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REPORT OF THE  
CODEX COMMITTEE ON PROCESSED MEAT PRODUCTS  
Fifth Session  
23 - 27 November 1970  
Copenhagen, Denmark

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REPORT OF THE  
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Introduction

1. The Codex Committee on Processed Meat Products held its Fifth Session in Copenhagen, Denmark, from 23 to 27 November 1970 by courtesy of the Government of Denmark. Dr. V. Enggaard (Denmark) was in the chair.
2. The session was opened by Mr. E. Mortensen (Head of Division, Ministry of Agriculture) who welcomed the participants on behalf of the Minister of Agriculture.
3. Representatives from the following 29 countries were present: Algeria, Argentina, Australia, Austria, Belgium, Brazil, Denmark, Finland, France, Federal Republic of Germany, Ghana, Hungary, Ireland, Italy, Japan, Morocco, Netherlands, New Zealand, Norway, Philippines, Poland, Spain, Sweden, Switzerland, Thailand, United Kingdom, United States of America, Venezuela and Yugoslavia. Observers were present from the following international organizations: International Organization of Consumers Unions (IOCU) and Commission des Industries Agricoles et Alimentaires de l'Union des Industries de la CEE (CIAA/UNICE).  
The list of participants is contained in Appendix I to this Report.

Adoption of Provisional Agenda

4. The Committee adopted the Provisional Agenda.

Election of Rapporteurs

5. On the proposal of the Chairman, the Committee appointed Mr. L.G. Hanson (U.K.) and Mr. J. Rivière (France) as rapporteurs of the Session,

Matters arising from the Report of the 7th Session of the Codex Alimentarius Commission (April 1970)

6. The Committee was informed that the Commission had agreed to establish Sub-Committee IV on Processed Meat Products and Consumer Packaged Meat as a Committee in its own right and had agreed that it should be named Codex Committee on Processed Meat Products. The Commission had further agreed on the following terms of reference for the Codex Committee on Processed Meat Products: To elaborate world-wide standards for processed meat products including consumer packaged meat but not including poultry products.
7. The Committee was further informed of the terms of reference for the Codex Committee on Meat: To elaborate world-wide standards and/or codes of practice as may seem appropriate for 1) classification and grading of carcasses and cuts of beef, lamb, mutton, pork and veal, and 2) meat hygiene, excluding poultry hygiene.
8. In respect of the question of liaison and relationship between the Codex Committee on Meat and on Processed Meat Products concerning meat hygiene, the Commission agreed that this matter should be considered by the Executive Committee at its next session (February 1971), as well as the question of whether it would be necessary to amend the Guidelines.

9. The Committee was informed that the Commission had decided to advance the standards for canned hams, canned corned beef, canned luncheon meat and canned chopped meat to Step 6 of the Procedure. The Commission had noted that there were still a number of issues yet to be resolved, particularly, the questions of the method of assessing the meat content of meat products and the methods of analysis to be used. The Commission instructed the Committee that these standards should not be advanced to Step 8 of the Procedure until the Committee was satisfied that these issues had been resolved.

#### Matters arising from the Report of the 5th Session of the Codex Committee on Food Labelling (April 1970)

10. The Committee was informed that the introductory sentence to the labelling section of commodity standards which applied provisions of the General Standard for the Labelling of Prepackaged Foods by cross-reference, had been amended by the Committee on Food Labelling to delete reference to Section 5 of the General Standard.

11. The Food Labelling Committee considered that Commodity Committees, when requiring a declaration of a complete list of ingredients, should have regard to whether water should or should not be declared in the list of ingredients.

#### Matters arising from the Reports of the 6th and 7th Sessions of the Codex Committee on Food Additives (October 1969 and 1970)

12. It was brought to the attention of the Committee that the Codex Committee on Food Additives, at its 6th Session, had requested Codex Commodity Committees to give due attention to the technological justification for the use of food additives. In this connection, the Committee was informed that the Codex Alimentarius Commission, at its 7th Session, had adopted provisionally general principles for the use of food additives and that these were published as an Appendix to the Report of that Session (1970). At its 7th Session the Codex Committee on Food Additives endorsed the use and the levels of use of a number of additives for a number of products.

#### Consideration of Draft Code of Hygienic Practice for Processed Meat Products at Step 4

13. The Committee considered the above Draft Code (Appendix II of ALINORM 70/16) in the light of Government comments received at Step 3. The Committee was informed that the Codex Committee on Meat, at its 5th Session, held in Bonn from 16 to 20 November, had considered a Code of Hygienic Practice for Fresh Meat and had agreed that it should be sent out to Governments for comment at Step 3. While the present Committee noted that it would be necessary to consider the Draft Code elaborated for Fresh Meat and to harmonize the two texts where necessary, it agreed that it would not, be feasible to do this at the current session, since many delegations were not in possession of the Draft Code for Fresh Meat and there would not be sufficient time available to consider points in depth.

14. The delegation of Argentina stated that it had been unable to submit its comments in writing on the Draft Code for the present session, but would make its comments available in writing for the next session of the Committee.

## II. DEFINITIONS

The Committee considered the definition of meat in the light of the definition of meat which had been adopted in the Code for Fresh Meat. The Committee considered that, as the Code was being elaborated for processed meat products and was intended to take account of consumer patterns throughout the world, it

was desirable that the definition of meat should be as wide as possible. For this reason the Committee did not think it desirable to change the definition of meat.

### III. INGREDIENT REQUIREMENTS

The Committee agreed to provide for an additional definition in Section II of the Code, namely a definition of "Ingredients". This was done following consideration of Section III of the Code entitled "Raw material requirements". The Committee thought that there could be some doubt as to the precise meaning of "raw material" in this Section and decided to use the word "ingredients", as defined. The definition of ingredients applied only to this Code and did not in any way prejudice any other definitions of ingredients elsewhere. The Committee considered a proposal of the delegation of the Federal Republic of Germany that "for the processing and manufacture of meat products only meat should be used that has been treated, stored and transported, at least in accordance with the conditions laid down in the "Code of Hygienic Practice for Fresh Meat."

The Committee decided that at this state it would be best not to incorporate this proposal of the Federal Republic of Germany in the Code and agreed that this and possibly other proposals would need to be considered by Governments in due course within the framework of effecting such harmonization as was necessary "between the two Codes.

### IV. ESTABLISHMENT FACILITIES AND OPERATING REQUIREMENTS

- IV.A.1. The Committee amended the reference to the layout and construction of premises in this sub-section to read as follows: "The layout and the construction of the premises should be such as to ensure that departments in which meat or meat products are processed are used for that purpose only, or for that purpose only at one and the same time. If the departments are used for the 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". The other principal amendment to this sub-section was the deletion of the recommendation that the ceiling should be dustproof. The Committee considered it sufficient that the ceiling should be easy to clean.
- IV.A.2(b) The Committee considered this sub-section dealing with the temperature in the boning-out and trimming rooms. The Committee agreed that the temperature in any room used for boning-out and trimming should at no time during working hours exceed 10° C, subject to certain exceptions dealt with further on in this report (see the paragraph below on sub-section IV.C.1(c)) in the case of the boning-out and trimming of hot meat.
- IV.A.2(h) The Committee considered this sub-section of the Code dealing with lighting in rooms in which meat or meat products are prepared or processed. The delegation of New Zealand suggested the following: "Adequate lighting of 220 lux (20 foot candles) should be provided throughout the premises. Where employees and meat inspectors are engaged in the work which required better lighting, 325 lux (30 foot candles) or even 540 lux (50 foot candles) should be provided at working level and should not alter colours". The Committee agreed not to make any change in the existing text at this stage and to ask Governments for their comments on these figures.
- IV.A.2(n) In considering this sub-section of the Code relating to toilet and hand-washing facilities, the Committee agreed that it was not necessary to retain

the provision that there should be not less than one hand-washing facility for every ten employees.

#### IV.C HYGIENIC OPERATING REQUIREMENTS

- IV.C.1(a) The Committee agreed to revise this sub-section so as to make it clear that the whole establishment should be kept in good repair and amended the text accordingly.
- IV.C.1(b) (new) The Committee considered the possibility that in an establishment a department used for handling meat or meat products might also be used for other food manufacturing purposes and decided to insert a special sub-section to cover this situation, stipulating the necessity to clean and disinfect the room(s) immediately after such other use.
- IV.C.1(c) (new) As in some countries hot-boning and trimming of meat is common practice, the Committee decided to include a sub-section taking this into account and allowing the boning-out and trimming at ambient temperatures under the condition that at least once every four hours the room should be emptied, cleaned and all equipment and utensils thoroughly cleaned. This would ensure the maintenance of hygienic conditions especially if the processing operations were carried out quickly (see new provision in IV.D.5).
- IV.C.3 To indicate that no animals of any kind should be allowed in the premises, the Committee agreed to revise the wording of this sub-section to state this in general terms.
- IV.C.4 The replies received from Governments on the questions as posed in paragraph 20 of ALINORM 70/16 were reviewed. They concerned: (1) whether Governments preferred the revision of this paragraph, as appearing in the Code, to the relevant paragraph of the Recommended International Code of Practice on General Principles of Food Hygiene (CAC/RCP 1-1969) ; (2) whether a compulsory medical examination should be required by this Code; and (3) whether the management should be made responsible for ensuring that no persons are permitted to handle the meat unless they are healthy and are not carriers of pathogenic microorganisms.
- The Committee decided to consider this paragraph again at the next session and also decided to ask Governments to comment on the provision concerning the medical examination of food handlers, which had been agreed at the 5th Session of the Codex Committee on Meat in Bonn, which should precede IV, C.4(a) and which reads as follows: "It is recommended that national legislation should provide for a medical examination of meat handlers, meat inspectors and other persons who have access to and come into contact with meat in establishments. This should be carried out before these persons are employed and at regular intervals afterwards."
- IV.C.6(d) and (e) The Committee was of the opinion that no clothing whatsoever should be deposited in any place other than that specifically provided for the purpose and amended the sub-sections accordingly.

