fat content in cooked cured hams. It requested that an upper limit for the fat content be included in the standard.

44. With respect to correction figures for added gelatine, the Committee accepted the Danish proposal of deducting 1% protein from the % analytical protein on a fat-free basis found in products weighing less than 0.5 kg and 0.6% for products weighing from 0.5 kg to 1.0 kg. No deductions should be made from products weighing more than 1 kg. This provision was introduced in a sub-section of the section on Analysis and Sampling.

#### Food Additives

45. Hydrolyzed Protein used as Flavour Enhancer - The Committee on Food Additives (ALINORM 74/12, para 84) had requested further information on the source of the hydrolyzed protein used. During discussion it appeared that a large number of commercial products were in use based on a variety of raw material and the Committee concluded that it was not in a position to furnish the details requested by the Food Additives Committee. It was further considered that the hydrolyzed protein products could be regarded as being foods rather than additives, though the quantities used would be comparatively small.

46. Nitrate - Several delegations pointed out that the level of 500 mg NaNO<sub>3</sub>/kg seemed to be the ingoing quantity rather than the residue. As no data were available on residual levels the Committee agreed to retain the present figure.

47. Nitrite - The Committee agreed to reduce the residual level from 200 mg/kg to 125 mg/kg. The delegation of Ireland reserved its position with regard to the new figure.

48. Edible Gelatine - The Committee agreed that edible gelatine should be listed as a food additive rather than as an optional ingredient, the quantity to be used to be governed by good manufacturing practice.

49. The delegation of the Fed. Rep. of Germany reiterated its opposition to the use of thickening agents, phosphates, citrates, and smoke agents in the preparation of hams (ALINORM 74/16, para 54) The delegation of Sweden stated that with a few exceptions the additives provided for by the Standard were not permitted in its country.

#### Hygiene

50. The Committee agreed to amend editorially sub-section 5.2.3 by requiring that where applicable to the type of container it "shall show evidence of vacuum".

#### The Name of the Food

51. The Committee when considering the Scope Section of the standard had also reviewed the advisability of amending the provision for the name of the food. In particular it discussed the question of the necessity of maintaining sub-section 6.1.3 which provided for the designation of products not covered by the standard (see paras 28-29 of this Report).

52. Alternatively as proposed by the delegation of the United Kingdom, the text of the particular provision could be revised to read "..... it being understood that the term "cooked ham" as such or in combination with the descriptive designations in 6.1.2 may be used for other products only if accompanied by a qualifying statement in connection with the term "cooked ham" in such a way that it describes the true nature of the product, that it does not mislead the consumer and that it does not lead to confusion with products covered by the standard". It was pointed out, however, that this provision might lead to a name of a product of a considerable length.

53. The Committee agreed to accept the text suggested by the United Kingdom.

#### Storage Instructions

54. Some editorial amendments were made.

#### Status of the Standard

55. Several delegations expressed themselves in favour of advancing the standard to Step 8 of the Procedure. The majority of the Committee, however, preferred that, even though the standard had now been in the Committee six times, it be returned once more for a further round of government comments, in particular on the following specific issues:

- Scope - Whether to continue on the basis of a single standard (as at present); to elaborate one standard for canned ham only, or to elaborate two or possibly more standards for cooked hams, each covering a different form of preservation of the product.

- Meat Content - Governments were encouraged to review carefully the PFF values as adopted by the Committee, and to assess their impact on products both in domestic and international trade. Several delegations suggested that this review should include the effect of the PFF values on an absolute basis as well as their proposed use in the sampling plan.
- Collagen Free Protein - The feasibility of expressing the meat content as muscle protein and the minimum requirements for such an expression.
- Nitrate and Nitrite - The residual levels for these curing agents.

The revised Draft Standard is contained in Appendix III to this Report.

#### RECONSIDERATION OF THE DRAFT STANDARD FOR COOKED CURED PORK SHOULDER AT STEP 7

56. The Committee had before it the above named standard (ALINORM 74/16; Appendix IV), Government Comments on the Standard (CX/PMP 75/8), the Report from the ad hoc Working Group on Meat Content (CX/PMP 75/6) and Data on the Composition of Cooked Cured Pork Shoulders (CX/PMP 75/9).

57. It was agreed to ask the Secretariat to revise the Standard for Cooked Cured Pork Shoulder in the light of the amendments made in the Draft Standard for Cooked Cured Ham and to return the draft standard to Step 6 of the Procedure. The revised document is contained in Appendix IV of this Report.

#### RECONSIDERATION OF DRAFT STANDARD FOR COOKED CURED LUNCHEON MEAT AT STEP 7

58. In view of extensive amendments the Committee had decided in 1973 to return the draft standard to Step 6 for a further round of government comments. The following documents were taken into consideration at the Committee's present session: ALINORM 74/16, Appendix V; CX/PMP 75/2; CX/PMP 75/10 + Addendum 1.

##### General

59. The Committee noted the observation of Argentina that in the Spanish version of the standard the translation of "luncheon meat" should be corrected by the deletion of the word "tipo" and instructed the Secretariat to make this correction in the standard.

##### Title

60. The Committee agreed that the words "cooked cured" in the title of the standard were redundant and decided to delete them.

##### Description and Definitions

61. In its written comments Argentina had indicated that it had a significant export trade in wild game meat to a number of European countries. Since wild game were not slaughtered in abattoirs they did not undergo ante-mortem examination: they were, however, subjected to post-mortem examination. The delegation of Argentina regarded it as incongruous that there was a decision against the use of game meat whilst the use of a wide range of offals was permitted. The Committee drew attention to the fact that only edible offals were permitted to be used in the manufacture of luncheon meat.

62. The delegation of Norway informed the Committee that special provision had been made, by way of an annex to the Code of Hygienic Practice for Fresh Meat, for meat from reindeer slaughtered in field (mobile) slaughterhouses. These reindeer were



subjected to both ante-mortem and post-mortem examination and this was laid down in the provisions of the Annex to the Code.

63. The Committee did not think it should amend the definition of meat to provide exemption from slaughter in an abattoir, and it decided to leave the definition of meat unchanged.

64. The Committee noted that the definition of poultry meat in the standard had no requirement for slaughter in an abattoir. The Committee accordingly amended the definition to provide for this.

65. The Committee noted from the written comments of the United Kingdom that there were special requirements there concerning the sale of horseflesh for human consumption. The Committee agreed that this was not a matter with which it should "be concerned in the standard, but was rather a matter for regulation under national legislation.'

66. The Committee considered a proposal in the written comments that spleen should not be permitted to be used in the manufacture of a product for human consumption. This matter had been considered at previous sessions and the Committee now reaffirmed the decision that there was no reason why spleen should not be permitted to be used in the manufacture of this product.

#### Optional Ingredients

67. The Committee agreed to provide for lupin meal and sunflower meal in the list of optional ingredients, in accordance with a written proposal from Australia.

#### Composition

68. The standard, as presently drafted, limited to 15% the amount of poultry meat that could be part of the ingoing meat content. There was a proposal in the written comments that this be increased to 20%. After an exchange of views, it was agreed that in principle there was no reason why the amount of poultry meat should be limited to any particular figure, and that it was largely a matter of established practices and consumer preferences. The point was made, however, that depending on the amount of poultry meat present, there might be consequential requirements on the name of the product - for example, naming the predominant meat ingredient. The Committee agreed to delete the percentage limitation on the use of poultry meat.

69. The Committee agreed to make it clear in this section of the standard that "minimum ingoing meat content" included poultry and offals as appropriate to the products.

70. A number of delegations in their written comments and at the session considered that it would be desirable to have a figure in the standard for minimum protein content. Some delegations indicated that, additionally, they would like to see a figure for collagen content. The Committee considered that, as it did not have data before it, there was no reasonable basis on which to determine figures for inclusion in the standard. The Committee decided it would be prepared to consider the question of providing additional parameters in the future if the necessary data became available.

71. The Committee considered a proposal that the figures on fat content were too high and should be reduced from 35% to 30% and from 30% to 25%, respectively. In the absence of support for this proposal, it was decided not to amend the figures.

72. There was a proposal in the written comments that the Committee consider the question of luncheon meat with 70% ingoing meat content. In this connection attention was drawn to paragraph 98 of the Report of the Seventh Session in which it had been proposed to lower substantially the minimum meat content for the product with binder to provide for the use of larger amounts of non-meat protein. The Committee agreed to look into this subject when considering its programme of future work (see para 104 of this Report).

#### Food Additives

73. The Committee decided to remove the provision for the use of nitrate and to reduce the level for nitrite to 125 mg/kg on the final product on similar considerations as for the draft standards for the other products.

74. The need for the use of erythrosine in this product had been raised by the Codex Committee on Food Additives at its Ninth Session (ALINORM 74/12, para 85). While the Food Additives Committee did not see a need for the use of this colouring agent in luncheon meat, the delegations of Denmark, the Netherlands, the United Kingdom and the U.S.A. at that Committee considered that its use in this product should be accommodated.

75. The Codex Committee on Processed Meat Products reviewed the need for the use of erythrosine in luncheon meat. The delegations of the United Kingdom and Denmark presented to the Committee a technological justification for its use (see Annex 1 to Appendix V to this Report) on the basis of the General Principles for the use of Food Additives contained in the Commission's Procedural Manual.

76. Some delegations indicated that in their countries they did not find it necessary to provide for the use of erythrosine in this product and they would therefore be opposed to its use. However, other delegations in the Committee, having noted the technological justification referred to above, which, among other things, explained the purpose of the use of the additive as a means of improving the organoleptic properties of the product, considered that the technological arguments which had been advanced were such that they would not oppose the inclusion of this additive in the standard. These delegations took the view that it was proper to recognize that whilst in their countries there would be no need for the use of this additive in the product, there might well be a need for its use in other countries, more especially in the product with binder. Still other countries indicated that one of the main reasons why they would be unwilling to oppose provision for the use of the additive was the fact that its use in this product constituted well established practice in certain countries over a long period of time.

77. Taking into account the foregoing considerations the Committee decided, on a majority basis, that the use of erythrosine limited to the product with binder should remain at the level set forth in the standard and requested the Codex Committee on Food Additives to reconsider it with a view to endorsement.

#### Hygiene

78. The representative of WHO stated that as there was only a very general reference in the Code of Hygienic Practice for Poultry Processing to ante-mortem and post-mortem inspection, the Committee might wish to consider whether to lay down recommended requirements in this section of the standard. In particular there was no reference to branding in the poultry code. Whilst the Committee noted that, as yet, no Codex Code was being developed for ante-mortem and post-mortem inspection of

poultry and whilst it thought it desirable for such a code to be elaborated, it considered that the provisions of sub-section 5.2.1 were sufficient at the present time.

79. The Committee agreed on amendments to several of the sub-sections in this part of the standard, which are recorded in the revised version. The amendments to sub-section 5.2.3 and 5.2.4, proposed by Australia, were based on the consideration that the wording in the standard would prevent the use of lead based solders, which under most conditions did not present a health hazard but which did not comply with a rigid interpretation of the conditions being laid down.

80. Country of Origin

81. The Committee took note of the comments of Argentina that the name of the country of origin should be embossed or otherwise indelibly marked on the container, to avoid the possibility of commercial fraud.

82. The Committee noted that this requirement of the Argentine regulations had been made known at sessions of the Commission and of several other Codex Committees. The Committee decided to make no change in this provision.

Status of the Draft Standard for Luncheon Meat

82. The Committee decided to advance the draft standard to Step 8 for consideration by the Commission at its 11th Session. The revised standard is contained in Appendix V to this Report.

CONSIDERATION OF THE DRAFT STANDARD FOR GAMED CHOPPED MEAT HELD AT STEP 7

83. The Committee had before it the above named draft standard (ALINORM 71/16, Appendix V) and the Report of the ad hoc Working Group on Meat Content (CX/PMP 75/6). It was agreed to request the Secretariat to revise the draft standard in the light of the amendments made in the Draft Standard for Luncheon Meat and to return the draft standard to Step 6 of the Procedure. The revised document is contained in Appendix VI of this Report.