#### IV. D OPERATING PRACTICES AND PRODUCTION REQUIREMENTS

- IV.D.4 (new) The delegation of the USA proposed to add a new sub-section to control the use of the same equipment for raw and cooked products. The Committee agreed to specify that this equipment should be cleaned and disinfected

before it was moved to the area designated for cooked products. It was further agreed that exposed ready-to-eat or cooked products should not be stored in the same room with raw meat.

IV.D.5 (new) The Committee agreed to insert a new provision, as proposed by the UK delegation, concerning the need for rapidity in carrying out the work of boning-out and trimming.

#### IV.E SANITATION CONTROL PROGRAMME

The Committee agreed to take into account the fact that in many establishments outside contractors are employed for cleaning, and deleted the relevant clause from the text restricting the cleaning operations to establishment employees. The Committee further agreed to delete the second paragraph, because the substance of it was covered earlier in the Code,

#### IV.F LABORATORY CONTROL PROCEDURES

The Committee did not think it desirable to retain the provision in this Section which stated that "products unfit for human consumption should be rejected". As it was clear that whenever a product was found to be unfit for human consumption it would have to be rejected as a matter of course, the Committee decided that it was not necessary to include a provision to that effect anywhere in the Code.

#### V. END PRODUCT SPECIFICATIONS

To emphasize the need for the product to be free also from toxic substances of non microbiological origin, the Committee agreed to extend sub-section A to cover this point.

##### Appendix A to the Code - Preservation of Canned Meat Products

The Committee made no change of substance to this section but agreed to review sub-section (a) of this section in the light of subsequent discussions on the standards relating to heat treatment.

#### 15. Status of the Code

The Committee agreed to return the Code to Step 3 for a further round of Government comments and to invite Governments, in formulating their comments, to consider also what amendments it might "be appropriate to make to the Code in the light of the text of the Code of Hygienic Practice for Fresh Meat.

##### Consideration of the Determination of Meat Content

16. The Committee considered the Government comments on the questions of the provision of a minimum meat content in canned hams and of the determination of the ingoing meat content of canned luncheon meat.

##### Canned Hams

17. Hungary, Netherlands and the United Kingdom had provided data on canned hams as requested in paragraph 40 of the report of the 4th session and several Governments had sent in comments on the question of a minimum meat content. The delegation of the USA informed the Committee that a large amount of data was available about the US system of control of added substances in canned hams, but that the data would have to be extracted from original computer material, which would take some time. However, the US delegation undertook to provide the information in a suitable form

as quickly as possible. The Netherlands and the United Kingdom delegations drew the attention of the Committee to the data in their papers which had been obtained from analysis of a number of hams and to the fact that the papers showed that the analytical criteria, however expressed, did not correspond closely with the actual conditions. Attention was also drawn to the possibility of specifying a protein content on a fat-free basis. The Hungarian delegation observed that the amount of ham in the final product after the completion of the production process was in some respects a quality criterion as well as a minimum compositional requirement, and that it might therefore be appropriate for control to be exercised as part of a sampling plan.

18. The Committee discussed the following possible methods of controlling the finished product in the case of canned hams:

- i) The inclusion of the minimum meat content which might then be checked by inspection or by analysis. This method used a conversion factor based on the average of nitrogen content of the whole pig, whereas the standard related only to one part of the animal.
- ii) The US system whereby the maximum of added substances that the product may contain was specified. Enforcement was operated on the assumption that the manufacturer was exercising the appropriate production control and a figure was laid down (108%) at which action based on a sampling of large lots was taken. A maximum figure (116%) was specified on which rejection could be based on an analysis of a single can.
- iii) A water/protein ratio determined by analysis of nitrogen, with a conversion factor of 6.25 which was accepted internationally. The figure to be included could be a single maximum figure or could, as in the USA added substances system, be associated with a control procedure based on more than one figure.
- iv) Protein on a fat-free basis which - as shown by C.H. Perrin and P.H. Ferguson, JAOAC 51, page 971 (1968) - appeared to indicate on a small sample of 25 hams that protein on a fat-free basis was subject to small significant variations which were also less than those obtained in the corresponding figures found for the protein/water ratio. Any figure would be independent of the amount of fat present in the product and (as in iii)) a single figure or more than one figure could be specified,

19. The Committee decided that it was not possible to reach conclusions without more information on the lines of that asked for in paragraph 40 of the Report of the 4th session. The Committee noted that the paper by the Netherlands had been drawn up exactly in accordance with paragraph 40 and confirmed that all the information asked for in that paragraph was required and that it was especially important to distinguish between hams with skin and hams without skin. Governments were asked to do their best to provide further information to the Danish Secretariat.

20. The United Kingdom delegation undertook to reexamine the data, to obtain new data for more hams if possible and to compare the various systems of control. The Netherlands delegation said they would also reexamine their data. These delegations in collaboration with the Danish Secretariat would, if possible, recommend suitable criteria for inclusion in the standard together with a related control procedure and the Danish Secretariat would prepare a working paper in good time for the next session of the Committee based on all available information and including any new data provided by Governments in accordance with paragraph 19.

### Luncheon Meat and Chopped Meat

21. The Committee considered a proposal in a paper by Denmark that the compositional requirements for luncheon meat and chopped meat should be based on a minimum protein content but reaffirmed its previous decision that it was preferable in a meat product to base control on the amount of meat in it. The observer from IOCU said that the consumer would be more interested in the amount of meat in such products than in the amount of protein which might be from non-meat sources.

22. The observer from CIAA/UNICE drew attention to the suggestion that a minimum animal protein content of 8% should be included in the luncheon meat standard. The Netherlands delegation explained that this figure was not necessarily being used for food standard purposes. Some other delegations also observed that the figure would represent a significantly lower amount of meat than the one at present in the standard,

23. The Committee agreed that the standard should provide for a minimum ingoing raw meat content.

### Consideration of Draft Standard for Canned Hams at Step 7

24. The Committee considered the above standard (Appendix III of ALINORM 70/16) at Step 7 in the light of Government comments. The following were the main points emerging from the Committee's deliberations:

- (a) The Committee considered whether the term "canned" in the title of the standard was appropriate, in view of the fact that the containers in which the hams were hermetically sealed were not limited to metal containers and that the term "canned" might be taken to mean only metal containers. It was agreed that, since in the English language, the term "canned" was used in trade circles and in the legislation of some countries to refer to the whole process of filling, sealing and heating in containers of various kinds - not just metal containers - the term "canned" could be retained in the title of the standard, at least provisionally. The Committee was informed that in the Spanish version of the standard the word "enlatado" (canned) should be changed to "envasado" (packed), since the term "enlatado" limited the containers which may be used to very specific materials. This change should be made wherever necessary in the standard and in the other standards under consideration by the Committee.
- (b) In order to take into account new technological developments in the processing of hams, the Committee agreed to expand the Scope section of the standard to provide for heat treatment of the hams before sealing of the containers, where aseptic packaging techniques were used.
- (c) In considering the Description section of the standard, the Committee agreed to delete the square brackets around the portion of the first sentence in this section giving an anatomical description of ham for the purpose of the standard and amended slightly the provision. The Committee also agreed to delete from this section the clause which specifically excluded boar meat having an objectionable odour from being used in the manufacture of the product. The Committee decided to do this, because it considered that the clause was open to mis-interpretation in that it might be construed to mean that meat which had an objectionable odour, but which was not boar meat, was not excluded from use. The intention of the Committee was that all meat which had an objectionable odour must be excluded from use in the manufacture of the product and that a suitable provision should be included under Essential Composition and Quality

Factors. The Committee also amended the last sentence in this section to read: "The heat treatment and the type of cure should be sufficient to ensure ...."

- (d) The Committee agreed to delete the word "rigid" in the section entitled "Subsidiary Definition".
- (e) The Committee decided to provide for the use of hydrolyzed protein in the Ingredients section of the standard. Since the standard also covered fancy packs, the Committee also agreed to provide for the use of "any food likely to impart to the ham some organoleptic characteristics". As this section contained both essential and optional ingredients, the Committee decided to list the essential and optional ingredients under their appropriate headings as indicated in the revised version of the standard (see Appendix III to this report). It was agreed that ham, water and salt were essential ingredients and that sugars (as defined by the Codex Alimentarius Commission), honey, gelatine, spices, seasonings, condiments, hydrolyzed protein, as well as any food likely to impart to the ham some organoleptic characteristics, were optional ingredients. In regard to sugars, there was some discussion as to whether it was appropriate to retain the provision "sugars as defined by the Codex Alimentarius Commission" or whether this provision ought to be changed to refer to sugars for which standards had been elaborated by the Commission. The Committee did not think that it had been its intention to limit the sugars which could be used to those sugars for which standards had been elaborated. The matter would be considered further in the light of whether a general definition of sugars had been established by the Commission.
- (f) In considering the section entitled "Essential Quality Factors", the Committee agreed to delete the provision in square brackets stating that a method for determining the sliceability of ham was to be developed- Until such time as a method for determining the sliceability could be developed, the Committee decided that it would be best to rely on a provision in the standard requiring hams to be capable of being sliced. The Committee further amended this section to make a clear distinction between the essential quality factors applying (a) to the raw material and (b) to the final product.
- (g) (i) The Committee considered the Food Additives section of the standard in the light of the Report of the 7th Session of the Codex Committee on Food Additives. The Committee noted that the Food Additives Committee had requested that the artificial flavourings, essences and extracts be listed specifically. The Committee considered that such a list might be quite extensive and was unable, at this stage, to elaborate such a list. The attention of the Committee was drawn to a provision on natural flavourings and their identical synthetic equivalents (other than those known to represent a toxic hazard) which had been temporarily endorsed in a number of standards for processed fruits and vegetables. In the circumstances the Committee agreed to delete the existing provision on artificial flavourings, essences and extracts and to replace it with the type of provision which had been temporarily endorsed in the standards for processed fruits and vegetables. The Committee also deleted the provision for the use of cyclamates. In the case of monosodium glutamate, the Committee agreed on a level of use of 2000 mg/kg. The Committee also made it clear that the provision for the use of mono-, di- and poly-phosphates related to the added phosphates. It was agreed that the levels for the sodium salt of guanylic acid, and the sodium salt of inosinic

acid should no longer be in square brackets, and the levels were, therefore, firm levels proposed by the Committee,

- (ii) Various delegations indicated that some of the provisions of the Food Additives section were not in harmony with their national regulations. A number of delegations wished their reservations to be recorded specifically in the Report. The delegation of the Federal Republic of Germany reserved its position regarding the use of agar, alginates, inoascorbic acid, synthetic flavourings (unless these were chemically identical with the natural flavourings), artificial smoking agents, carrageenan, sodium citrate and phosphates. The delegations of Argentina, Belgium, France, Japan, New Zealand, Norway, Spain and Sweden were not in agreement with all of the provisions of the Food Additives section. In particular, the delegation of Norway supported by the delegation of New Zealand considered that the use of nitrate and nitrite singly or in combination should not result in more than 200 mg/kg in the finished product, expressed as sodium nitrite.
  - (iii) The Committee considered the question of artificial smoking agents. The Committee's attention was drawn to the fact that the Joint FAO/WHO Expert Committee on Food Additives was currently looking into these agents, and noted that they had not yet been toxicologically evaluated by the Expert Committee. The Committee recognized that there were traditional methods of smoking hams and understood that the Codex Committee on Food Additives was considering methods of control of the use of wood and smoke solutions. In the case of artificial smoking agents, it would wish to consider this matter further, when information became available from the Expert Committee regarding the safety of these agents and when a list of such agents had been drawn up by the Codex Committee on Food Additives. The Committee expressed the wish that, in considering the subject of smoking and artificial smoking agents, the Expert Committee should take into consideration their use for smoking hams.
- (h) (i) In considering the section on Hygiene, a number of delegations thought that it was inappropriate to include, as mandatory provisions in the standard, only certain sections of the Code of Hygienic Practice for Processed Meat Products. These delegations took the view that the maintenance of proper hygiene was a continuous process and that, therefore, to select certain sections of the Code for inclusion in the standard as mandatory provisions could place undue emphasis on these sections of the Code. Other delegations did not share this view and thought, in the light of government comments, that it was appropriate to retain certain sections of the Code as mandatory provisions in the standard. Apart from the provision on heat treatment, which the Committee decided to amend, it was agreed that all the remaining provisions in the Hygiene section
- (ii) As regards the provision on heat treatment, the Danish delegation proposed that all reference to specific time/temperature figures should be deleted. This proposal was based on the consideration that the heat treatment required to ensure that a product remained wholesome under normal conditions of storage and sale varied with the bacteriological quality of the raw material and with the amount of salt and nitrite present in the product, and that it would not be possible, therefore, to fix a time/temperature figure which would be meaningful in regard to the wholesomeness of the product. A majority of the Committee agreed with the substance of the Danish proposal and it was agreed that the following text should be substituted for the existing text on heat treatment:

"The heat treatment in combination with the curing shall be sufficient to ensure that the product will withstand spoilage and present no public health hazard under commercial conditions of storage and sale".

It was pointed out that there was already a reference to the manufacturing process in the Description section of the standard, which was not very different from the Danish proposal. Most delegations thought however that because it contained a reference to public health hazard the new text should be in the Hygiene section. It was finally agreed that it should be in the Hygiene section.

- (iii) In the light of the above decision, the Committee agreed that sub-section (a) of Appendix A of the Code of Hygienic Practice for Processed Meat Products should be amended to read as follows:

"Meat products packaged in hermetically sealed containers should be processed to withstand spoilage and present no public health hazard under commercial conditions of storage, transport and sale".

The delegations of the United Kingdom and New Zealand expressed reservations about the use of the word "commercial" in both texts and drew attention to the fact that in the Description section of the standard the word "normal" was used.

- (iv) The delegations of the United Kingdom and New Zealand expressed the view that sub-sections (a) and (b) of Appendix A of the Code would need to be expanded. The delegation of the United Kingdom undertook to prepare a more detailed wording of these two sub-sections for the next session of the Committee. The delegation of Denmark undertook to prepare a suitable reference to aseptic techniques.
- (v) The delegation of Argentina reiterated its previous comments that containers must be cooled in water that is potable and chlorinated to ensure that after 20 minutes cooling not less than 3 ppm of active chlorine remained. This requirement appeared in the Argentine sanitary regulations and was required by foreign sanitary inspection teams. This statement of the Argentine position was also valid for corned beef, luncheon meat, chopped meat and pork shoulder standards.
- (vi) The Committee considered a proposal of South Africa that an incubation test for shelf-stable products should be provided for, where processing control could not be undertaken. The Committee recalled that it had discussed the need for an incubation test at its previous session and had decided to postpone discussion on this question until a later session, when it was hoped that sampling plans for health protection purposes would be available. As such sampling plans were not yet available, the Committee agreed to defer consideration of the need for an incubation test to a later stage.
- (i) (i) The Committee agreed that the layout of the section of the standard on Labelling should be redrafted to bring it into line with the decisions taken by the Commission at its 7th Session on this subject and with the layout of other Codex standards. As regards changes of substance in this section of the standard, the Committee agreed to provide, under the sub-section dealing with the name of the product, for ham with skin. As regards the list of ingredients, the Committee agreed to provide for the declaration of a complete list of ingredients in accordance with sub-section 3.2(c) of the General Standard for the Labelling of

Prepackaged Foods, with the exception that water need not be declared. It was pointed out that it was "brine which was added to the ham and not water. Several delegations thought that if a significant amount of brine was added in the preparation of the product, the presence of water should be declared in the list of ingredients. Other delegations pointed out that this matter was linked with the question of the control of the meat content which would be considered at the next session of the Committee. The question of providing for a declaration of water in the list of ingredients would be reviewed, therefore, by the Committee at its next session.

- (ii) The representative of the IOCU and the delegation of Argentina stated that they were opposed to the decision not to require a declaration of added water on the grounds that the consumer was entitled to know if water had been added, and this was especially so in the case of some hams where the amount of brine pumped into the ham could be quite significant. The Committee noted that the attraction of sub-section 3.2(c) of the General Labelling Standard would enable the permitted class names listed in that sub-section to be used, as appropriate, in respect of the ingredients (including food additives) provided for in the standard. The delegation of the Federal Republic of Germany stated that it would have preferred that this section of the standard specified what ingredients (including food additives) need not be declared by their specific names.
- (iii) The delegation of the Argentine indicated the position which Argentina had taken with regard to declaration of country or origin, when the General Standard for the Labelling of Prepackaged Foods was being considered by the Commission at Step 8. Under the national legislation, Argentina would require that for all meat products the country of origin must be indicated in clear on the label and also on containers made of tin or similar material which would permit this. This position of Argentina applied to all the other standards under consideration by the Committee. The representative of IOCU supported the view of Argentina and also considered that all non-shelf stable products covered by the standards should be marked with the date of manufacture in clear.
- (j) As provided for in the agenda, the Committee would consider the subject of methods of analysis and sampling at a later stage of the session.

#### Status of the Draft Standard

25. In view of the fact that a number of significant changes had been made in the text of the draft standard and that there were still some important issues remaining to be resolved, the Committee agreed to return the draft standard for canned hams to Step 6 of the Procedure for a further round of government comments.

#### Consideration of Draft Standard for Canned Luncheon Meat at Step 7

26. The Committee considered the above standard (ALINORM 70/16, Appendix IV) at Step 7 in the light of Government comments. The following were the main points emerging from the Committee's discussions:

- (a) The Committee agreed to make, where appropriate in this standard, the same amendments as had been made in the Draft Standard for Canned Hams.
- (b) The Committee noted that the standard covered two main types of product, one with binder and one without. While the product without binder usually consisted of a narrow range of meat, for example in the United States of America of

skeleton meat, heart meat, tongue meat and head meat, the product with binder was made with a wider range of meat including some parts of the animal which would be regarded as edible offal. The Committee decided to revise the Description section to include the definition of meat which had been agreed at its 4th session, so that the definition would supplement the specific inclusions and exclusions which had been listed in the description at that session. Governments were asked to comment in detail on the revised text and also on the suitability for inclusion in the standard of the following definition of "edible offal" which had been elaborated for the Draft Code of Hygienic Practice for Fresh Meat:

“‘Edible offal’ in relation to slaughtered animals, includes the brain, the thymus gland, the pancreas gland, the liver, the spleen, the kidney, the heart, the lung, the cleaned stomach, the tongue and such other offals as may be passed as fit for human food.”

It was noted that the purpose of the definition in the standard would be to determine the essential composition of luncheon meat and to protect the consumer from the use of offals which might not be acceptable. It was also noted that before certain offals and other parts of the animal could be used, they would have to be given special technological treatment while others, e.g. lungs would need special care in hygiene. It was suggested that provisions about the preparation of offals for use in processed meat products should be included in the Draft Code of Hygienic Practice.

- (c) The Committee agreed to retain the provision in the Description section which restricted the non shelf-stable product to packs of over 3 lb in weight but noted that it might be possible in the future to provide for products in non-metal containers of less than 3 lb with suitable labelling provisions about the perishability of the product. The delegation of Denmark said that in its view it was wrong not to provide in the standard for the future developments in the production and sale of luncheon meat in any sort of container.
- (d) Essential Composition and Quality Factors

Some delegations maintained that the amount of fibrous tissues, pork rind, fat and some of the edible offals should be restricted either by setting limits for each of them or by including a provision that they should not count towards the ingoing meat content. The United Kingdom delegation proposed figures of 32% and 36% for the maximum fat content. The Committee included provisions in square brackets so that Governments could comment on them. The observer of CIAA/UNICE, referring to the 8% animal protein content quoted earlier, suggested limits of respectively 70% and 80% for ingoing minimum raw meat content.
- (e) Some delegations suggested that there should be a limit for carbohydrate binders as it already had been included in the case of protein binders. The Committee decided however to make no change. The delegation of the United Kingdom observed that in its view there was no need for a limit for either category of binder so long as the standard included provisions to control the minimum amount of meat. The Committee agreed to the inclusion of textured vegetable protein in the permitted protein binders.
- (f) During consideration of the Labelling section which was revised in accordance with the Codex format, the delegation of USA called attention to the need for

more specific labelling provisions which would enable the consumer to make a value judgement between several products with the same name, which the standard at present allowed to contain a wide range of different types of meat in variable amounts. In its view the ingredients statement should require the actual percentage quantity of each principal ingredient and should be as follows:

"A complete list of ingredients shall be declared on the label in descending order of proportion. The percentage of each principal ingredient that occurs in an amount exceeding one percent shall be shown. Ingredients occurring individually in amounts of less than one percent shall be listed in descending order of proportion but may be grouped for the purpose of showing a single total percentage. Meat (skeletal, tongue, heart and oesophageal muscle) and each edible offal product or meat by-product (i.e. other parts of the animal such as detached skin) shall be shown separately by species."