CONSIDERATION OF REVISED CODE OF HYGIENIC PRACTICE FOR PROCESSED MEAT PRODUCTS AT STEP 7

84. The Committee considered the above named code as contained in Appendix VI, ALINORM 74/16 in the light of changes made by the Codex Committee on Meat Hygiene at its 3rd Session in the Code of Hygienic Practice for Fresh Meat (FM), comments submitted by CLITRAVI, and amendments proposed by New Zealand (doc. CX/PMP 75/11 + Add. 1 and 2). The Committee further considered a document prepared by the delegation of the United Kingdom (Annex B) dealing with the preparation of Meat Products Heat Treated Prior to Packaging (Open Pack Meat Products) (CX/PMP 75/11, Add. 3).

85. The Committee took note of the instructions of the Commission to harmonize as far as possible the present code with the Code of Hygienic Practice for Fresh Meat.

86. The delegation of the Netherlands drew attention to the fact that there was a similar need to consider harmonization of the Code of Hygienic Practice for Poultry Processing.

87. Definitions (the numbers refer to the paragraphs in the text before the Committee)

(4.) "Container" - At the previous session of the Committee it had been agreed to reconsider this definition as the word "container" was used in the text of the code in various connotations. The Committee concluded that it would be advisable to delete the definition.

(5.) "Contamination" - Amended as in Fresh Meat Code.

(7.) "Disinfection" - Amended as in Fresh Meat Code.

(11.) "Fresh Meat" - As the term fresh meat was not used in the code the definition was deleted.

(14.) "Inspector" - It was pointed out that the present wording of the definition implied that the processing of meat in as far as the hygienic aspects of the manufacture were concerned would have to take place under the direct supervision of a veterinarian. Several delegations expressed the view that such requirements were not in force in their countries and did not seem appropriate in an international code. The Committee agreed to retain the present text.

(16.) "Meat" - The delegation of Argentina reiterated the statement made at earlier sessions that the definition as it stood was too broad with respect to meat proper and should be restricted to skeletal muscle and edible connected tissue. It further stated that in its view not only domesticated animals which had been subjected to ante- and post-mortem inspection should be covered but also game such as wild boar, hare, or antelope, as the meat of these animals was exported in considerable quantities to a number of countries for further processing after having been subjected to post-mortem inspection. The delegation of Kenya associated itself with the latter statement.

The Committee noted that the Meat Hygiene Committee had endeavoured to elaborate special provisions for animals slaughtered in field or mobile slaughterhouses, also taking into consideration game cropping practices, but considered that insufficient data had been presented to work out a specific code.

The delegation of Argentina undertook in collaboration with the delegations of the Fed. Rep. of Germany and Italy to elaborate a paper for the next session of the Committee dealing with the problem of including game in the provisions of the present code.

(17.) "Meat Product" - The delegation of Switzerland brought to the attention of the Committee possible difficulties which may arise out of the present definition of meat products which would include soups and broths. The Committee held the view that the definition did not extend to the products mentioned.

(18.) "Processed" - It was agreed that this term should include methods of manufacture as well as preservation.

#### 88. Ingredient Requirements

The Committee agreed to adopt the proposal of the delegation of New Zealand given in square brackets, which included a reference to poultry meat; the original provision was therefore deleted.

#### 89. Establishment Registration, Construction and Lay-out

(27(h)) - The Committee agreed to delete the first part of this provision and to merge the last sentence with sub-section 29(a).

(27(j)) - Merged with 29(h) as in Fresh Meat Code.

(28.) - Editorial amendments were made.

90. Sanitary Facilities and Controls

(29(c))- The delegation of Norway proposed that, because the Codex Committee on Meat Hygiene had considered it unnecessary in an international code to lay down fixed requirements regarding the temperature in rooms in which boning-out and trimming are carried out, the same wording as used in the Code of Practice for Fresh Meat should be used also in the Processed Meat Code. There would otherwise be an inconsistency between the two Codes. The Committee decided to retain the present temperature requirement.

(29(g)) - The provision was amended to cover waste as well as inedible material.

(29(k)) - agreed to specify that all doors should have smooth and impervious surfaces and that doors should be close fitting.

(29(P)) - The provision was deleted as the content was also covered in sub-section 30.

(29(q))- Amended to agree with the Fresh Meat Code.

(29(r)(iv))- Deleted as in Fresh Meat Code.

(30(a), (b))- Amended as in Fresh Meat Code. It was agreed to add to 30(b) a statement that the washing facilities should be kept clean at all times.

(32.) - Editorial amendments were made.

(34.) - The provision was revised so as to separate distinctly the operations of assembly and storage of containers.

(35(d)) - An amendment was made stating that the room as well as "all equipment and utensils should be cleaned" at least every four hours.

(35(j)) - Editorial amendments were made.

(38.+ 39.) - Amended as in Fresh Meat Code. The WHO had elaborated a series of provisions on the hygiene and health of personnel which were also considered applicable to persons engaged in the manufacture of processed meat products. A specific provision relating to staff handling raw material or semi-processed products (39(j)) was retained.

(41.) - The heading was amended to read "raw material handling and manufacture".

(43.) - The Committee agreed to include the wording as proposed by the delegation of New Zealand at the Seventh Session with minor amendments.

(46.) - Editorial amendment.

(48.) - The delegation of New Zealand and the Committee agreed to expand the provision by-including a further three sub-paragraphs relating to packaging and packaging material.

(54(b)) - The representative of WHO proposed, and the Committee agreed, to rephrase this end product specification to read "the products should not contain pathogenic microorganisms in amounts that would constitute a public health hazard and should not contain any toxic substances produced by micro-organisms in a concentration believed to constitute a public health hazard".

91. Annex A

The heading of the Annex was changed to be consistent with the content.

(c) - It was agreed that water used for cooling and which was recirculated should be filtered prior to the addition of chlorine.

92. Annex B

At the previous session the Committee had requested the delegation of the United Kingdom to prepare a proposal for an annex dealing with Meat Products Heat Treated Prior to Packaging (Open Pack Products). The Committee expressed its gratitude to the delegation of the United Kingdom for the work it had done. It was agreed to append a revised version of the working paper as Annex B to the code and to request governments to comment on the document at Step 3 of the Procedure.

Status of the Code

93. The Committee agreed to advance the code to Step 8 of the Procedure for consideration by the 11th Session of the Commission. The revised code is contained in Appendix VII to this Report.

SAMPLING AND INSPECTION PROCEDURES FOR MICROBIOLOGICAL EXAMINATION OF PROCESSED MEAT PRODUCTS

94. The representative of ICMSF (international Committee on Microbiological Specifications for Foods) introduced a paper (CX/PMP 75/12) on sampling and inspection procedures for shelf-stable and perishable meat products heat treated after packaging. At the previous session of the Committee ICMSF had been requested to elaborate sampling and inspection procedures for microbiological examination of processed meat products. The present paper contained such procedures intended to be used specifically in cases of dispute, but which also could be used in normal food control.

95. The representative of ICMSF again stressed the fundamental importance of proper inplant hygiene control in the manufacture of food and which should be considered to be of much greater importance than the end product control. He further stated that the sampling plan was a compromise between an ideal situation and one that could realistically be achieved. This implied that there were certain restrictions with regard to the number of the samples, the extent of the work that could be undertaken, and on the economics of the exercise.

96. With reference to inplant control, which would also include quality control of the containers, the Committee was informed that at the 11th Session of the Commission the Codex Secretariat would present a report on how to deal with the question of can seam quality. The Committee expressed its appreciation of the valuable work done by ICMSF and agreed that the paper should be sent to governments with a request for comments at Step 3 of the Procedure. It was thought that in due course the document should be integrated in the Code of Hygienic Practice for Processed Meat Products. The Committee could then refer to these in the various meat product standards. The document is attached as Appendix VIII to this Report.

CONSIDERATION OF POSSIBLE STANDARDIZATION OF CANNED CORNED MUTTON AND OF CANNED MEAT AND VEGETABLES

97. The Committee had before it a paper prepared by the delegation of Australia (CX/PMP 75/13) in which were summarized the results of an international survey to which 21 countries had replied covering the production and trade in canned corned mutton and canned meat and vegetables. The delegation of Australia pointed out that, on the basis of the available information, further work on canned corned mutton did not

seem to be warranted at this stage. Whilst there was a substantial trade in canned meat and vegetables the variety of products covered by the general description was so large that it was considered difficult to encompass these in one standard. To illustrate the problems the delegation of Australia had prepared an outline standard as a working document (CX/PMP 75/13, Appendix I).

98. The Committee congratulated the delegation of Australia for the work done on the survey. In order to overcome the difficulty associated with group standards which would of necessity be of a rather general nature, it was proposed that for certain products falling within the group, individual standards might be elaborated. The survey did not, however, indicate substantial international trade in any one product so the Committee agreed not to pursue the matter further for the time being.

#### FUTURE WORK

99. The Chairman of the Committee pointed out that the Agenda for the next Session would include the following items: Cooked Cured Ham; Cooked Cured Pork Shoulder; Canned Chopped Meat; "Annex B" to the Code of Hygienic Practice for Processed Meat Products; Micro biological Sampling and Inspection Procedures (provisionally Annex C); and also proposals for the inclusion of game in the Code of Hygienic Practice. He expressed the view that this presented a considerable work load for the Committee.

100. The Committee was of the opinion, however, that it would be of interest to consider certain specific subjects at its next session.

101. The delegation of the Fed. Rep. of Germany undertook to prepare in collaboration with the delegations of Austria and Switzerland, a working paper on appropriate levels of collagen-free protein in meat products.

102. The delegation of the U.S.A. stated that in view of recent changes in meat technology and bearing in mind a world shortage of animal protein the Committee should consider its position in regard to such practices as the mechanical deboning of meat. In its opinion the time for such considerations was at present, before it might conflict with established trade practices. Furthermore in view of the variable nature of the product, international standardization seemed warranted.

103. The Committee accepted the offer of the U.S.A. delegation to produce a background paper on the product for the next session of the Committee.

104. The delegation of the U.S.A. further undertook to prepare a background paper on extended meat products. It was pointed out that there would be a need to take into account the relative contributions of proteins from different sources and the total amino acid profiles of the products.

105. The Committee agreed that at this stage it did not wish to embark on the elaboration of a standard for corned beef type products not covered by the present standard for Canned Corned Beef.

#### Date and place of next Session

106. The Committee was informed that the next session would be held in Copenhagen at a date to be fixed in consultation with the Codex Secretariat.

#### French Version of Report

107. Due to the limited time available, the French Rapporteur had not been in a position to review the French translation of the Report. This had resulted in a number of

errors not having been corrected. The Secretariat undertook to have the Report properly translated by the FAO Translation Service.

### SUMMARY STATUS OF WORK

(Prepared by Codex Alimentarius Commission Secretariat)

#### 1. CODES AND STANDARDS UNDER CONSIDERATION BY THE COMMITTEE

Code/standard/Document	Status (Step)	to be dealt with by	Document ALINORM-App.
Draft Standard for Canned Corned Beef	8-advanced	C'ssion 11th	76/16 - II
Draft Standard for Cooked Cured Hams	6-returned	C'ttee 9th	76/16 - III
Draft Standard for Cooked Cured Pork Shoulder	6-returned	C'ttee 9th	76/16 - IV
Draft Standard for Luncheon Meat	8-advanced	C'ssion 11th	76/16 - v
Draft Standard for Cooked Cured Chopped Meat	6-retained	C'ttee 9th	76/16 - VI
Draft Code of Hygienic Practice for Processed Meat Products	8-advanced	C'ssion 11th	76/16 - VII
Meat Products Heat Treated prior to Packaging (Annex B)	3-advanced	C'ttee 9th	76/16 - VII (Annex B)
Sampling and Inspection Procedures for Microbiological Examination of Processed Meat Products	3-advanced	C'ttee 9th	76/16 - VIII

#### 2. WORK UNDERTAKEN BY VARIOUS COUNTRIES AND ORGANIZATIONS

- 2.1 Proposal for special provisions for game in the Code of Hygienic Practice for Processed Meat Products
  - Argentina in collaboration with Fed. Rep. of Germany and Italy (see para 87(16)).
- 2.2 Working Paper on Appropriate Levels of Collagen-free Protein in Meat Products
  - Fed. Rep. of Germany in collaboration with Austria and Switzerland (see para 101).
- 2.3 Background paper on Mechanically Deboned Meat and on the Feasibility of Elaborating International Standards for this product
  - U.S.A. (see paras 102 and 103).
- 2.4 Background paper on Extended Meat Products
  - U.S.A. (see para 104).