Some delegations expressed support in principle for a more detailed ingredients declaration so long as it would not present insuperable difficulties for the manufacturer when he varied the composition of the product within reasonable limits. Governments were asked to comment on this question and on the whole of the Labelling section.

- (g) The Committee considered the Food Additives section in the light of the decisions taken by the Codex Committee on Food Additives regarding canned luncheon meat, and agreed to the following amendments and proposals for addition, apart from those already agreed to in the standard for canned hams:

- monosodium glutamate      5000 mg/kg expressed as glutamic acid
- glucono-delta-lactone      5000 mg/kg
- erythrosine CI 45430      15 mg/kg

The delegation of France reserved its position on the level proposed for monosodium glutamate. The delegation of the Netherlands, supported by several other delegations, pointed out that the use of the pH adjusting agent glucono-delta-lactone could improve the microbiological stability of the product. Governments were asked to comment on the possible use of this additive. The delegations of Denmark and the United Kingdom, supported by the Netherlands, proposed that the use of colours should be permitted for this particular product because the colour of luncheon meat tends to fade within a short time after slicing. A few other delegations were opposed to the inclusion of colours in the standard. Governments were requested to give their views on the proposed inclusion of erythrosine in the list of food additives.

#### Status of the Draft Standard

27. The Committee agreed that the draft standard should be returned to Step 6 of the Procedure for a further round of Government comments in view of the amendments which had been made.

#### Consideration of Draft Standard for Canned Chopped Meat at Step 7

28. The Committee had before it the Draft Standard for Canned Chopped Meat (document ALINORM 70/16, Appendix V) for review in the light of Government comments.

29. Discussing the Description section of the standard, the Committee decided to revise this section on the same lines as was done for luncheon meat. The Committee further considered replies received from Governments on the significance of the word

"coarsely cut". While some delegations maintained that there was no need for the term to be defined and that it was quite distinct from the term "finely chopped", other delegations were in favour of a definition with an indication of the required size of meat pieces. It was also pointed out that canned chopped meat often contained a certain amount of finely chopped, cured meat. In the product without binder this finely chopped meat had to some extent the function of binder. The Committee decided to insert an explanatory clause on "coarsely cut" into the first sentence of the Description section, which reads as follows: "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 any one dimension." Governments were requested to comment on the above amendment and on the revised description section which was based on that elaborated for luncheon meat with the necessary changes for chopped meat.

30. The delegation of the United Kingdom observed that the minimum fat content which it had suggested for luncheon meat would not be appropriate for chopped meat as the amount of fat in the product would "be significantly less. However, the Committee decided that as the amount of fat would be controlled by technological factors and by consumer acceptance, it would not be necessary to include any provision in the standard.

31. Concerning food additives there was general agreement to specify the limit for monosodium glutamate at 5000 mg/kg (expressed as glutamic acid), as for luncheon meat. The delegations of France and the United Kingdom however expressed reservations about the use of this additive in chopped meat at higher amounts than were allowed in canned ham where a limit of 2000 mg/kg had been considered sufficient. The Committee agreed to the inclusion of glucono-delta-lactone (as for luncheon meat) but considered that a provision for the use of colours was not necessary for chopped meat.

32. Regarding the Labelling section, the Committee decided to make similar changes as for luncheon meat.

#### Status of the Draft Standard

33. The Committee agreed to return the standard to Step 6 of the Procedure, in view of the number of amendments and additions made to the standard.

#### Consideration of Draft Standard for Canned Corned Beef at Step 7

34. The Committee considered the above standard (ALINORM 70/16, Appendix VI) at Step 7 in the light of Government comments. The following were the main points emerging from the Committee's discussions:

- (a) The Committee agreed to make, where appropriate in this standard, the same amendments as had been made in the Draft Standard for Canned Hams.
- (b) The delegation of France, Federal Republic of Germany, Belgium and the observer from CIAA/UNICE asked that the standard should be amended so as to include the product which had some different essential compositional factors, e.g. it could include a limited amount of pork, cereal and have more fat, but which was also known as corned beef in some parts of Europe and Africa. The Committee asked that full details be provided of the composition, designation and trading statistics, both for domestic consumption and export trade, so that consideration could be given at its next session to the best way of dealing with

- the product in relation to the standard for corned beef. Meanwhile it was agreed not to extend the scope or the provisions of the standard.
- (c) The delegation of Ireland asked whether the use of the description "corned" for products other than corned beef would be affected by the existence of a recommended Codex standard for corned beef. It was noted that there appeared to be no legal definition for "corned" but that in respect of canned corned beef it was generally recognized that it applied to a process which involved the curing of precooked beef. It was thought that the use of the term "corned" for other products would not necessarily be affected by the, existence of a standard for canned corned beef. The Federal Republic of Germany asked whether the use of a description such as "German corned beef" would be affected, and it was thought that the matter could best be considered at the next session when dealing with the question of the extension of the standard.
  - (d) The delegation of Argentina drew the attention of the Committee to the inclusion in the pre-cooked beef during the process of corning of small amounts of raw meat, i.e. not more than 5%, for binding purposes. It was agreed that the Description section should be amended accordingly.
  - (e) The Committee agreed that in this standard it would be appropriate to retain the references to "canned" and "rigid", and not to provide for aseptic canning. It was also agreed that any consequential amendments should "be made.
  - (f) The Committee agreed to include a reference to "capable of being sliced" as one of the essential quality factors, as such a factor was important for corned beef and it would bring the provision into line with the other standards.
  - (g) The delegation of Japan proposed to include in the list of food additives guanylic acid, inosinic acid and its salts and monosodium glutamate. This proposal was not supported by the Committee.
  - (h) The delegation of Argentina indicated that the figures for nitrate and nitrite mentioned in the standard were too high and that they should refer to the maximum level of use for the total net content of the ingoing raw material.
  - (i) The use of ascorbic acid was proposed by the delegation of the Federal Republic of Germany, supported by some delegations. Other delegations were not convinced that it was necessary to provide for the use of ascorbic acid. Governments were invited to comment on the matter.
  - (j) The delegation of the USA said that it was not yet convinced that the standard adequately dealt with the traditional product sold in the USA and that the standard could be improved by the inclusion of some detailed provisions, for example the degree of pre-cooking since this was related to the yield.

#### Status of the Draft Standard

35. The Committee agreed to return the standard to Step 6 so that Governments could comment on the question of the extension of the provisions to include the product referred to in paragraph 34(b), or alternatively whether the product referred to in paragraph 34(b) might more appropriately be the subject of a separate standard.

### Consideration of Proposed Draft Standard for Canned Pork Shoulder at Step 3

36. The Committee considered the above standard (ALINORM 70/16, Appendix VII) at Step 3 in the light of Government comments. The following were the main points emerging from the Committee's discussions:

- (a) The Committee agreed to make, where appropriate in this standard, the same amendments as had been made in the Draft Standard for Canned Hams.
- (b) The Committee agreed to a proposal made by the delegation of the United Kingdom to request Governments to make available any data they might have on canned pork shoulders similar to those for canned hams.
- (c) The US delegation drew attention to the use in its country, and conceivably in other countries, of descriptions which had the identical meaning as the descriptions laid down in the Labelling section under the name of the product. The US delegation was invited to provide details, so that consideration might be given to the need to provide, in the standard, for the use of such descriptions for products sold on the home market of the various countries.

### Status of the Proposed Draft Standard

37. The Committee agreed to advance the Proposed Draft Standard to Step 5 of the Procedure for submission to the Commission at its next Session.

### METHODS OF ANALYSIS

38. At the request of the Committee at its last session, the Danish delegation prepared a document (CX/PMP/70/13) containing a list of proposed methods of analysis for processed meat products. The document contained a list of proposed international referee methods of analysis for the determination of nitrite and nitrate, ascorbic acid and iso-ascorbic acid, phosphates, protein, water and fat. The Committee agreed that it would be necessary for it to consider the suitability of the proposed recommended methods before forwarding them to the Codex Committee on Methods of Analysis and Sampling for endorsement. The Committee hoped to be able to reach a decision on the suitability of the methods at its next session. The Committee noted that most of the methods recommended by the Danish delegation were ISO methods, and also noted the close collaboration which existed between ISO and the Codex Alimentarius Commission in the development of internationally acceptable referee methods of analysis.

39. The delegation of the Netherlands stated that in its view it would be necessary to include in the standards, methods of analysis to control the effect of heat treatment and curing as specified in the standards. The representative of WHO thought it advisable to include in the standards, as soon as possible, appropriate methods of analysis for the purpose of verifying hygienic and other provisions relating to public health. The Committee was informed that the International Committee on Microbiological Specifications for Food has made considerable progress in the elaboration of methods for microbiological examination of foods. It was also pointed out that the Committee was in close liaison with the above International Committee and would use the results of its work at a later stage. Methods of analysis for determining the presence of pesticide residues and food additives, which were also an important part of the protection of public health, were also under elaboration in appropriate Codex committees.

### SAMPLING

40. The Committee noted that the Executive Committee would be considering the subject of sampling at its next session. The Committee agreed to examine further the subject of sampling plans for processed meat products at its next session in the light of the recommendation of the Executive Committee and the decisions of the 8th Session of the Commission.

### FUTURE WORK

41. The delegation of Australia suggested that standards might be elaborated for corned mutton and canned meat and vegetables. The Committee agreed that the delegation of Australia should prepare a background paper for the next session of the Committee in the light of the work priority criteria, as laid down in the Procedural Manual of the Codex Alimentarius Commission.

### DATE AND PLACE OF THE NEXT SESSION

42. The Committee noted that, in accordance with the normal procedure, the arrangements for the next session of the Committee would, following consultation between the Chairman of the Committee and the Codex Secretariat, be submitted to the 8th Session of the Commission for approval.

### FRENCH VERSION OF THE DRAFT REPORT

43. The Committee noted that, for practical reasons, it had not been found possible to have the entirety of the report and appendices reviewed, as to accuracy of the translation from English, by the French rapporteur. The Committee was informed that the parts of the report which had not been so reviewed by the rapporteur would be reviewed by FAO translators before issue in its final form.

### STATEMENT BY THE CHAIRMAN

44. The Chairman referred to the fact that the Commission at its last session had decided that the present Committee should be a Committee in its own right. The Chairman expressed his appreciation of the close collaboration which had always existed between this Committee and the Codex Committee on Meat, when this Committee was a Sub-Committee of the Committee on Meat. The Chairman expressed the hope that this close collaboration would continue with the Codex Committee on Meat.

### SUMMARY STATUS OF WORK

CODE/STANDARD	STEP	DOCUMENT ALINORM-APP.
Code of Hygienic Practice for Processed Meat Products	3	71/16 - IT
Standard for Canned Hams	6	71/16 - III
Standard for Canned Luncheon Meat	6	71/16 - IV
Standard for Canned Chopped Meat	6	71/16 - V
Standard for Canned Corned Beef	6	71/16 - VI
Standard for Canned Pork Shoulder	5	71/16 VII

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PROPOSED DRAFT CODE OF HYGIENIC PRACTICE FOR  
PROCESSED MEAT PRODUCTS

(Returned to Step 3 for a second round of  
Government comments)

I. SCOPE

This Code of Hygienic Practice, including the Annex, applies to processed meat products.

II. DEFINITIONS

For the purpose of this Code:

1. "Container" means any hermetic enclosure for food including, but not limited to, metal, glass or laminated plastics.
2. "Edible" means suitable as food for humans.
3. "Establishment" includes any premises in which meat products are prepared, processed, handled and stored.
4. "Hermetically sealed container" means air-tight container.
5. "Inedible" means unsuitable as food for humans.
6. "Ingredient" means any substance including a food additive or processing aid used in the manufacture or preparation of a meat product.
7. "Inspector" means an officer appointed by the competent authority of a country for the purpose of meat and meat products inspection.
8. "Meat" means the edible part of any mammal which is normally used for human consumption.
9. "Meat product" means a product intended for human consumption containing meat.
10. "Processed" includes all methods of preservation but does not include prepackaged, fresh, chilled or frozen meat cuts or joints.
11. "Potable water" means water that is pure and wholesome at the point of usage in accordance with the WHO 1963 requirements contained in the "international Standards for Drinking Water".
12. "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.

III. INGREDIENT REQUIREMENTS

1. No meat should be used for the processing and manufacture of meat products unless and until the carcass from which the meat has been derived has been examined ante-mortem and post-mortem by an Inspector. It should be passed and branded by him as fit for human consumption.

2. No meat or other ingredient should be used for the processing and manufacture of meat products 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.
3. All ingredients should be adequately stored and kept off the floor after delivery to the establishment.
4. Where necessary, laboratory tests should be made of the ingredients prior to their being moved into the production area of the establishment.

#### IV. ESTABLISHMENT FACILITIES AND OPERATING REQUIREMENTS

##### A. ESTABLISHMENT CONSTRUCTION AND LAYOUT

- 1(a) The establishment should be located in an area which can be kept reasonably free from objectionable odours, smoke, dust or other contaminants.
  - (b) The size of the establishment should be sufficient to allow for the required working space.
  - (c) The construction should be sound and ensure adequate ventilation, good natural or artificial lighting and easy cleaning.
  - (d) The layout and the construction of the premises should be such as to ensure that the departments in which meat or meat products are processed are used for that purpose only, or for that purpose only at one and the same time. 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.
  - (e) In every department in which meat is stored, handled, prepared or processed:
    - (i) The floor should be constructed of an impervious and easily cleaned material that is resistant to wear and corrosion and adequately graded and drained.
    - (ii) The walls should be constructed of impervious, non-toxic, non-absorbent material having a smooth surface.
    - (iii) The ceiling should be so designed and constructed as to prevent the accumulation of dirt and condensation and should be easily cleaned.
  - (f) The premises should be of such construction as to protect against the entrance and harbouring of insects, birds, rodents or other vermin.
  - (g) Effective facilities should be provided for the disposal of plan affluent and should at all times be maintained in good order and repair; catch-basins, traps, save-alls, and sumps should at all times be kept separate and apart from any department in which meat or meat products are prepared, processed, packed or stored.
2. SANITARY FACILITIES AND CONTROLS
    - (a) Every department in which edible meat or meat products are prepared, processed or stored should be used for that purpose only

at that time, and should be physically separated from every area for the handling of inedible material or for other purposes.

- (b) The temperature in any room used for boning-out and trimming should at no time during working hours exceed 10°C, except as provided for in subsection IV.C.1(c).
- (c) An ample supply of potable water should be provided with adequate facilities for its storage and distribution and with adequate protection against contamination and pollution:
  - (i) All water used in departments in which meat or meat products are prepared or processed should be potable.
  - (ii) Where non-potable water is used for such purposes as fire control, it should be carried in completely separate lines, identified preferably by colour and with no cross connection or backsiphonage with the lines carrying potable water.
- (d) Ice should be made from potable water and should be manufactured, handled, stored and used so as to protect it from contamination.
- (e) An adequate supply of hot potable water should be available at all times during working hours.
- (f) All 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. Inedible meat should be so treated that it cannot be used for human consumption, or supply food or harbour for vermin.
- (g) Adequate ventilation should be provided to prevent excessive heat, steam and condensation and ensure that the air of the premises is not contaminated with odours, dust, vapours or smoke. Ventilation openings should be screened. Windows should be fitted with whole panes and those which open should be screened.
- (h) Adequate lighting should be provided in every room in which meat or meat products are prepared and processed. When artificial lighting is provided, it should be well distributed and of good quality. Light bulbs and fixtures suspended over food in any step of preparation should be of the safety type or otherwise protected to prevent contamination of the food product in the case of breakage.
- (i) All stairs located in any room used for the preparation or processing of meat and meat products, should be so constructed: that they can be easily cleaned; that no contamination can be caused by material passing through the risers or treads. They should have side curbs that are at least 10 cm in height measured at the leading edge of the treads.
- (j) Platforms, ladders, chutes and similar facilities in any room used for the preparation or processing of meat and meat products should be hygienically constructed of material which is not subject to rust or corrosion and which can be easily cleaned.

- (k) Floor drains should be kept in good condition and repair with strainers in places.
- (l) Doors should be tight-fitting when closed. External doors should be preferably double doors with an entrance lock between.
- (m) Adequate provision should be made in every establishment for changing-room accommodation, toilets, and shower and washing facilities for all persons employed. All such accommodation, toilets, and shower and washing facilities should at all times be kept clean and should have adequate lighting and ventilation; and no changing-room, toilet, or room containing any shower or washing facilities should open directly into or upon any room, compartment, or space used for the preparation or processing of meat and meat products.
- (n) Conveniently adjacent to every toilet and in every room in which meat and meat products are handled, prepared or processed, an adequate number of suitably placed hand-washing facilities should be available, furnished with waste pipes leading to a drain and with mixing faucets supplying both hot and cold water. In addition, an adequate supply of soap or other cleansing agent with clean dispenser type roller towels or paper towels or other acceptable means of drying the hands should be provided adjacent to each washing facility. Where paper towels are used, a sufficient number of receptacles should be provided.
- (o) Adequate accommodation for Inspectors should be provided by the management of an establishment and should comprise offices, changing rooms, toilets, showers and hand washing facilities with soap dispensers and suitable hygienic means of drying the hands. An access to laboratory facilities should be provided. The Inspectors accommodation should be provided with adequate lighting, ventilation and heating. The management of an establishment should ensure that the accommodation is at all times maintained in good repair and condition, and is cleaned daily.

## B. EQUIPMENT AND UTENSILS

1. All equipment, implements, tables, utensils and containers used in an establishment should be so constructed that they may readily be cleaned and made from a material which is non-toxic, smooth, free from pits, crevices or scale, resistant to meat products, 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.
2. There should be provided in every establishment adequate facilities for the cleaning or disinfection, as the case may be, of all equipment, implements, and utensils.
3. Equipment and utensils used for inedible or condemned materials should be so identified and should not be used for edible products.
4. The use of wood in the production rooms should be restricted as far as possible. Where it is indispensable it should be planed and renewed at

frequent intervals. Wooden surfaces that are soiled and washed daily should be allowed to dry after cleaning and disinfecting.

5. No containers should be assembled, and no containers, equipment or utensils stored or deposited in any part of an establishment in which meat or meat products are prepared, processed or stored, unless the containers, equipment or utensils are required for use in that part.