#### 3. REQUEST FOR SPECIAL COMMENTS

Governments are requested to comment specifically on the matters referred to in para 55 (applies also to Cooked Cured Pork Shoulder).



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DRAFT STANDARD FOR CANNED CORNED BEEF  
(Advanced to Step 8 of the Procedure)

1 SCOPE

The provisions of this standard shall apply to canned beef products designated as "Corned Beef" and packed in hermetically sealed containers which have been heat treated after sealing to such an extent that the product is shelf-stable.

The standard does not apply to canned corned beef products with compositional characteristics different from those specified in the standard and which are designated with a qualifying statement to this effect in connection with the term "Corned Beef" in such a way that it describes the true nature of the product, that it does not mislead the consumer and that it does not lead to confusion with products covered by the standard.

2. DESCRIPTION

Corned beef is chopped, cured, boneless carcass meat from animals of bovine species and may include head meat, heart meat, and skirt meat.

The product shall be prepared from coarsely cut beef which has been precooked or a mixture of such precooked beef to which a maximum of 5% raw beef has been added and, in either case, the meat shall be cured before or after filling into the container.

The heat treatment shall be applied after the container is sealed and shall be sufficient to ensure that the product is shelf-stable and that it presents no hazard to public health.

Subsidiary Definition

Hermetically sealed container means a container which is completely sealed, rigid and impermeable and which is made of any appropriate material which is suitable for the product covered by the standard.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Ingredients

- uncured beef
- salt (sodium chloride), sodium or potassium nitrite

3.2 Optional Ingredients

- sucrose, invert sugar, dextrose (glucose), lactose, maltose, or glucose syrup (including corn syrup)

3.3 Composition

Total protein content in the final product shall not be less than 21% m/m.

3.4 Essential Quality Factors

3.4.1 Raw material

The meat from which the product is prepared shall be free from objectionable odours and flavours.



### 3.4.2 Final product

The product shall be clean and substantially free from staining from the container. The meat shall be uniformly and thoroughly cured and the product capable of being sliced.

## 4. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications as contained in section ... of the Codex Alimentarius have been endorsed or have been temporarily endorsed by the Codex Committee on Food Additives, as indicated below:

<u>Additive</u>	<u>Maximum level calculated on the total net content of the final product</u>	<u>Status</u>
Nitrite, potassium and/or sodium salts	50 mg/kg total nitrite expressed as sodium nitrite <sup>1/</sup>	Temporarily endorsed
Ascorbic acid and its sodium salt	500 mg/kg expressed as ascorbic acid <sup>1/</sup>	Endorsed

<sup>1/</sup> Subject to review in the light of further information based on current research.

## 5. HYGIENE

5.1 It is recommended that the Code of Hygienic Practice for Processed Meat Products of the Codex Alimentarius Commission (subject to finalization) should apply (see Appendix VII to this report).

5.2 The following specific provisions in respect of food hygiene of this product are subject to, or have been endorsed by the Codex Committee on Food Hygiene as indicated below:

5.2.1 No meat or meat products shall be accepted by an establishment unless the meat or meat products have been derived from animals subjected to ante-mortem and post-mortem inspection. They shall not be accepted unless they are properly branded or marked and in all ways suitable for human consumption and that they have not, subsequent to being examined by an Inspector, been exposed to contamination or processed or handled or subjected to the addition of any harmful substance which renders them unfit for human consumption. <sup>2/</sup> (IV. D. 39 (a)). (Endorsed)

5.2.2 Meat and meat products shall be handled, stored and transported in an establishment in a manner that will protect the meat and meat products from contamination and deterioration. <sup>2/</sup> (IV. D.39 (b)) (Endorsed)

<sup>2/</sup> These provisions have been taken from the Draft Code of Hygienic Practice for Processed Meat Products ( Appendix VII to this Report).

5.2.3 The product shall be packaged in hermetically sealed containers which do not permit contamination and which shall be clean and show the characteristics of sound containers and shall show evidence of vacuum. (To be endorsed)

5.2.4 When processed containers are cooled in water, the water shall be of potable quality or suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be filtered and effectively disinfected by chlorine or otherwise, before use or each re-use. (Endorsed)

5.2.5 After processing, containers shall be handled in such a manner as to avoid contamination of the product. (To be endorsed)

## 6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), the following specific provisions apply and are subject to endorsement or have been endorsed by the Codex Committee on Food Labelling.

### 6.1 The Name of the Food (subject to endorsement)

The name of the product is "Corned Beef".

### 6.2 List of Ingredients (endorsed)

A complete list of ingredients shall be declared on the label in descending order of proportion and a specific name shall be used for all of the ingredients.

### 6.3 Net Contents (endorsed)

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

### 6.4 Name and address (endorsed)

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

### 6.5 Country of Origin (endorsed)

6.5.1 The country of origin of the product shall be declared in clear.

6.5.2 The country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

### 6.6 Lot Identification (endorsed)

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

## 7. METHODS OF ANALYSIS AND SAMPLING

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

### 7.1 Protein (subject to endorsement)

Recommended method: Determination of Nitrogen Content of Meat and Meat Products, ISO Recommendation R 937.

### 7.2 Nitrite

To be elaborated (Secretariat)

### 7.3 Ascorbic acid and its sodium salt

To be elaborated (Secretariat)

DRAFT STANDARD FOR COOKED CURED HAM

(Returned to Step 6 of the Procedure for further Government Comments)

1. SCOPE

The provisions of this standard shall apply to products designated as "Cooked Ham" packaged in any suitable packaging material as defined in section 5 below.

The standard shall not apply to any ham products with compositional characteristics different from those specified in the standard, even though the name of such products might include the terms "ham" or "cooked ham".

2. DESCRIPTION

The product shall be made of meat from the hind leg of a pig - divided transversely from the remainder of the side at a point not further anteriorly than the end of the hip bone - excluding comminuted or chopped meat. All bones and detached cartilage, tendons and ligaments shall be removed. Skin and fat may or may not be removed.

The meat shall be cured and may be smoked, spiced and/or flavoured.

The heat treatment to which the product has been subjected and the type of cure and packaging shall be sufficient to ensure that the product presents no hazard to public health and remains wholesome under conditions of storage, transport and sale as indicated in subsections 5.2.3 and 5.2.4.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Ingredients

- uncured ham
- brine consisting of water and salt (sodium chloride) and sodium or potassium nitrite and/or nitrate.

3.2 Optional Ingredients

- sucrose, invert sugar, dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup), honey
- spices, seasonings and condiments
- hydrolysed protein.

3.3 Essential Quality Factors 3.3.1 Raw material

The ingredients from which the product is prepared shall be free from objectionable odours and flavours.

3.3.2 Final product

The product shall be clean and substantially free from staining and contamination from the container. The meat shall be uniformly and thoroughly cured and the product shall be capable of being sliced.

3.4 Meat Content

Percentage meat-protein on fat-free basis 18.0% <sup>1/</sup>  
Minimum percentage meat-protein on fat-free basis 16.5% <sup>1/</sup>

(for canned products the percentage of meat-protein is calculated on the total content of the can and corrected for added gelatin, if added).

<sup>1/</sup> See for inspection procedure (sampling plan) and for gelatin correction figures subsection 7.4 on Lot Acceptance of section 7, Methods of Analysis and Sampling.

#### 4. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications, as contained in section ... of the Codex Alimentarius, are subject to endorsement, have been endorsed or temporarily endorsed by the Codex Committee on Food Additives, as indicated below:

<u>Additive</u>	<u>Maximum level calculated on the total net content of the final product</u>	<u>Status</u>
Agar	Limited by good manufacturing practice (GMP)	Endorsed
Alginates, potassium and/or sodium salts	Limited by GMP	Endorsed
Carrageenan	Limited by GMP .	Endorsed
Ascorbic acid, iso-ascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination <sup>1/</sup>	Endorsed
Natural flavourings as defined in the Codex Alimentarius and their identical synthetic equivalents	Limited by GMP	Temporarily endorsed pending establishment of Codex lists
Natural smoke solutions and their extracts as defined in the Codex Alimentarius and their identical synthetic equivalents	Limited by GMP	Temporarily endorsed, pending evaluation by the JECFA
Citrate, sodium salt	Limited by GMP	Endorsed
Guanylic acid, sodium salt	500 mg/kg expressed as guanylic acid	( Postponed ( pending ( toxicological ( evaluation by the ( JECFA
Inosinic acid, sodium salt	500 mg/kg expressed as inosinic acid	( JECFA
Monosodium glutamate	2000 mg/kg expressed as glutamic acid	Endorsed
Nitrate, potassium and/or sodium salts .	500 mg/kg expressed as sodium nitrate <sup>1/</sup>	Temporarily endorsed
Nitrite, potassium and/or, sodium salts	125 mg/kg total nitrite expressed as sodium nitrite <sup>1/</sup>	To be endorsed
Added phosphates (mono di- and poly-sodium and potassium salts)	3000 mg/kg (expressed as P <sub>2</sub> O <sub>5</sub> ) singly or in combination	Endorsed
Edible gelatine	Limited by GMP	To be endorsed

<sup>1/</sup> Subject to review in the light of further information on current research.

## 5. HYGIENE

- 5.1 It is recommended that the Code of Hygienic Practice for Processed Meat Products of the Codex Alimentarius Commission (subject to finalization) should apply (see Appendix VII to this Report).
- 5.2 The following specific provisions in respect of food hygiene of this product are subject to endorsement by the Codex Committee on Food Hygiene:
- 5.2.1 No meat or meat products shall be accepted by an establishment unless the meat or meat products have been derived from animals subjected to ante-mortem and post-mortem inspection. They shall not be accepted unless they are properly branded or marked and in all ways suitable for human consumption and that they have not, subsequent to being examined by an Inspector, been exposed to contamination, or processed or handled or subjected to the addition of any harmful substance which renders them unfit for human consumption. <sup>2/</sup> (IV.D.39(a))

<sup>2/</sup> These provisions have been taken from the Draft Code of Hygienic Practice for Processed Meat Products (Appendix VII to this Report).

- 5.2.2 Meat and meat products shall "be handled, stored or transported in an establishment in a manner that will protect the meat and meat products from contamination and deterioration. <sup>1/</sup> (IV.D.39(b))

<sup>1/</sup> These provisions have been taken from the Draft Code of Hygienic Practice for Processed Meat Products (Appendix VII to this Report).

- 5.2.3 Products that are heat treated after packaging shall be packaged in hermetically sealed containers which do not present any health hazard or permit contamination under the conditions of handling, storage, transport, and sale indicated on the label. The containers shall be clean and show the characteristics of sound containers and, 'where applicable to the type of container, shall show evidence of vacuum.
- 5.2.4 Products that are heat treated before packaging shall be packaged in such a way that contamination is kept to a minimum so that the product will withstand spoilage and present no public health hazard under the conditions of handling, storage, transport and sale indicated on the label. The containers shall not present any health hazard or permit contamination under normal conditions of handling. They shall be clean and, where applicable, show evidence of vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality or suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be filtered and effectively disinfected by chlorine or otherwise, before use or each re-use.
- 5.2.6 The final product shall be handled and stored in such a, manner as to avoid contamination of the product.

## 6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), the following specific provisions apply (subject to endorsement by the Codex Committee on Food Labelling):

## 6.1 The Name of the Food

6.1.1 The name of the product is "Cooked Ham".

6.1.2 The name of the product shall include, as appropriate, the designation:

- "with skin"
- "in/with natural juice"
- "X added" applying to gelatine, agar, alginates or carrageenan
- "smoked"
- "smoking agent added"

6.1.3 The name "cooked ham" if used as such or in combination with the descriptive designations in 6.1.2 shall be reserved exclusively to products falling within the scope of the standard, it being understood that the term "cooked ham" as such or in combination with the descriptive designations in 6.1.2 may be used for other products only if accompanied by a qualifying statement in connection with the term "cooked ham" in such a way that it describes the true nature of the product that it does not mislead the Consumer and that it does not lead to confusion with products covered by the standard.