C. HYGIENIC OPERATING REQUIREMENTS

1.
  - (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) If a room is used for any other purpose than the handling, preparation, processing, packaging or storage of meat products, sanitation and disinfection is necessary immediately after such use.
  - (c) Where meat is boned and trimmed in rooms other than rooms under temperature control as defined in Iv.A.2(b), the room should at least every four hours be emptied and cleaned and all equipment and utensils thoroughly cleaned.
  - (d) Any cooking of meat products should be done in separate areas suitably equipped for this purpose.
  - (e) Immediately after cessation of work for the day, or at such other times as may be required, the floor and walls should be thoroughly cleaned.
  - (f) All equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws and containers should be forthwith thoroughly cleaned or disinfected, as the case may be, whenever they come in contact with diseased or infected material and at the conclusion of each working day or whenever necessary, particularly during the cutting up of meat when knives and steels require frequent disinfection, in special equipment provided for this purpose in each room where the preparation of meat takes place.
  - (g) If detergents, sanitizing agents and disinfectants are used they should conform to public health requirements and no such substance should be allowed to come in contact with any meat or meat products.
2. Every establishment should ensure that the premises are kept free from rodents, birds, flies, cockroaches and other vermin.
3. No animals should be allowed to enter or to live in rooms where meat or meat products are handled, prepared, processed or stored.
4.
  - (a) No person who is suffering from, or who is a carrier of any communicable disease, notably diarrhoea, or is suffering from any condition causing a discharge of pus or serum from any part of the head, neck, arms or hands should engage in any establishment in the preparation, processing, handling or transportation of meat or meat products or should work in any department where meat or

meat products are prepared, processed, handled or transported. Any such person should immediately report to the management.

- (b) Management should take care to ensure that no person, while known to be affected with a disease capable of being transmitted through food, or known to be a carrier of such disease micro-organisms, or while afflicted with infected wounds, sores, or any illness, is permitted to work in any area of an establishment in a capacity in which there is a likelihood of such person contaminating meat or meat products with pathogenic organisms.
  - (c) The manager of any establishment should, if required to do so by an Inspector, produce for perusal by the Inspector any medical certificate produced to the manager by an employee of the establishment.
  - (d) No person who is suffering from any cut or injury should engage in any establishment in the preparation, processing, handling or transportation of any meat or meat product unless and until the cut or injury has been so treated or dressed that the discharge of blood on to the meat or meat product has been prevented.
5. All rodenticides, insecticides, fumigants or other toxic substances should be stored in separate rooms or cabinets under lock and key and dispensed and handled only by authorized and properly trained personnel to avoid any possibility of contaminating any meat or meat products directly or indirectly as the case may be.
6. Hygiene of personnel and food handling practice
- (a) Every person engaged in an establishment should, before commencing work and on every occasion after visiting any toilet and before resuming work, wash his hands thoroughly with soap or other cleansing agent, and potable water.
  - (b) Every person engaged in an establishment 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 which should be maintained in a clean condition consistent with the nature of the work in which the person is engaged.
  - (c) Every person who visits an establishment should wear clean protective clothing and appropriate head- and shoe-coverings.
  - (d) No clothing should be deposited in any part of an establishment used for the preparation, processing, handling or transportation of meat or meat products. However, protective clothing and knife pouches, etc. may be left in a place provided for the purpose in such a manner that they will not contaminate meat or meat products.
  - (e) Eating, use of tobacco or chewing gum, and spitting should be prohibited where meat or meat products are prepared, processed, handled or transported.

- (f) Gloves, if used in 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 as any other employee working without gloves. Gloves should be made of an impermeable material except where the use of such material would be inappropriate or incompatible with the work involved.
- (g) No person working in any establishment should wear on the hand any bandage unless the bandage is completely protected by a waterproof covering and is of such a nature that it cannot become accidentally detached.
- (h) 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 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.
- (i) Every employee should be taught the principles of hygiene and the relevant parts of this Code so as to be able to take the necessary precautions to prevent contamination of meat, meat products and ingredients used for the preparation of meat products.

D. OPERATING PRACTICES AND PRODUCTION REQUIREMENTS

1. Raw material handling

- (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 stored in an establishment in such a manner as to prevent deterioration and contamination.
- 2. Raw materials and semi-manufactured goods should be kept separated from outgoing finished products.
  - 3. Preparatory operations leading to the finished product and the packaging operations should be so timed as to permit expeditious handling of consecutive units in production under conditions which would prevent contamination, deterioration, spoilage, or the development of infectious or toxigenic microorganisms.

4. Equipment such as trays, vats, tables, etc. should not be used interchangeably for raw product and cooked product 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.
5. 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.
6. Packaging of finished product  
Packaging materials should be clean and should be stored in a clean and sanitary manner to prevent contamination of the final product.
7. Preservation of finished product  
Requirements for the preservation of specific groups of meat products are given in annexes to this Code. [To be developed.]
8. 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

1. It is desirable that each establishment in its own interest designate a single individual, whose duties are preferably divorced from production, to be held responsible for the cleanliness of the establishment. His staff should be well trained in the use of special cleaning tools, methods of disassembling equipment for cleaning, and in the significance of contamination and the hazards involved. Critical areas, equipment and materials should be designated for specific attention to be cleaned and, if necessary, disinfected at least once daily as part of a permanent sanitation schedule.

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 of the sanitary quality of the products processed. The amount and type of such control will vary with the meat products as well as the needs of management. Analytical procedures used should follow recognized or standard methods in order that the results may be readily interpreted.

V. END PRODUCT SPECIFICATIONS

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 be free from any micro-organisms pathogenic to man and should not contain any toxic substances produced by micro-

organisms in a concentration believed to constitute a public health hazard.

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

## ANNEX A

### Preservation of canned meat products

- a. Meat products packaged in hermetically sealed containers should be processed to withstand spoilage and present no public health hazard under commercial conditions of storage, transport and sale.
- b. Processing conditions for specific formulations of canned meats should be based on the recommendations of technical specialists competent in canning technology. such processing should be supervised in the establishment by technically competent personnel and be subject to check by the Inspector. Where applicable, processing records adequate to identify the processing history should be kept and made available for inspection.
- c. No water, other than potable water, should be used for the cooking or cooling of any hermetically sealed container. Where heat processed containers are cooled in water, any recirculated water should be treated by the addition of chlorine so that it contains not less than two parts per million of free chlorine at the point of usage after a contact time of at least 20 minutes. Instead of chlorine other acceptable, efficient disinfectants may be used adequately.
- d. After processing, containers should be handled in such a manner as to avoid contamination of the product; in particular, no person should handle a wet can while still hot. Rough treatment of processed cans, especially if such cans are wet, should be avoided. 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 to exclude defective containers.
- f. Adequate facilities should be provided for the incubation of random samples of individual batches of containers.
- g. Every container should be permanently marked, either in code or otherwise, to identify the establishment, country and date of production.

DRAFT STANDARD FOR CANNED HAMS  
(Returned to Step 6 for further Government comments)

1. SCOPE

The provisions of this standard apply to hams in hermetically sealed containers which have been heat-treated after sealing, or, where aseptic packaging techniques are employed, before sealing.

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 and the type of cure shall be sufficient to ensure that the product remains wholesome under normal conditions of storage and sale.

Subsidiary definition

Hermetically sealed container means a container which is completely sealed, 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

- ham
- water
- salt

3.2 Optional ingredients

- sugars as defined by the Codex Alimentarius Commission
- honey
- gelatine
- hydrolized protein
- spices, seasonings and condiments
- any food likely to impart to the ham some organoleptic characteristics

3.3 Essential quality factors

3.3.1 Raw material

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

3.3.2 Final product

The meat shall be clean and substantially free from staining from the container. The meat shall be uniformly and thoroughly cured and 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 of use calculated on the total net the final product content of</u>	<u>Status</u>
Agar	Limited by good manufacturing practice (GMP)	Endorsed
Alginates, potassium and/or sodium salts-	Limited by GMP	Endorsed
Ascorbic acid, iso-ascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination	Endorsed
Natural flavourings and their identical synthetic equivalents, except those which are known to represent a toxic hazard	Limited by GMP	Subject to endorsement
Carrageenan	Limited by GMP	Endorsed
Citrate sodium	Limited by GMP	Endorsed
Guanylic acid, sodium salt	500 mg/kg expressed as guanylic acid	Not endorsed, pending tox. evaluation
Inosinic acid, sodium salt	500 mg/kg expressed as inosinic acid	Not endorsed, pending tox. evaluation
Monosodium glutamate	2000 mg/kg expressed as glutamic acid	Subject to endorsement
Nitrate, potassium and/or sodium salts	500 mg/kg expressed as sodium nitrate	Temporarily endorsed
Nitrite, potassium and/or sodium salts	200 mg/kg total nitrite expressed as sodium nitrite	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

#### 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 II to this Report).
- 5.2 The following specific provisions in respect of the 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>1/</sup>
- 5.2.2 Meat and meat products shall be stored in an establishment in such a manner as to prevent deterioration and contamination. <sup>1</sup>
- 5.2.3 The heat treatment in combination with the curing shall be sufficient to ensure that the product will withstand spoilage and present no public health hazard under commercial conditions of storage, transport and sale.
- 5.2.4 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, where applicable to the type of container, shall show visible vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality and suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be effectively disinfected by chlorine or otherwise before use or each re-use. <sup>2/</sup>
- 5.2.6 After processing, containers shall be handled in such a manner as to avoid contamination of the product. <sup>1/</sup>

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

<sup>2/</sup> This provision has been endorsed by the Codex Committee on Food Hygiene.

## 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 shall include the designation:
- "ham" or "ham with skin",
  - "ham in/with natural juice" or "ham with skin in/with natural juice".
  - "ham in/with natural juice, gelatine added" or "ham with skin in/with natural juice, gelatine added" or "added gelling agent" applying to agar, alginates or carrageenan, as appropriate.
- 6.1.2 The following shall appear on the label so as to be simultaneously visible with the name of the product:
- a declaration of characteristic flavouring or seasoning, e.g. "with X", when appropriate;
  - when the ham has been smoked, this shall be declared on the label;

- a declaration that accurately describes any method of preparation or processing may be given and shall be given when 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 sub-section 3.2(c) of the Recommended General Standard for the Labelling of Prepackaged foods, except that water need not be declared.

## 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 if its omission would mislead or deceive the consumer.

6.5.2 When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

## 6.6 Additional provisions

### 6.6.1 Storage instructions

For hams 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 permissible 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.

### 6.6.2 Impression of establishment number and country of origin on the container

The establishment number and the country of origin shall be shown on the container in an indelible manner. The country of origin may be shown in code or in clear.