6.1.4 A declaration that accurately describes the method of preparation or processing shall be given so as to appear simultaneously visible with the name of the product if its omission would mislead the consumer.

## 6.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion, in accordance with subsection 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods, except that specific names shall be used for ascorbic acid, iso-ascorbic acid and their sodium salts, nitrate (potassium and sodium), and nitrite (potassium and sodium), and added phosphates may be declared by the class title "phosphates".

## 6.3 Net Contents

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

## 6.4 Name and Address

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

## 6.5 Country of Origin

6.5.1 The country of origin of the product shall "be declared in clear.

6.5.2 The country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

## 6.6 Storage Instructions

For hams which are not **shelf-stable, i.e. which may be expected not to keep** for at least one year in normal conditions of storage and sale, adequate storage instructions shall be given on the label. These instructions shall state the recommended maximum **temperature or conditions of storage and, in the**

case -of containers sold to the consumer, an indication of the recommended maximum period of storage in specified conditions.

6.7 Lot Identification

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

7. METHODS OF ANALYSIS AND SAMPLING

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

7.1 Protein

Recommended method: Determination of Nitrogen Content<sup>1</sup> of Meat and Meat Products, ISO Recommendation R 937.

7.2 Fat

Recommended method: Determination of Total Fat Content of Meat and Meat Products, ISO Recommendation R 1443.

7.3 Nitrite and Nitrate

To be elaborated.

7.4 Inspection procedure for 'PFF and correction for gelatine

Zone L: 16.5% PFF or below

Zone A: 16.6% - 17.2% PFF

Zone B: 17.3% - 17.9% PFF

Zone C: 18.0% PFF or above.

- a) When the first sample is equivalent to or above 18.0 the lot is accepted.
- b) When the first sample is in Zone B a further sample is taken and the results of that analysis should be 18.0 or above for the lot to be accepted.
- c) When the first sample is in Zone A two further samples are taken and the results of both analyses should be 18.0 or above for the lot to be accepted.
- d) When the first sample is below 16.5 the lot is not acceptable.

Correction for added gelatine

For products weighing less than 0.5 kg, 1% protein should be deducted from the percentage protein on fat-free basis found by\* analysis. For products weighing from 0.5 kg to 1.0 kg, 0.6% should be deducted from the percentage protein on fat-free basis found by analysis. No deductions should be made from products weighing more than 1.0 kg.

DRAFT STANDARD FOR COOKED CURED PORK SHOULDER  
(Returned go Step 6 of the Procedure for further Government Comments)

1. SCOPE

The provisions of this standard shall apply to products designated as "Cooked Pork Shoulder" packaged in any suitable packaging material as defined in section 5 below.

The standard shall not apply to any pork shoulder products with compositional characteristics different from those specified in the standard, even though the name of such products might include the terms "pork shoulder" or "cooked pork shoulder".

2. DESCRIPTION

The product shall be made of meat from the shoulder of a pig excluding comminuted or chopped meat. All bones and detached cartilage, tendons and ligaments shall be removed. Skin and fat may or may not be removed.

The meat shall be cured and may be smoked, spiced and/or flavoured. The heat treatment to which the product has been subjected and the type of cure and packaging shall be sufficient to ensure that the product presents no public health hazard and remains wholesome under conditions of storage, transport and sale as indicated in sections 5.2.3 and 5.2.4.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Ingredients

- uncured pork shoulder
- brine consisting of water and salt (sodium chloride) and sodium or potassium nitrite **and or nitrate**.

3.2 Optional Ingredients

- sucrose, invert sugar, dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup), honey
- **spices, seasonings and condiments**
- **hydrolyzed protein**

3.3 Essential Quality Factors

3.3.1 Raw material

The ingredients from which the product is prepared shall be free from objectionable odours and flavours.

3.3.2 Final product

The product shall be clean and substantially free from staining and contamination from the container. The meat shall be uniformly and thoroughly cured and the product shall be capable of being sliced.



### 3.4 Meat Content

Percentage meat-protein on fat-free basis 17.5% <sup>1/</sup>  
 Minimum percentage meat-protein on fat-free basis 16.0% <sup>1/</sup>  
 (for canned products the percentage of meat-protein is calculated on the total content of the can and corrected for added gelatin, if added).

<sup>1/</sup> See for inspection procedure (sampling plan) and for gelatin correction figures subsection 7.4 on Lot Acceptance of section 7: Methods of Analysis and Sampling

### 4. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications, as contained in section ... of the Codex Alimentarius are subject to endorsement, have been endorsed or temporarily endorsed by the Codex Committee on Food Additives, as indicated below;

<u>Additive</u>	<u>Maximum level calculated on the total net content of the final product</u>	<u>Status</u>
Agar	Limited by good manufacturing practice (GMP)	Endorsed
Alginates, potassium and/or sodium salts	Limited by GMP	Endorsed
Carrageenan	Limited by GMP	Endorsed
Ascorbic acid, iso-ascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination <sup>1/</sup>	Endorsed
Natural flavourings as defined in the Codex Alimentarius and their identical synthetic equivalents	Limited by GMP	Temporarily endorsed, pending establishment of Codex lists
Natural smoke solutions and their extracts as defined in the Code Alimentarius and their identical synthetic equivalents	Limited by GMP	Temporarily endorsed, pending evaluation by the JECFA
Citrate, sodium salt	Limited by GMP	Endorsed
Guanylic acid, sodium salt	500 mg/kg expressed ( as guanylic acid (	Postponed pending toxicological evaluation by the JECFA
Inosinic acid, sodium salt	500 mg/kg expressed ( as inosinic acid (	
Monosodium glutamate	2000 mg/kg expressed as glutamic acid .	Endorsed
Nitrate, potassium and/or sodium salts	500 mg/kg expressed as sodium nitrate <sup>1/</sup>	Temporarily endorsed To be endorsed

Nitrite, potassium and/or sodium salts	125 mg/kg total nitrite expressed as sodium nitrite <sup>1/</sup>	
Added phosphates (mono-, di- and poly-sodium and potassium salts)	3000 mg/kg (expressed as Endorsed P <sub>2</sub> O <sub>5</sub> ) singly or in combination	
Edible gelatine	Limited by GMP	To be endorsed

<sup>1/</sup> Subject to review in the light of further information on Current research.

## 5. HYGIENE

- 5.1 It is recommended that the Code of Hygienic Practice for Processed Meat products of the Codex Alimentarius Commission (subject to finalization) should apply (see Appendix VII to this Report).
- 5.2 The following specific provisions in respect of food hygiene of this product are subject to endorsement by the Codex Committee on Food Hygiene:
- 5.2.1 No meat or meat products shall be accepted by an establishment unless the meat or meat products have been derived from animals subjected to ante-mortem and post-mortem inspection. They shall not be accepted unless they are properly branded or marked and in all ways suitable for human consumption and that they have not, subsequent to being examined by an Inspector, been exposed to contamination, or processed or handled or subjected to the addition of any harmful substance which renders them unfit for human consumption. <sup>2/</sup> (IV.D.39(a))
- 5.2.2 Meat and meat products shall be handled, stored or transported in an establishment in a manner that will protect the meat and meat products from contamination and deterioration. <sup>2/</sup> (IV.D.39(b))
- <sup>2/</sup> These provisions have been taken from the Draft Code of Hygienic Practice for Processed Meat Products (Appendix VII to this Report).
- 5.2.3 Products that are heat treated after packaging shall be packaged in hermetically sealed containers which do not present any health hazard or permit contamination under the conditions of handling, storage, transport and sale indicated on the label. The containers shall be clean and show the characteristics of sound containers and, where applicable to the type of container, shall show evidence of vacuum.
- 5.2.4 Products that are heat treated before packaging shall be packaged in such a way that contamination is kept to a minimum so that the product will withstand spoilage and present no public health hazard under the conditions of handling, storage, transport and sale indicated on the label. The containers shall not present any health hazard or permit contamination under normal conditions of handling. They shall be clean and, where applicable, show evidence of vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality or suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be filtered and effectively disinfected by chlorine or otherwise, before use or each re-use.
- 5.2.6 The final product shall be handled and stored in such a manner as to avoid contamination of the product.

## 6. LABELLING

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), the following specific provisions apply (subject to endorsement by the Codex Committee on Food Labelling):

### 6.1 The Name of the Food

6.1.1 The name of the product is "Cooked Pork Shoulder"

6.1.2 The name of the product shall include, as appropriate, the designation:

- "with skin"
- "in/with natural juice"
- "X added" applying to gelatine, agar, alginates or carrageenan
- "smoked"
- "smoking agent added"

6.1.3 The name "cooked pork shoulder" if used as such or in combination with the descriptive designations in 6.1.2 shall be reserved exclusively to products falling within the scope of the standard, it being understood that the term "cooked pork shoulder" as such or in combination with the descriptive designations in 6.1.2 may be used for, other products only if accompanied by a qualifying statement which describes the true nature of the product, that it does not mislead the consumer and that it does not lead to confusion with products covered by the standard.

6.1.4 A declaration that accurately describes the method of preparation or processing shall be given so as to appear simultaneously visible with the name of the product if its omission would mislead the consumer.

### 6.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion, in accordance with subsection 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods, except that specific names shall be used for ascorbic acid, iso-ascorbic acid and their sodium salts, nitrate (potassium and sodium), and nitrite (potassium and sodium) and added phosphates may be declared by the class title "phosphates".

### 6.3 Net Contents

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

### 6.4 Baffle and Address

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

### 6.5 Country of Origin

6.5.1 The country of origin of the product shall be declared in clear.

6.5.2 The country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

## 6.6 Storage Instructions

For pork shoulders which are not shelf-stable, i.e. which may be expected not to keep for at least one year in normal conditions of storage and sale, adequate storage instructions shall be given on the label. These instructions shall state the recommended maximum temperature or conditions of storage and, in the case of containers sold to the consumer, an indication of the recommended maximum period of storage in specified conditions.

## 6.7 Lot Identification

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

## 7. METHODS ANALYSIS AND SAMPLING

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

### 7.1 Protein

Recommended method: Determination of Nitrogen Content of Meat and Meat Products, ISO Recommendation R 937.

### 7.2 Fat

Recommended method: Determination of Total Fat Content of Meat and Meat Products, ISO Recommendation R 1443.

### 7.3 Nitrite and Nitrate

To be elaborated.

### 7.4 Inspection procedure for PFF and correction for gelatine

Zone L: 16.0% PFF or below

Zone A: 16.1% - 16.7% PFF

Zone B: 16.8% - 17.4% PFF

Zone C: 17.5% PFF or above.

- a) When the first sample is equivalent to or above 17.5 the lot is accepted.
- b) When the first sample is in Zone B a further sample is taken and the results of that analysis should be 17.5 or above for the lot to be accepted.
- c) When the first sample is in Zone A two further samples are taken and the results of both analyses should be 17.5 or above for the lot to be accepted.
- d) When the first sample is below 16.0 the lot is not acceptable.

#### Correction for added gelatine

For products weighing less than 0.5 kg, 1% protein should be deducted from the percentage protein on fat-free basis found by analysis. For products weighing from 0.5 kg to 1.0 kg, 0.6% should be deducted from the percentage protein on fat-free basis found by analysis. No deductions should be made from products weighing more than 1.0 kg.

DRAFT STANDARD FOR LUNCHEON MEAT  
(Advanced to Step 8 of the Procedure)

1. SCOPE

The provisions of this standard apply to products designated as "Luncheon Meat"<sup>1/</sup> which have been packed in any suitable packaging material.

<sup>1/</sup> Only the English language shall be used whatever the language of the text.

2. DESCRIPTION

The product shall be prepared from meat as defined below and which has been comminuted and cured and which may have been smoked.

Apart from the meat as defined below, edible offal as defined below and poultry meat as defined below may also be used in the preparation of the product.

The product may or may not contain binders.

The heat treatment to which the product has been subjected and the type of cure and packaging shall be sufficient to ensure that the product presents *no* public health hazard and remains wholesome under the conditions of storage, transport and sale as indicated in sections 5.2.3 and 5.2.4.

Subsidiary Definitions

**For the purpose of this standard:**

Edible offal means such offals as have been passed as fit for human consumption including lungs (but not if the animal from which the lungs have been taken has, been scalded by immersion in hot water) but not including ears, scalp, snouts (including lips and muzzle), mucous membrane, sinews, genital system, udders, intestines and urinary bladder.

Meat means the edible part of any mammal slaughtered in an abattoir.

Packaged means packed in a container manufactured of materials which do not permit contamination under normal conditions of handling.

Poultry meat means the edible part of any domesticated birds including chickens, turkeys, ducks, geese, guinea-fowls or pigeons slaughtered in an abattoir.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Ingredients

- meat
- water
- curing ingredients consisting of salt and sodium or potassium nitrite

3.2 Optional Ingredients

- edible offal, fat per se, cured and uncured pork rind per se, poultry meat
- carbohydrate and protein binders
  - meal, flour or starch prepared from grain, or potato or sweet potato
  - bread, biscuit or bakery products

- milk powder, skim milk powder, butter milk powder, egg protein, whey powder, soya flour, soya protein, textured vegetable protein, caseinate, groundnut protein, wheat gluten, dried blood serum, lupin meal, sunflower meal.
- sucrose, invert sugar, dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup)
- spices, seasonings and condiments
- hydrolized protein

### 3.3 Composition

	product - with binder	product without binder and edible offal (but may include heart, tongue or head meat from mammals)
– Minimum ingoing meat content	80% <sup>1/</sup>	90%
– Maximum fat content	35%	30%

<sup>1/</sup> The meat content includes meat, edible offal and poultry meat.

### 3.4 Essential Quality Factors

#### 3.4.1 Raw material

The ingredients from which the product is prepared shall be free from objectionable odours and flavours.

#### 3.4.2 Final product

The product shall be clean and substantially free from staining and contamination from the container. The meat and poultry meat shall be uniformly and thoroughly cured and the product shall be capable of being sliced.

## 4. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications as contained in section ... of the Codex Alimentarius are subject to endorsement, have been endorsed or temporarily endorsed by the Codex Committee on Food Additives as indicated below:

<u>Additive</u>	<u>Maximum level calculated on the total net content of the final product</u>	<u>Status</u>
Ascorbic acid, iso-ascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination	Endorsed
Natural flavourings as defined in the Codex Alimentarius and their identical synthetic equivalents	Limited by GMP	Temporarily endorsed, pending establishment of Codex lists
Sodium citrate	Limited by GNP	Endorsed
Guanylio acid, sodium salt	500 mg/kg expressed as guanylic acid	Endorsement postponed pending toxicological evaluation by the JECFA
Inosinic acid, sodium salt	500 mg/kg expressed as inosinic acid	Endorsement postponed pending toxicological evaluation by the JECFA
Monosodium glutamate	5000 mg/kg expressed as glutamic acid	Endorsed
Nitrite, potassium and/or sodium salts	125 mg/kg total nitrite expressed as sodium nitrite <sup>2/</sup>	Temporarily endorsed
Added phosphates (mono-, di- and poly-), sodium and potassium salts	3000 mg/kg (expressed as P <sub>2</sub> O <sub>5</sub> ) singly or in combination	Endorsed
Glucono-delta-lactone	3000 mg/kg	Endorsed
Erythrosine C.I. No. 45430 to replace loss of colour	15 mg/kg <sup>1</sup>	Endorsement postponed <sup>2/</sup>

<sup>2/</sup> Subject to review in the light of further information based on current research.

## **5. HYGIENE**

- 5.1 It is recommended that the Code of Hygienic Practice for Processed Meat Products and, where applicable, the Code of Hygienic Practice for Poultry Processing of the Codex Alimentarius Commission (subject to finalization) should apply.
- 5.2 The following specific provisions in respect of food hygiene of this product are subject to endorsement by the Codex Committee on Food Hygiene:
- 5.2.1 No meat including poultry meat and their products shall be accepted by an establishment unless the meat or meat products have been derived from animals subjected to ante- mortem and post-mortem inspection. They shall not be accepted unless they are properly branded or marked and in all ways suitable for human consumption and that they have not, subsequent to being examined by an Inspector, been exposed to contamination, or processed or handled or subjected to the addition of any harmful substance which renders them unfit for human consumption<sup>3</sup>(IV.D.39(a)).

- 5.2.2 Meat including poultry meat and their products shall be handled, stored or transported in an establishment in a manner that will protect the meat and meat products from contamination and deterioration. <sup>3</sup> (IV.D.39(b)).
- 5.2.3 Products that are heat treated after packaging shall be packaged in hermetically sealed containers which do not present any health hazard or permit contamination under the conditions of handling, storage, transport and sale indicated on the label. The containers shall be clean and show the characteristics of sound containers and, where applicable to the type of container, shall show evidence of vacuum.
- 5.2.3 Products that are heat treated before packaging shall "be packaged in such a way that contamination is kept to a minimum so that the product will withstand spoilage and present no public health hazard under the conditions of handling, storage, transport and sale indicated on the label. The containers shall not present any health hazard or permit contamination under normal conditions of handling. They shall be clean and, where applicable, show evidence of vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality or suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be filtered and effectively disinfected by chlorine or otherwise, before use or each re-use.
- 5.2.6 The final product shall be handled and stored in such a manner as to avoid contamination of the product.

<sup>1</sup> For the product with binder only.

<sup>2</sup> See Report of 9th Session of Codex Committee on Food Additives, ALINORM 74/12, para 85.

<sup>3</sup> These provisions have been taken from the Draft Code of Hygienic Practice for Processed Meat Products (Appendix VII to this Report).

## 6. LABELLING

In addition to Sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. Ho. CAC/RS 1-1969), the following specific provisions apply:

### 6.1 The Name of the Food

The name of the product is "Luncheon Meat".

A declaration of the presence of binders and of edible offal and a declaration indicating "the species of animal from which the meat is derived shall be given in connection with the name of the product if their omission would mislead the consumer.

### 6.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with subsection 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods, except that specific names shall be used for ascorbic acid, isoascorbic acid and their sodium salts, and nitrite (potassium and sodium), and added phosphates may be declared by the class title "phosphates".

The list of ingredients shall indicate the species of animals from which the meat is derived.



### 6.3 Net Contents

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

### 6.4 Name and Address

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

### 6.5 Country of Origin

6.5.1 The country of origin of the product shall be declared in clear.

6.5.2 The country in which the processing is performed, shall be considered to be the country of origin for the purpose of labelling.

### 6.6 Storage Instructions

For products which are not fully **shelf-stable, i.e. which may be expected not to** keep for at least one year in normal conditions of storage and sale, adequate storage instructions shall be given on the label. These instructions shall state the recommended maximum **temperature or conditions of storage and, in**

the case of products sold to the consumer, an indication of the recommended maximum period of storage in specified conditions.

### 6.7 Lot Identification

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

## 7. METHODS OF ANALYSIS AND SAMPLING

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

### 7.1 Fat

Recommended method: Determination of Total Fat Content of Meat and Meat Products, ISO Recommendation R 1443.

### 7.2 Nitrite

**To be elaborated.**

Argumentation presented by the delegations of the United Kingdom and Denmark for the use of erythrosine in the manufacture of Luncheon Meat

1. The standard makes provision for a product with 80% meat content which must contain at least 45% lean meat. The natural colour derived from the meat muscle pigments is paler than that of the solid pack products such as ham and pork shoulder. The use of offals and of poultry meat is permitted and these may be naturally paler in colour than red muscle meat.
2. The natural pigment of cooked canned meat is inherently unstable to the combined action of light and air. On exposure to light and air, fading is relatively rapid and is not an indication of bacteriological deterioration - although the loss of colour might give the impression that such deterioration has occurred.
3. To minimize this loss of colour, erythrosine has been used for this product for many years. If this practice were to cease, the **marketability of** product would undoubtedly suffer and consumers might well be denied a traditional, relatively cheap product which has been an established line for 20 years or more.
4. It is considered that the justification for the use of erythrosine at the level of 15 mg/kg is under 5(c) of the General Principles for the Use of Food Additives: to improve the organoleptic properties of the product with out there being any question of deception of the consumer.

DRAFT STANDARD FOR COOKED CURED CHOPPED MEAT

(Returned to Step 6 for further Government comments)

(Revised by the Secretariat - see para 83 of Report)

1. SCOPE

The provisions of this standard apply to cooked, cured meat products designated as "Chopped Meat" <sup>1</sup> which have been packed in any suitable packaging material.

<sup>1</sup> The word "meat" may be replaced by a word describing the kind (s) of meat used

2. DESCRIPTION

The product shall be prepared from meat as defined below and which has been cured and which may have been smoked. At least 50% of the meat used shall consist of coarsely cut pieces equivalent to meat ground through holes of not less than 8 mm in diameter. No piece shall be greater than 15 mm in anyone dimension.

Apart from the meat as defined below, edible offal as defined below and poultry meat as defined below may also be used in the preparation of the product.

The product may or may not contain binders.

The heat treatment to which the product has been subjected and the type of cure and packaging shall be sufficient to ensure that the product presents no public health hazard and remains wholesome under the conditions of storage, transport and sale as indicated in sub-sections 5.2.3 and 5.2.4.

Subsidiary Definitions

For the purpose of this standard:

Edible offal means such offals as have been passed as fit for human consumption including lungs (but not if the animal from which the lungs have been taken has been scalded by immersion in hot water) but not including ears, scalp, snouts (including lips and muzzle), mucous membrane, sinews, genital system, udders, intestines and urinary bladder.

Meat means the edible part of any mammal slaughtered in an abattoir.

Packaged means packed in a container manufactured of materials which do not permit contamination under normal conditions of handling.

Poultry meat means the edible part of any domesticated birds including chickens, turkeys, ducks, geese, guinea-fowls or pigeons slaughtered in an abattoir.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Ingredients

- meat
- water
- curing ingredients consisting of salt and sodium or potassium nitrite.

3.2 Optional Ingredients

- edible offal, fat per se, cured and uncured pork rind per se, poultry meat
- carbohydrate and protein binders
  - meal, flour or starch prepared from grain, or potato or sweet potato
  - bread, biscuit or bakery products
  - milk powder, skim milk powder, butter milk powder, egg protein, whey powder, soya flour, soya protein, textured vegetable protein, caseinate, groundnut protein, wheat gluten, dried blood serum, lupin meal, sunflower meal
- sucrose, invert sugar, dextrose (glucose), lactose, maltose, glucose syrup (including corn syrup)
- spices, seasonings and condiments
- hydrolized protein

3.3	<u>Composition</u>	<u>product with Milder</u>	<u>product without binder and edible offal (but may include heart, tongue or head meat from mammals)</u>
	- Minimum ingoing meat content	85% <sup>1/</sup>	90%
	- Maximum fat content	30%	25%

<sup>1/</sup> Ingoing meat includes edible offal and poultry meat.

### 3.4 Essential Quality Factors

#### 3.4.1 Raw Material

The ingredients from which th.8 product is prepared shall be free from objectionable odours and flavours.

#### 3.4.2 Final Product

The product shall be clean and substantially free from staining and contamination from the container. The meat and poultry meat shall be uniformly and thoroughly cured and the product shall be capable of being sliced.

### 4. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications as contained in section ... of the Codex Alimentarius are subject to endorsement, have been endorsed or temporarily endorsed by the Codex Committee on Food Additives as indicated below:

<u>Additive</u>	<u>Maximum level calculated on the total net content of the final product</u>	<u>Status</u>
Ascorbic acid, iso-ascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination	Endorsed
Natural flavourings as defined in the Codex Alimentarius and their identical synthetic equivalents	Limited by GMP	Temporarily endorsed, pending establishment of Codex lists
Sodium citrate	Limited by GMP	Endorsed
Guanylic acid, sodium salt	500 mg/kg expressed as guanylic acid	Endorsement postponed pending toxicological evaluation by the JECFA
Inosinic acid, sodium salt	500 mg/kg expressed as inosinic acid	Endorsed
Monosodium glutamate	5000 mg/kg expressed as glutamic acid	Endorsed
Nitrite, potassium and/or sodium salts	125 mg/kg total nitrite expressed as sodium nitrite <sup>2/</sup>	Temporarily endorsed
Added phosphates (mono-, di- and poly-), sodium and potassium salts	3000 mg/kg (expressed as P <sub>2</sub> O <sub>5</sub> ) singly or in combination	Endorsed
Glucono-delta-lactone	3000 mg/kg	Endorsed
Erythrosine C.I. No. 45430 to replace loss of colour	15 mg/kg <sup>3/</sup>	Endorsement postponed <sup>4/</sup>

<sup>2/</sup> Subject to review in the light of further information based on current research.