### 6.6.3 Impression of date of manufacture on the container

The date of manufacture shall be shown on the container in code.

## 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 Nitrite and Nitrate

Recommended method: "The Determination of the Nitrite and Nitrate Content in Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

### 7.2 Ascorbic acid and iso-ascorbic acid

Recommended method: "Determination of Ascorbic acid and Iso-ascorbic acid Content in Food Products", Standard Methods of Chemical Analysis, Vol. 3B, Sixth Edition 1966, P.J. Welcher (Ed.)

### 7.3 Phosphate

\* Recommended method: "Determination of the Phosphate Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

- \* It should be pointed out that the recommended method of analysis for the determination of the phosphate content refers to the total phosphate content of the product, whereas the limitations stated in the various standards relate to added phosphates only.  
In this connection reference is made to a method given in the Laboratory Guidebook of the Consumer and Marketing Service, U.S. Department of Agriculture, according to which the added phosphate content can be calculated from the total phosphate content as follows:

Added Phosphorous (P) = Total Phosphorous (P) content - 0.0106 (% Meat Protein)

where 0.0106 = factor to correct for the phosphorous content of meat protein.

The added phosphate content (expressed as P<sub>2</sub>O<sub>5</sub>) is then calculated by multiplying the added phosphorous content with the factor 2.29.

It should be noted that this method of calculating the added phosphate content is influenced when non-meat proteins have been added to the product in question.

### 7.4 Protein

Recommended method: "The protein Content in Meat and Meat Products", ISO Recommendation R. 937.

### 7.5 Fat

Recommended method: "The determination of the Total Fat Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

DRAFT STANDARD FOR CANNED LUNCHEON MEAT  
(Returned to Step 6 for further Government comments)

1. SCOPE

The provisions of this standard apply to luncheon meat in hermetically sealed containers which have been heat treated after sealing.

2. DESCRIPTION

The product shall be prepared from meat as defined below and which has been comminuted and cured. Without prejudice to the definition, the meat used in the preparation of the product includes the fat, gristle, sinew, rind and skin associated with the flesh and may include [for products with binders] fat and [pork] rind, edible offal 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 [urinary bladder]. The product may or may not contain binders.

The heat treatment shall be sufficient to ensure that the product is shelf-stable. Packs over 1350 g (3 lbs) net weight may be midly heat treated provided that it is sufficient to ensure that the product remains wholesome under conditions of storage and sale as specified in the Labelling section of this standard.

Subsidiary definitions

Meat means the edible part of any mammal which is normally used for human consumption.

Hermetically sealed container means a container which is completely sealed 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 Ingredients

	<u>With binders</u>	<u>Without binders</u>
- Minimum ingoing raw meat content	80%	90%
[Note: for the purpose of this provision meat does not include pork rind per se, and edible offal except heart, liver, tongue, head meat.]		
- Maximum fat content	[figures to be determined; the U.K. has proposed 32% and 36%, respectively.]	
- <u>Carbohydrate binders</u>		
- meat, flour or starch prepared from grain, or potato or sweet potato;		
- bread, biscuit or bakery products.		

- Protein binders

- 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.

The maximum amount of protein binders which may be present in the product shall not exceed 3%.

- water
- salt
- sugars, as defined by the Codex Alimentarius Commission
- spices, seasonings and condiments
- hydrolized protein

3.2 Essential quality factors

3.2.1 Raw material

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

3.2.2 Final product

The product shall be clean and substantially free from staining from the container.

The meat shall be uniformly and thoroughly cured and 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 of use calculated on the total net content of the final product</u>	<u>Status</u>
Ascorbic acid, isoascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination	Endorsed
Natural flavourings and their identical synthetic equivalents, except those which are known to represent a toxic hazard	Limited by GMP	Subject to endorsement
Citrate sodium	Limited by GMP	Endorsed
Guanylic acid, sodium salt	500 mg/kg expressed as guanylic acid	Not endorsed, pending tox. evaluation
Inosinic acid, sodium salt	500 mg/kg expressed as inosinic acid	Not endorsed, pending tox. evaluation
Monosodium glutamate	5000 mg/kg expressed as glutamic acid	Subject to endorsement

Nitrate, potassium and/or sodium salts	500 mg/kg expressed as sodium nitrate	Temporarily endorsed
Nitrite, potassium and/or sodium salts	200 mg/kg total nitrite expressed as sodium nitrite	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	5000 mg/kg	Subject to endorsement]
Erythrosine C.I. No. 45430	15 mg/kg	Subject to endorsement

## 5. HYGIENS

- 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 II to this Report)
- 5.2 The following specific provisions in respect of the 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>1/</sup>
- 5.2.2 Meat and meat products shall be stored in an establishment in such a manner as to prevent deterioration and contamination.<sup>1/</sup>
- 5.2.3 The heat treatment in combination with the curing shall be sufficient to ensure that the product will withstand spoilage and present no public health hazard under commercial conditions of storage, transport and sale.
- 5.2.4 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, where applicable to the type of container, shall show visible vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality and suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be effectively disinfected by chlorine or otherwise before use or each re-use.<sup>2/</sup>
- 5.2.6 After processing, containers shall be handled in such a manner as to avoid contamination of the product.<sup>1/</sup>

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

<sup>2/</sup> This provision has been endorsed by the Codex Committee on Food Hygiene.

## 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 shall include the designation "luncheon meat". A declaration of the presence of binders and a declaration indicating the species of animals from which the meat is derived may be given and shall be given in connection with the name of the product when 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 sub-section 3.2(c) of the General Standard for the Labelling of Prepackaged Foods [except that water need not be declared.] 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 if its omission would mislead or deceive the consumer.

6.5.2 When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

### 6.6 Additional provisions

#### 6.6.1 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 permissible 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.

#### 6.6.2 Impression of establishment number and country of origin on the container

The establishment number and the country of origin shall be shown on the container in an indelible manner. The country of origin may be shown in code or in clear.

### 6.6.3 Impression of date of manufacture on the container

The date of manufacture shall be shown on the container in code.

## 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 Nitrite and Nitrate

Recommended method: "The Determination of the Nitrite and Nitrate Content in Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

### 7.2 Ascorbic acid and Iso-ascorbic acid

Recommended method: "Determination of Ascorbic acid and Iso-ascorbic acid Content in Food Products", Standard Methods of Chemical Analysis, Vol. 3B, Sixth Edition 1966, F.J. Welcher (Ed.).

### 7.3 Phosphate

\* Recommended method: "Determination of the Phosphate Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

- \* It should be pointed out that the recommended method of analysis for the determination of the phosphate content refers to the total phosphate content of the product, whereas the limitations stated in the various standards relate to added phosphates only.  
In this connection reference is made to a method given in the Laboratory Guidebook of the Consumer and Marketing Service, U.S. Department of Agriculture, according to which the added phosphates content can be calculated from the total phosphate content as follows:
- $$\text{Added Phosphorous (p)} = \text{Total Phosphorous (P) content} - 0.0106 (\% \text{ Meat Protein})$$
- where 0.0106 = factor to correct for the phosphorous content of meat protein.
- The added phosphate content (expressed as P<sub>2</sub>O<sub>5</sub>) is then Calculated multiplying the added phosphorous content with the factor 2.29.
- It should be noted that this method of calculating the added phosphate content is influenced when non-meat proteins have been added to the product in question.

### 7.4 Protein

Recommended method: "The protein Content in Meat and Meat Products", ISO Recommendation R 937.

### 7.5 Fat

Recommended method: "The Determination of the Total Fat Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

DRAFT STANDARD FOR CANNED CHOPPED MEAT

(Returned to Step 6 for further Government comments)

1. SCOPE

The provisions of this standard apply to chopped meat in hermetically sealed containers which have been heat treated after sealing.

2. DESCRIPTION

The product shall be prepared from meat as defined below and which has been cured. 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 any one dimension.

Without prejudice to the definition, the meat used in the preparation of the product includes the fat, gristle, sinew, rind and skin associated with the flesh and may include [For products with binders] fat and edible offal but not including ears, scalp, snouts [including lips and muzzle], mucous membrane, sinews, genital system, spleens, lungs, udders, intestines [urinary bladder] and pork rind per se. The product may or may not contain binders.

The heat treatment shall be sufficient to ensure that the product is shelf-stable. Packs over 1350 g (3 lbs) net weight may be mildly heat treated provided that it is sufficient to ensure that the product remains wholesome under conditions of storage and sale as specified in the Labelling section of this standard.

Subsidiary definitions

Meat means the edible part of any mammal which is normally used for human consumption.

Hermetically sealed container means a container which is completely sealed 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 Ingredients

	<u>With binders</u>	<u>Without binders</u>
- <u>Minimum ingoing raw meat content</u>	85%	90%
[Note: For the purpose of this provision meat does not include edible offal except heart, liver, tongue, head meat.]		
- <u>Carbohydrate binders</u>		
- meat, flour or starch prepared from grain, or potato or sweet potato;		
- bread, biscuit or bakery products.		

- Protein binders

- milk powder, skim milk powder, butter milk powder, egg protein, whey powder, soya flour and soya protein, textured vegetable protein, caseinate, groundnut protein, wheat gluten, dried blood serum.

The maximum amount of protein binders which may be present in the product shall not exceed 3%.

- water
- salt
- sugars, as defined by the Codex Alimentarius Commission
- spices, seasonings and condiments
- hydrolized protein

3.2 Essential quality factors

3.2.1 Raw material

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

3.2.2 Final product

The product shall be clean and substantially free from staining from the container.