<sup>3/</sup> For the product with binder only.

<sup>4/</sup> See Report of 9th Session of Codex Committee on Food Additives, ALINORM 74/12, para 85.

## 5. HYGIENE

- 5.1 It is recommended that the Code of Hygienic Practice for Processed Meat Products and, where applicable, the Code of Hygienic Practice for Poultry Processing of the Codex Alimentarius Commission (subject to finalization) should apply.
- 5.2 The following specific provisions in respect of food hygiene of this product are subject to endorsement by the Codex Committee on Food Hygiene:
- 5.2.1 No meat including poultry meat and their products shall be accepted by an establishment unless the meat or meat products have been derived from animals subjected to ante-mortem and post-mortem inspection. They shall not be accepted unless they are properly branded or marked and in all ways suitable for human consumption and that they have not, subsequent to being examined by an Inspector, been exposed to contamination, or processed or handled or subjected to the addition of any harmful substance which renders them unfit for human consumption <sup>1/</sup> (IV.D.39(a)).
- 5.2.2 Meat including poultry meat and their products shall be handled, stored or transported in an establishment in a manner that will protect the meat and meat products from contamination and deterioration <sup>1/</sup> (IV.D.39(b)).

<sup>1/</sup> These provisions have been taken from the Draft Code of Hygienic Practice for Processed Meat Products (Appendix VII to this Report).

- 5.2.3 Products that are heat treated after packaging shall be packaged in hermetically sealed containers which do not present any health hazard or permit contamination under the conditions of handling, storage, transport and sale indicated on the label. The containers shall be clean and show the characteristics of sound containers and, where applicable to the type of container, shall show evidence of vacuum.
- 5.2.4 Products that are heat treated before packaging shall be packaged in such a way that contamination is kept to a minimum so that the product will withstand spoilage and present no public health hazard under the conditions of handling, storage, transport and sale indicated on the label. The containers shall not present any health hazard or permit contamination under normal conditions of handling. They shall be clean and, where applicable, show evidence of vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality or suitably treated so as not to constitute a public health hazard. If cooling water is recirculated, it shall be filtered and effectively disinfected by chlorine or otherwise, before use of each re-use.
- 5.2.6 The final product shall be handled and stored in such a manner as to avoid contamination of the product.

## 6. LABELLING

In addition to Sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969), the following specific provisions apply:

### 6.1 The Name of the Food

The name of the product is "Chopped Meat" except that the word "meat" may be replaced by a word describing the kind of meat used, or where more than one kind of meat has been used, by the names in descending order of proportion, e.g. "chopped pork", "chopped pork and beef".

A declaration of the presence of binders and of edible offal and a declaration indicating the species of animal from which the meat is derived shall be given in connection with the name of the product if their omission would mislead the consumer.

### 6.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with subsection 3.2(c) of the Recommended International General Standard for the Labelling of Prepackaged Foods, except that specific names shall be used for ascorbic acid, isoascorbic acid and their sodium salts, and nitrite (potassium and sodium), and added phosphates may be declared by the class title "phosphates".

The list of ingredients shall indicate the species of animals from which the meat is derived.

6.3 Net Contents

The net contents shall be declared by weight in either the metric ("Système international" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold.

6.4 Name and Address

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

6.5 Country of Origin

6.5.1 The country of origin of the product shall be declared in clear.

6.5.2 The country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

6.6 Storage Instructions

For products which are not fully shelf-stable, i.e. which may be expected not to keep for at least one year in normal conditions of storage and sale, adequate storage instructions shall be given on the label. These instructions shall state the recommended maximum temperature or conditions of storage and, in the case of products sold to the consumer, an indication of the recommended maximum period of storage in specified conditions.

6.7 Lot Identification

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

7. METHODS OF ANALYSIS AND SAMPLING

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

7.1 Fat

Recommended method: Determination of Total Fat Content of Meat and Meat Products, ISO Recommendation R 1443.

7.2 Nitrite

To be elaborated.

DRAFT CODE OF HYGIENIC PRACTICE FOR PROCESSED MEAT PRODUCTS

(Advanced to Step 8 of the Procedure)

- Note : - Sidelined portions indicate provisions specific to this Code
- FM = Same text as in Draft Code of Hygienic Practice for Fresh Meat (ALINORM 76/15, Appendix II) with such modifications that are necessary to bring it into line with the Scope of the present Code
  - (FM) = Partial reference to text of Draft Code of Hygienic Practice for Fresh Meat (ALINORM 76/15, Appendix II)

Notes : If poultry 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 Annex, 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 meat products.

SECTION II - DEFINITIONS

For the purpose of this Code:

1. "Abattoir" means premises approved and registered by the controlling authority used for the slaughter of animals for human consumption. FM 1
2. "Brand" means any mark or stamp approved by the controlling authority and also includes any tag or label bearing such mark or stamp. FM 2
3. "Cleaning" means the removal of objectionable matter. FM 4
4. "Contamination" means the direct or indirect transmission of objectionable matters. FM 5
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. (FM 6)
6. "Disinfection" means the application of hygienically satisfactory chemical and/or physical agents and processes to cleaned surfaces with the intention of eliminating micro-organisms FM 7
7. "Edible" means fit for human consumption.
8. "Edible offal" means such offals as have been passed as fit for human consumption. (FM 9)
9. "Establishment" means any premises approved and registered by the controlling authority in which meat products are prepared, processed, handled, packed or stored. FM 10
10. "Hermetically sealed" means completely sealed and impermeable to gas.



11. "Ingredient" means any substance including food additives used in the manufacture or preparation of a meat product.
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. The supervision of the inspection of meat hygiene including the inspection of meat and meat products should be the responsibility of a veterinarian. (FM13)
13. "Manager" in relation to an establishment includes any person for the time being responsible for the management of the establishment. FM 14
14. "Meat" means the edible part of any mammal slaughtered in an abattoir
15. "Meat product" means a product intended for human consumption containing meat FM15
15. "Meat product" means a product intended for human consumption containing meat.
16. "Poultry meat" means the edible part of slaughtered domesticated birds including chickens, turkeys, ducks, geese, guinea-fowls or pigeons.
17. "Processed" includes all methods of manufacture and preservation but does not include prepackaged fresh, chilled or frozen meat cuts or joints
18. "Potable water" means water that is pure and wholesome at the point of usage in accordance with the WHO requirements contained in the "International Standards for Drinking Water". FM 16
19. "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 and footwear. FM 17
20. "Unfit for human consumption", in relation to meat and meat products, means an article that would normally be edible but is inedible because of disease, decomposition or any other reason.

### SECTION III - INGREDIENT REQUIREMENTS

21. All meat used in the manufacture of meat products should have been produced in compliance with the provisions of the Code of Hygienic Practice for Fresh Meat and should have been subjected to the inspection processes prescribed therein and in the Code of Ante-Mortem and Post-Mortem Inspection of Slaughter Animals. It should have been passed by an Inspector as fit for human consumption. Poultry meat should have been produced in compliance with the Code of Hygienic Practice for Poultry Processing and shall be fit for human consumption.
22. No meat or other ingredient which has undergone deterioration or any process of decomposition or which has been contaminated with foreign matter to an extent which has made it unfit for human consumption should be used for the processing and manufacture of meat products.
23. All ingredients should be adequately stored and kept off the floor after delivery to the establishment
24. Where necessary, laboratory tests should be made of the ingredients prior to their being moved into the production area of the establishment

## SECTION.IV - ESTABLISHMENT FACILITIES AND OPERATING REQUIREMENTS

- A. Establishment Registration, Construction and Lay-out
25. Establishments should be approved and registered by the controlling authority
26. (a) Establishments should be located in areas not subject to regular and frequent flooding and free from objectionable odours, smoke, dust or other contaminants FM22(a)
- (b) Establishments should provide adequate working space for the satisfactory performance of all operations. FM 22(b)
- (c) The construction should be sound and ensure adequate ventilation, good natural or artificial lighting and easy cleaning. FM 22(c)
- (d) The buildings and facilities of the establishment should be kept in good repair at all times FM 22(d)
- (e) The establishment should be laid out and equipped so as to facilitate proper supervision of meat hygiene including performance of inspection and control FM 22(e)
- (f) The establishment should be of such construction as to protect against the entrance and harbouring of insects, birds, rodents or other vermin FM 22 (f)
- (g) In every establishment there should be a physical separation between departments in which edible and inedible material is handled FM 22(g)
- (h) In all rooms in an establishment other than rooms provided for the accommodation of workers and inspectors: FM 22(h)  
(i),(ii),
- (i) Floors should be of water-proof, non-toxic, non-absorbent materials, easy to clean and disinfect. They should be non-slip and without crevices and, except in the case of rooms where meat is frozen or stored frozen, should slope sufficiently for liquids to be drained off to trapped outlets protected by a grill.
- (ii) Walls should be of water-proof, non-toxic, non-absorbent materials, which are easy to clean and disinfect, smooth and at a height appropriate to the operation conducted; they should be light coloured and washable. The angles between the walls and the angles at the wall to floor junctions should be coved.
- (iii) Ceilings should be so designed and constructed as to prevent the accumulation of dirt and condensation and should be easy to clean.
- (i) Abattoirs and establishments should have an efficient effluent and waste disposal system which should at all times be maintained in good order and repair. All effluent lines (including sewer systems) must be large enough to carry peak loads. All lines must be water-tight and have adequate traps and vents. Catch-basins, traps, save-alls and sumps should at all times be kept separate and apart from any department in which meat is prepared, handled,

packed or stored. Disposal of waste should be effected in such a manner as to avoid contamination of potable water supplies. The effluent lines and the manner of waste disposal should be approved by the con- FM 22(i) trolling authority.

27. The construction and lay-out of any chilling room, freezing room, freezer store or freezer should satisfy the requirements of this Code FM 25
28. Sanitary Facilities and Controls
- (a) Every department in which edible meat products are prepared, processed or stored should be used at that time only for that purpose or for the preparation 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 products
  - (b) Establishments should be laid-out and equipped so as to 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 con tact with meat FM 26(c)
  - (c) The temperature in any room used for boning-out and trimming should at *no* time during working hours exceed 10°C, unless cleaning practices are carried out as provided for in sub-section IV.C34(d)
  - (d) An ample supply of potable water under adequate pressure should be pro vided with adequate facilities for its storage and distribution and with adequate protection against contamination and pollution FM 26(f)
    - (i) All water used in establishments should be potable FM 26(f)(i)
    - (ii) Non-potable water may be used for such purposes as producing steam, refrigeration and fire control. Such water should be carried in completely separate lines, identified preferably by colour, and. with no cross connection or backsiphonage with the lines carrying potable water FM 26(f)(ii)
  - (e) Ice should be made from potable water and should be manufactured, handled, stored and used so as to protect it from contamination.
  - (f) An adequate supply of hot potable water at no less than 82 C should be available at all times during the working hours. FM 26(g)
  - (g) All waste and inedible material resulting from the preparation and processing of meat and meat products, refuse and rubbish should be removed promptly and in such a manner as to avoid contaminating meat or meat products, potable water, equipment, floors and walls. Appropriate steps should be taken to ensure that waste and inedible material does not provide food for vermin, and

that inedible material is not used for human consumption.

- (h) Adequate natural or artificial lighting which does not alter colours should be provided throughout the establishment. 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 step of preparation should be of the safety type or otherwise protected to prevent contamination of meat and meat products in case of breakage. FM 26(h)
- (i) Adequate ventilation should be provided to prevent excessive heat, steam and condensation and ensure that the air of premises is not contaminated with odours, dust, vapour or smoke. Ventilation openings should be screened. Windows should be fitted with whole panes and those which open should be screened. The screens should be made so as to be easily movable for cleaning. Internal window sills, if present, should be sloped to prevent use as shelves. FM 26(i)
- (j) wide and those opening from departments where edible material is handled, unless provided with an effective and operating air screen, should be solid, as far as practicable self-closing, or close-fitting double action doors. (FM 26(j))
- (k) All stairs located in any room used in any department where edible material is handled should be constructed so that FM (k) 26:(i), (ii)
- (i) They can be easily cleaned and no contamination can be caused by material passing through the risers or treads.
- (ii) They should have side curbs that are at least 10 cm in height measured at the leading edge of the treads
- (l) Lift cages should be so constructed as to afford adequate protection of the meat against contamination. In particular the base and sides should be finished to a smooth impervious surface. Lift shafts should be smoothly finished or tiled. If painted, a light colour should be used. The floor of lift shafts should be drained so as to permit effective cleaning. FM 26(l)
- (m) Platforms, ladders, chutes and similar equipment in any room used for the preparation or processing of meat and meat products should be constructed so as to be capable of being effectively cleaned and should consist of material which is resistant to fracture, abrasion or corrosion and which can be effectively cleaned. Where chutes are provided they should be constructed with inspection and cleaning hatches. FM 26(m)
- (n) Floor drains should be kept in good condition and repair with strainers in place
- (o) All rooms used for de-boning, preparation, processing, packing or other handling of meat and meat products should be equipped with FM 26(n)

adequate facilities for washing hands, furnished with waste pipes leading to drains and conveniently located for the use of personnel during operations. The water used for the washing of hands should be warm. Taps of hand-washing facilities should be of a non hand-operable type. An adequate supply of odourless liquid soap or other cleansing agents should be provided.

- (p) (i) All rooms used for 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. FM 26(o) (i), (ii) (iii), (iv)
- (ii) 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
- (iii) All facilities for cleaning and disinfecting of implements should be fitted with suitable means of supplying water in sufficient quantity at a temperature of not less than 82°C at all times while meat or meat products are being handled in that part of the establishment.

29. Every establishment should include the following amenities:

- (a) Facilities for employees: adequate changing-room accommodation, drying room, lunch room, toilets with flushing water closets, showers and hand- washing facilities which should have adequate lighting, ventilation and heating and should not open directly to any work areas. Handwashing facilities with hot and cold water with taps of a non hand-operable type and suitable hygienic means of drying the hands should be provided adjacent to every toilet. Where paper towels are used a sufficient number of dispensers with paper towels and receptacles for used towels should be provided adjacent to each washing facility. Waste from these facilities should not join the plant effluent system prior to the final save-all; and

FM 27(a)

(b) Facilities for meat inspection personnel: adequate changing room accommodation, drying room, lunchroom, toilets with flushing water closets, showers and handwashing facilities. The amenities reserved for the meat inspection service, and toilets and shower and handwashing facilities should have adequate lighting, ventilation and heating. Handwashing facilities with hot and cold water with taps of a non hand-operable type and suitable hygienic means of drying the hands should be provided adjacent to every toilet. Where paper towels are used a sufficient number of dispensers with paper towels and receptacles for used towels should be provided adjacent to each washing facility. Such accommodation should be kept clean at all times. FM 27(b)

30. Office accommodation should be provided for the exclusive use of the meat inspection service. Laboratory facilities should be readily available for the purpose of meat inspection and meat hygiene FM 28

B Equipment and Utensils

31. All equipment, implements and utensils used in establishments which come in contact with meat and meat products should present a smooth impervious surface and be resistant to corrosion. They should be made of a material which does not transmit odour or taste, is non-toxic, free from, pits and crevices, non- absorbent and capable of withstanding repeated exposure to normal cleaning and disinfection. Stationary equipment should be installed in such a manner as will permit easy access and thorough cleaning and disinfection. Such equipment should be so constructed that it may be easily cleaned FM 29

32. Equipment and utensils used for inedible or condemned materials should be so identified and should not be used for edible products FM 30

33. No containers, particularly wooden crates, wooden boxes or cartons, should be assembled in any part 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 any part of an establishment in which meat or meat products are prepared, processed, handled, packed or stored, unless the container, equipment or utensils are required for use in that part (FM 32)

C. Hygienic Operating Requirements

34. (a) Rooms should be kept in good repair and clean at all times, and as far as practicable, free from steam, vapour and surplus water.  
(b) Amenities provided for the use of employees and the meat inspection service including the meat inspection office space should be kept clean at all times FM 33(a)  
(c) If a room normally used for the handling, preparation, processing, packaging or storage of meat and meat products is used for any other purpose, then sanitisation and disinfection are necessary immediately after such use.

- (d) If meat is boned and trimmed in rooms other than rooms under temperature control as defined in 28(c), the room and all equipment and utensils should be cleaned at least every four hours.
- (e) Any cooking or smoking of meat products should be done in separate areas suitably equipped for this purpose.
- (f) All equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws and containers should be cleaned at frequent intervals during the day and immediately and thoroughly cleaned and disinfected whenever they come in contact with diseased material, infective material or become contaminated. They shall also be cleaned and disinfected at the conclusion of each working day. FM 33(b)
- (g) The manager should ensure that washing down, cleaning and disinfection are carried out in compliance with this Code. FM 33(c)
- (h) Meat or meat products should not be contaminated during cleaning or disinfection of rooms, equipment or utensils. FM 3 3  
(d)
- (i) Immediately after cessation of work for the day, or at such other times as may be required, the floors and walls should be thoroughly cleaned.
- (j) 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 any edible department. FM 33(e)
- (k) Detergents, sanitizing agents and disinfectants should conform to public health requirements and should not be allowed to come into contact with meat or meat products. Any residue of these cleaning agents used for the washing of floors, walls or edible product equipment should be removed by thorough rinsing with potable water before the area or equipment is again used for handling meat or meat products. Prior to use of the equipment any residue of sanitizing agents or disinfectants should be removed by thorough rinsing with potable water. FM 33(f)
- (l) No cleaning preparation or material or any paint likely to contaminate meat or meat products should be used in any establishment where any meat or meat product is or may be prepared, processed, handled, packaged or FM 33(g)
- (m) Except as required for purposes of hygiene no substance which may contaminate meat or meat products should be handled or stored in any part of any establishment in which meat or meat products are prepared, processed, handled, packed or stored. However, materials employed in the construction or maintenance of an establishment may be used at any time when an inspector is satisfied that there would be no danger of contamination of meat or meat products FM 33(h)

35. Pest Control
- (a) An effective and continuous programme for the control of insects, birds, rodents or other vermin within the establishment should be maintained. FM 34(a)
  - (b) Establishments and surrounding areas should be regularly examined for evidence of infestation with insects, birds, rodents or other vermin FM 3,4(b)
  - (c) Should pests gain entrance to establishments, approved eradication measures should be instituted. The eradication of pests should always be carried out under skilled supervision and with the full knowledge of the inspector FM 34 (c)
  - (d) Only pesticides approved for use in an establishment by the competent authority should be used in an establishment and the greatest care should be exercised to prevent any contamination of the meat or meat products. Pesticides should only be employed if other precautionary methods cannot be used effectively FM 34 (d)
  - (e) Before pesticides are applied all meat and meat products should be removed from the room and all equipment and utensils covered. After spraying the equipment and utensils should be thoroughly washed prior to being used again FM 34 (e)
  - (f) Pesticides or other toxic substances should be stored in separate locked rooms or locked cabinets and dispensed or handled only by authorised and properly trained personnel. Every precaution should be taken to avoid contaminating meat or meat products. FM 34 (f)
36. No animals are allowed to enter establishments. (FM 35)
- Hygiene and Health of Personnel
37. (a) Managers of establishments should arrange for adequate and continuing training of every employee in hygienic handling of meat and meat products and clean habits so that the employees are able to take the necessary precautions to prevent contamination of meat and meat products. Instructions should include relevant parts of this Code FM 36 (a)
- (b) It is recommended that national legislation should provide for a medical examination of meat handlers, meat inspectors and other persons who come into contact with meat and meat products in abattoirs and establishments. This medical examination should be carried out just prior to employment and should be repeated when clinically or epidemiologically indicated. The medical examination should pay particular attention to 1) infected wounds and sores; 2) enteric infections including parasitic diseases and carrier states especially with respect to Salmonellae; and 3) respiratory diseases FM 36 (b)



- (C) The management should take care to ensure that no employee, while known or suspected to be suffering from or to be a carrier of a disease capable of being transmitted through meat and meat products or while afflicted with infected wounds or sores or diarrhoea, is permitted to work in any area of an abattoir or establishment in a capacity in which there is a possibility of such a person directly or indirectly contaminating meat and meat products with pathogenic micro-organisms. Any ill person should immediately report to management that he is ill. FM 36 (c)
- (d) 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 abattoir or establishment in the preparation, handling, packaging or transportation of meat and meat products. No person working in any abattoir or establishment should wear any 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 FM 36 (d)
- (e) 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 abattoir or establishment FM 36 (e)
- (f) Every person engaged in an establishment should wash his hands frequently and thoroughly with soap or detergents under running warm potable water while on duty. Hands should be washed before commencing work, immediately after using lavatory, after handling contaminated material, and whenever else necessary. After handling diseases or suspect material hands must be washed and disinfected immediately. Notices requiring hand-washing should be displayed. FM 36 (f)
- (g) 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 (a) head covering and (b) footwear, all of which articles 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. Aprons and similar items should not be washed on the floor. FM 36 (g)
- (h) Every person who visits an area in an establishment where carcasses or meat and meat products are handled should wear clean protective clothing. FM 36 (h)
- (i) No part of an establishment used for slaughter of animals, dressing of carcasses, preparation, handling, packaging or storing of meat and meat products should be used for deposit of personal effects or clothing. FM 36 (i)
- (j) Protective clothing, knife pouches, belts and working implements should be deposited in a place provided for the purpose where they will not contaminate any carcase or meat and meat products. FM 36 (j)

- (k) Any behaviour which can potentially contaminate the meat and meat products, such as eating, use of tobacco, chewing, should be prohibited in any part of an abattoir or establishment used for slaughtering or dressing of carcasses or for the preparation, handling, packaging or transportation of meat and meat products FM 36 (k)
- (l) Gloves if used in the handling of meat and meat products should be maintained in a sound, clean and sanitary 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. FM 36 (l)
- (m) Management should arrange for sufficient supervision to ensure that provisions (c), (d), (f), (g), (h), (i), (j), (k), and (l) are observed. FM 36 (m)
- (n) Staff handling raw materials or semi-processed products capable of contaminating the end product should not come in contact with any finished products unless and until they discard all such protective clothing worn by them during the handling of raw materials and semi-processed products which have come in direct contact with or have been soiled by the raw material 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.

D Operating Practices and Production Requirements

38. Where the inspector considers that the manner under which meat or meat products are being prepared, processed, handled, stored or packaged will adversely affect FM 37 (u)
- (i) the cleanliness of the meat and meat product, or
  - (ii) the hygiene of production, or
  - (iii) the efficiency of inspection of meat and meat products,
- he may require the manager to take action to correct the deficiency or to reduce the rate of production or to suspend operations for the time being in any specified section of the establishment.

39. Raw Material Handling and Manufacture

- (a) No meat or meat products should be accepted by an establishment unless the meat or meat products have been derived from animals subjected to ante-mortem and post-mortem inspection. They should not be accepted unless they are properly branded or marked and in all ways suitable for human consumption and that they have not, subsequent to being examined by an Inspector, been exposed to contamination or processed or handled or subjected to the addition of any harmful substance which renders them unfit for human consumption.
- (b) Meat and meat products should be handled, stored or transported in an establishment in a manner that will protect the meat and meat products from contamination and deterioration (FM 39(a))

40. Raw materials and semi-manufactured goods should be kept separated from outgoing finished products.
41. All steps in the production process, including packaging, should be performed as rapidly as possible and under conditions which will prevent the possibility of contamination, deterioration, or the development of pathogenic and spoilage microorganisms
42. Equipment such as trays, vats, tables etc. should not be used interchangeably for raw products and cooked products unless it is completely cleaned and disinfected before moving: to the area designated for cooked products. Exposed ready-to-eat or cooked products should not be stored in the same room with raw meat
43. The operation of boning-out and trimming should always be carried out as rapidly as possible and meat should not be allowed to accumulate in rooms used for boning- out and trimming.
44. Storage
- (a) The following provisions should apply where meat or meat products are placed in chilling rooms, freezing rooms or frozen storage as the case may be FM 39(c)
- (i) Entry should be restricted to personnel necessary to carry out operations efficiently
  - (ii) Doors should not be left open for extended periods and should be closed immediately after use
  - (iii) No chilling room, freezing room or freezer store should be loaded beyond its designed capacity.
  - (iv) Where refrigerating equipment is not manned, automatic temperature recorders should be installed.
  - (v) If no automatic device is installed, temperatures should be read at regular intervals and the readings recorded in a log book
  - (vi) A record should be maintained of all meat placed in or taken out of the chilling room, freezing room or freezer store.
- (b) In chilling rooms, the following provisions should be observed in addition to those in subsection 44(a):
- (i) Temperature, degree of relative humidity and air flow should be maintained at a level suitable for the preservation of meat and meat products FM 39(d)  
(iv)
  - (ii) Condensation should be prevented by the efficient operation of refrigerating facilities combined with proper insulation of walls and ceilings, the application of heat near the ceilings, or by any other suitable method. If overhead refrigerating coils are installed, insulated drip pans should be placed beneath them. All floor type refrigerating units should be placed within curbed and separately drained areas unless located adjacent to floor drains. FM 39(d)  
(v)
- (c) Where meat and meat products to be stored are placed in any

freezer store, the following provisions should be observed in addition to those in subsection 4 (a).

- (i) Meat or meat products should not be stacked directly on the floor but should be, placed on pallets or on dunnage in such a way that there is adequate air circulation. (FM 39(f) (ii))
- (ii) The freezer store should be operated at a temperature which will give adequate protection to the type of product. Temperature fluctuations in the freezer store should be kept to a minimum. Where unpackaged meat is stored, the temperature difference between the evaporator and the meat should be kept to a minimum (FM 39(f) (iii))
- (iii) Refrigeration coils should be defrosted as required to prevent excessive accumulation of ice and loss of refrigerating efficiency. Provision should be made for removal, without affecting the product, of water resulting from defrosting. FM 39(f) (iv)

45. Transportation

- (a) Meat or meat products should not be carried in any means of transport which is used for conveying live animals. FM 41(a)
- (b) Meat or meat products should not be carried in the same means of transport as other goods in a way which' may adversely affect the meat or meat products. FM 41 (b)
- (c) Meat or meat products should not be placed in any means of transport which has not been cleaned before loading and if necessary also disinfected FM 41(d)
- (d) Means of transport or containers should comply with the following conditions:
  - (i). 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 FM 43 (f) (i)-(iii)
  - (ii) The design and equipment should be such that the required temperature can be maintained throughout the whole period of transport
  - (iii) Vehicles intended for the transport of meat and meat products should be equipped in such a manner that the meat and meat products do not come into contact with the floor.

46. Packaging of Finished Product

Packaging material should be stored and used in a clean and sanitary manner.

FM 40(a)

(a) Neat products should be packaged in a manner which will protect them from contamination and deterioration under normal conditions of handling, transportation and storage.

(b) The packing material should be non-toxic and should not leave harmful deposits of any kind on the product or otherwise contaminate it.

FM 40(c)

(c) Packaging should be done under conditions that preclude the contamination of the product.

47. Preservation of Finished Product

Requirements for the preservation of specific groups of meat products are given in annexes to this Code (to be developed).

48. The finished product should be stored off the floor and transported under such conditions as will preclude contamination, infestation and deterioration of the product or of the container.

E. Sanitation Control Programme

49. All aspects covered by this Code should be supervised by an official veterinarian. In particular, care should be taken that for every establishment at least one official veterinarian is appointed for the supervision of hygiene including inspection of meat and meat products

FM 43

50. It is desirable that each establishment in its own interest designates a single individual, whose duties are preferably 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 establishment are cleaned appropriately and that critical areas, equipment and material are designated for cleaning and/or disinfection daily or more frequently if required.

FM 44

F. Laboratory Control Procedures

In addition to the routine control carried out by the meat inspection services, it is desirable that each establishment in its own interest should have access to laboratory control. Analytical procedures used should follow recognized or standard methods in order that the results may be readily interpreted.

FM 45

## SECTION V - END PRODUCT SPECIFICATIONS

- 51 Appropriate methods should be used for sampling and analysis or determination to meet the following specifications:
- (a) 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.
  - (b) The products should not contain pathogenic microorganisms 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.
- The products should comply with the requirements for pesticide residues and food additives laid down by the Codex Alimentarius Commission.

### ANNEX A

#### Preservation of Meat Products in Hermetically Sealed Rigid Metal Containers

- (a) The products packed in hermetically sealed rigid metal containers 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 of canned meats should be based *on* the recommendations of technical specialists competent in canning technology.
- (b) Processing should be supervised in the establishment by technically competent personnel and be subject to check by the Inspector. Seam measurements should be made regularly during production and these, 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.
- (c) No water, other than potable water, should be used for washing of empty containers or for the cooking or cooling of any hermetically sealed container. Where heat processed containers are cooled in water, any recirculated water should be filtered and 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.
- (d) Rough treatment of containers both before and after processing must be avoided to prevent the possibility of contamination of the processed product. 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.
- (e) Processed hermetically sealed containers should be inspected and any defective container rejected.
- (f) Adequate facilities should be provided for the incubation of random samples of individual batches of containers and, after establishment of a satisfactory history for the product involved, batches may be released provided the controlling inspection authority is assured that the product will be returned, if required.

(g) Every container should be permanently marked, in code or otherwise, to identify the establishment, country and date of production.

## ANNEX B (STEP 3)

### Preservation of Meat Products Heat Treated Prior to Packaging (Open Pack Meat Products)

- a. In establishments in which meat products are heat treated prior to packaging, herein after called Open Pack Meat Products, a chillroom should be available for holding raw meat on its reception and for storing boned, cut or otherwise prepared raw meat which is not transferred directly to the sections in which it is cooked or otherwise processed. During boning and cutting of the raw meat and mixing of the meat product the temperature of the meat or raw material mix should not exceed 7°C (45°F).
- b. Open pack meat products should be heat treated, handled subsequent to heat treatment and packaged in such a way that contamination is kept to a minimum so that they present no public health hazard and will withstand spoilage under the conditions of handling, storage, transport and sale indicated on the label. Particular care must be taken to prevent cross- contamination from raw meat, preferably by physical separation of processing areas where exposed processed cooked meat products are handled.
- c. The temperature and duration of the cooking process for open pack heat treated meat products should be such that the heat treatment alone or in combination with other preserving processes protects public health.
- d. On arrival in the cooking section the meat products should be placed in the cookers without delay. Cooking processes should be supervised by technically competent personnel and be subject to check by the Controlling Inspection Authority. Cooking operations should be controlled by a suitable recording device. 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 Controlling Inspection Authority.
- e. There should be adequate means for rapidly chilling in a hygienic manner any cooked meat product which has only been preserved by heat to an internal temperature of 7°C (45°F). Water used for cooling any meat product should be of potable quality, be fast flowing or used in the form of sprays and should not be recirculated.
- f. 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. Where manual handling of exposed meat products is unavoidable, gloves made of impermeable material, either disposable or easily cleaned and disinfected, should be worn.
- g. Packaging of meat products preserved by heat treatment should be carried out in a separate room used only for this purpose. Packaged finished meat products should be inspected to ensure the detection of any visibly defective packages. Only properly sealed and unbroken packages should be released from the establishment.
- h. Open pack meat products requiring refrigeration should be stored in chilled accommodation used only for this purpose.
- i. Adequate laboratory facilities should be available for the purpose of making routine bacteriological examinations of meat products. Routine bacteriological checks should be made of all equipment and of all food contact surfaces to ensure that cleansing and disinfecting procedures have been satisfactory.
- j. Every package of the open pack meat product should be permanently marked, in code or otherwise, to identify the establishment, country and date of production.



Sampling and Inspection Procedures for Microbiological  
Examination of Processed Meat Products'  
(step 3)

Introduction

At its 7th session the Committee discussed a document (CX/PMP 73/10) on sampling plans for microbiological examination of processed meat products, elaborated by the Danish Secretariat and based upon two chapters from a book published by ICMSF (International Commission on Microbiological Specifications for Foods): Microorganisms in Foods 2. Sampling for microbiological analysis: Principles and specific applications. 1974. University of Toronto Press.

The Committee requested the Danish Secretariat in collaboration with the ICMSF to draw up a new text of sampling and inspection procedures, giving the details in a stepwise fashion for shelf-stable and perishable meat products, heat-treated after packaging (see Alinorm 74/16 §§ 108-111).

Based upon the proposals made by the ICMSF two sampling plans are proposed, one for shelf-stable meat products, and one for perishable meat products. Both are applicable in a port of entry, and especially under such circumstances where data from in plant control (e.g. control of thermal processing, seam inspection and compositional control of preservatives) are lacking or inadequate. For the latter - the perishable meat products - the lack of data for transportation and storage conditions (especially temperature) would also indicate a need for sampling.

The sampling procedure is a lot inspection procedure to be used when the consignment is still complete.

It is suggested that the sampling plans, if accepted by the Codex Committee on Processed Meat Products, could be inserted as one of the annexes to the Code of Hygienic Practice for Processed Meat Products. Inclusion in the various standards for processed meat products could then be carried out by reference to the annex under the section for "Methods of analysis and sampling".

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

a) Select 200 containers from cartons distributed at random in the lot. The 200 containers are randomly selected from the shipping containers in accordance with the following schedule:

<u>No. of containers per carton</u>	<u>No. of containers to pick</u>
5 or less	all
6-12	6
13 - 60	12
61 - 250	16
251 or more	24

If, for example, each carton contains 24 containers, 17 cartons shall be opened. 12 containers shall be picked at random from 16 of them, totalling 192 containers and 8

containers shall be picked at random from the 17th carton. Identification of individual containers at this point is unnecessary.

- b) Examine the 200 containers for "swells", pinholes, tears and seam defects. If no defective containers are found the lot is accepted. If 3 or more defective containers are found reject the lot. If 1 or 2 defective containers are found proceed to step c).
- c) When 1 or 2 defective containers among the 200 containers are found, sort the whole lot for removal of defective containers. If this sorting reveals more than 1% of defective containers reject the lot. The 1 or 2 containers initially found defective are included in the number of defective containers. If the sorting reveals less than 1% defective, proceed to step d).
- d) 200 of the sorted, sound containers are taken at random for incubation testing, and the remaining containers of the lot is withheld.
- e) Identify the 200 containers mentioned under d in a proper manner and send them to a laboratory for incubation testing.
- f) In the laboratory incubate the 200 containers at 30-37°C for at least 10 days.
- g) If any of the incubated containers show "swells", reject the lot. If no "swells" occur choose 20 containers at random and proceed to step h).
- h) Examine the 20 containers for pinholes, tears and seam defects. If none show defects, accept the lot. Otherwise reject.

## 2. Perishable meat products, heat-treated after packaging

- a) Sample containers at random from at least 5 different cartons or shipping containers. Identification of individual containers at this point is unnecessary.
- b) Examine the 10 containers for "swells" and seam defects. At the same time measure the temperature, preferably with an electronic measuring device between containers. If no defective containers are found, and if the temperature does not exceed 10°C, accept the lot. If 1 or more defective containers are found, reject the lot. If the temperature exceeds 10 C, proceed to step c).
- c) Sample 5 containers from the warmer places in the lot for a microbiological examination, and withhold the lot. Proceed to step d).
- d) Identify the 5 containers mentioned under c in a proper manner and send them to a laboratory for microbiological examination. The transportation should take place under refrigeration.
- e) In the laboratory draw sample units from the 5 containers with aseptic precautions, so as to obtain one sample unit from the center of each container and one sample unit from the jelly of each container.
- f) Examine these 2 x 5 sample units for aerobic plate count. Use e.g. method proposed by Thatcher & Clark: Microorganisms in foods. Their significance and methods of enumeration. 1968. University of Toronto Press.
- g) Reject if any of the 10 samples has an aerobic plate count exceeding 10.000 per gram.

Also reject if 3 or more of the containers (either from the meat or the jelly) show an aerobic plate count higher than 1000 per gram. Otherwise accept.

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