The meat shall be uniformly and thoroughly cured and 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 of use calculated on the total net content of the final product</u>	<u>Status</u>
Ascorbic acid, isoascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination	Endorsed
Natural flavourings and their identical synthetic equivalents, except those which are known to represent a toxic hazard	Limited by GMP	Subject to endorsement
Citrate sodium	Limited by GMP	Endorsed
Guanylic acid, sodium salt	500 mg/kg expressed as guanylic acid	Not endorsed pending tox. evaluation
inosinic acid, sodium salt	500 mg/kg expressed as inosinic acid	Not endorsed pending tox. evaluation
Monosodium glutamate	5000 mg/kg expressed as glutamic acid	Subject to endorsement

Nitrate, potassium and/or sodium salts	500 mg/kg expressed as sodium nitrate	Temporarily endorsed
Nitrite, potassium and/or sodium salts	200 mg/kg total nitrite expressed as sodium nitrite	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	5000 mg/kg	Subject to endorsement]

## 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 II to this Report).
- 5.2 The following specific provisions in respect of the 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>1/</sup>
- 5.2.2 Meat and meat products shall be stored in an establishment in such a manner as to prevent deterioration and contamination.<sup>1/</sup>
- 5.2.3 The heat treatment in combination with the curing shall be sufficient to ensure that the product will withstand spoilage and present no public health hazard under commercial conditions of storage, transport and sale.
- 5.2.4 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, where applicable to the type of container, shall show visible vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality and suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be effectively disinfected by chlorine or otherwise before use or each re-use.<sup>2/</sup>
- 5.2.6 After processing, containers shall be handled in such a manner as to avoid contamination of the product.<sup>1/</sup>

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

<sup>2/</sup> This provision has been endorsed by the Codex Committee on Food Hygiene.

## 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 shall include the designation "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 a declaration indicating the species of animals from which the meat is derived may be given and shall be given in connection with the name of the product when 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 sub-section 3.2(c) of the General Standard for the Labelling of Prepackaged Foods [except that water need not be declared.] 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 if its omission would mislead or deceive the consumer.

6.5.2 When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

### 6.6 Additional provisions

#### 6.6.1 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 permissible 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.

6.6.2 Impression of establishment number and country of origin on the container

The establishment number and the country of origin shall be shown on the container in an indelible manner. The country of origin may be shown in code or in clear.

6.6.3 Impression of date of manufacture on the container

The date of manufacture shall be shown on the container in code.

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 Nitrite and Nitrate

Recommended method: "The Determination of the Nitrite and Nitrate Content in Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

7.2 Ascorbic acid and Iso-ascorbic acid

Recommended method: "Determination of Ascorbic acid and Iso-ascorbic acid Content in Food Products", Standard Methods of Chemical Analysis, Vol. 3B, Sixth Edition 1966, F.J. Welcher (Ed.).

7.3 Phosphate

\* Recommended method: "Determination of the Phosphate Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

- \* It should be pointed out that the recommended method of analysis for the determination of the phosphate content refers to the total phosphate content of the product, whereas the limitations stated in the various standards relate to added phosphates only.

In this connection reference is made to a method given in the Laboratory Guidebook of the Consumer and Marketing Service, U.S. Department of Agriculture, according to which the added phosphate content can be calculated from the total phosphate content as follows:

Added Phosphorous (P) = Total Phosphorous (P) Content - 0.0106 (% Meat Protein)

where 0.0106 = factor to correct for the phosphorous content of meat protein.

The added phosphate content (expressed as P<sub>2</sub>O<sub>5</sub>) is then calculated by multiplying the added phosphorous content with the factor 2.29.

It should be noted that this method of calculating the added phosphate content is influenced when non-meat proteins have been added to the product in question.

7.4 Protein

Recommended method: "The Protein Content in Meat and Meat Products", ISO Recommendation R 937.

DRAFT STANDARD FOR CANNED CORNED BEEF  
(Returned to Step 6 for further Government comments)

1. SCOPE

The provisions of this standard apply to canned corned beef in hermetically sealed containers which have been heat treated after sealing.

2. DESCRIPTION

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

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.

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 Ingredients

- beef
- salt
- sugars (for curing) as defined by the Codex Alimentarius Commission

3.2 Composition

Total fat content in the final product shall not exceed 20%.

3.3 Essential quality factors

3.3.1 Raw material

The meat 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 from the container. The meat shall be uniformly and thoroughly cured and 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 temporarily endorsed by the Codex Committee on Food Additives, as indicated below:

<u>Additive</u>	<u>Maximum level of use calculated on the total net content of the final product</u>	<u>Status</u>
Nitrate, potassium and/or sodium salts	500 mg/kg expressed as sodium nitrate	Temporarily endorsed
Nitrite, potassium and/or sodium salts	200 mg/kg total nitrite expressed as sodium nitrite	Temporarily endorsed

## 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 II to this Report).
- 5.2 The following specific provisions in respect of the 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>1/</sup>
- 5.2.2 Meat and meat products shall be stored in an establishment in such a manner as to prevent deterioration and contamination. <sup>1/</sup>
- 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 visible vacuum.
- 5.2.4 When processed containers are cooled in water, the water shall be of potable quality and suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated, it shall be effectively disinfected by chlorine or otherwise before use or each re-use. <sup>2/</sup>
- 5.2.5 After processing, containers shall be handled in such a manner as to avoid contamination of the product. <sup>1/</sup>

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

<sup>2/</sup> This provision has been endorsed by the Codex Committee on Food Hygiene.

## 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

The name of the product is "corned beef".

## 6.2 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2(c) of the General Standard for the Labelling of Prepackaged Foods [except that water need not be declared].

## 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

6.6.1 The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.

6.6.2 When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

## 6.6 Additional provisions

6.6.1 Impression of establishment number and country of origin on the container

The establishment number and the country of origin shall be shown on the container in an indelible manner. The country of origin may be shown in code or in clear.

6.6.2 Impression of date of manufacture on the container

The date of manufacture shall be shown on the container in code.

## 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 Nitrite and Nitrate

Recommended method: "The Determination of the Nitrite and Nitrate Content in Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

### 7.2 Fat

Recommended method: "The Determination of the Total Fat Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

PROPOSED DRAFT STANDARD FOR CANNED PORK SHOULDER

(Advanced to Step 5 of the Procedure)

1. SCOPE

The provisions of this standard apply to pork shoulder in hermetically sealed containers which have been heat-treated after sealing.

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 and the type of cure shall be sufficient to ensure that the product remains wholesome under normal conditions of storage and sale.

Subsidiary definition

Hermetically sealed container means a container which is completely sealed, 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

- pork shoulder
- water
- salt

3.2 Optional ingredients

- sugars as defined by the Codex Alimentarius Commission
- honey
- gelatine
- hydrolyzed protein
- spices, seasonings and condiments
- any food likely to impart to the pork shoulder some organoleptic characteristics

3.3 Essential quality factors

3.3.1 Raw material

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

3.3.2 Final product

The meat shall be clean and substantially free from staining from the container. The meat shall be uniformly and thoroughly cured and 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 of use calculated on the total net content of the final product</u>	<u>Status</u>
Agar	limited by GMP	endorsed
Alginates, potassium and/or sodium salts	limited by GMP	endorsed
Ascorbic acid, iso-ascorbic acid and their sodium salts	500 mg/kg (expressed as ascorbic acid) singly or in combination)	endorsed
Natural flavourings and their identical synthetic equivalents, except those which are known to represent a toxic hazard	limited by GMP	subject to endorsement
Carrageenan	limited by GMP	endorsed
Citrate sodium	limited by GMP	endorsed
Guanylic acid, sodium salt	500 mg/kg (expressed as guanylic acid)	not endorsed pending toxicological evaluation
Inosinic acid, sodium salt	500 mg/kg (expressed as inosinic acid)	not endorsed pending toxicological evaluation
Monosodium glutamate	2000 mg/kg (expressed as glutamic acid)	to be endorsed
Nitrate, potassium and/or sodium salts	500 mg/kg (expressed as sodium nitrate)	temporarily endorsed
Nitrite, potassium and/or sodium salts	200 mg/kg (total nitrite expressed as sodium nitrite)	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

## 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 II to this Report.)
- 5.2 The following specific provisions in respect of the food hygiene of this product are subjct 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 postmortem 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>

- 5.2.2 Meat and meat products shall be stored in an establishment in such a manner as to prevent deterioration and contamination. <sup>1/</sup>
- 5.2.3 The heat treatment in combination with the curing shall be sufficient to ensure that the product will withstand spoilage and present no public health hazard under commercial conditions of storage, transport and sale.
- 5.2.4 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, where applicable to the type of container, shall show visible vacuum.
- 5.2.5 When processed containers are cooled in water, the water shall be of potable quality and suitably treated so as not to constitute a public health hazard. If cooling water is re-circulated it shall be effectively disinfected by chlorine or otherwise before use or each re-use. <sup>2/</sup>
- 5.2.6 After processing, containers shall be handled in such a manner as to avoid contamination of the product. <sup>1/</sup>

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

<sup>2/</sup> This provision has been endorsed by the Codex Committee on Food Hygiene.

## 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 shall include the designation:

- "pork shoulder" or "pork shoulder with skin",
- "pork shoulder in/with natural juice" or "pork shoulder with skin in/with natural juice",
- in/with natural juice, . gelatine added" or "added gelling agent" applying to agar, alginates or carrageenan, as appropriate.

6.1.2 The following shall appear on the label so as to be simultaneously visible with the name of the product:

- a declaration of characteristic flavouring or seasoning, e.g. "with X", when appropriate;
- when the pork shoulder has been smoked this shall be declared on the label;
- a declaration that accurately describes any method of preparation or processing may be given and shall be given when 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 sub-section 2.3 (c) of the Recommended

General Standard for the Labelling of Prepackaged Foods, except that water need not be declared.

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 if its omission would mislead or deceive the consumer.

6.5.2 When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

6.6 Additional provisions

6.6.1 Storage instructions

For pork shoulders 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 permissible 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.

6.6.2 Impression of establishment number and country of origin on the container

The establishment number and the country of origin shall be shown on the container in an indelible manner. The country of origin may be shown in code or in clear.

6.6.3 Impression of date of manufacture on the container

The date of manufacture shall be shown on the container in code.

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 Nitrite and Nitrate

Recommended method: "The Determination of the Nitrite and Nitrate Content in Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

7.2 Ascorbic acid and Iso-ascorbic acid

Recommended method: "Determination of Ascorbic acid and Iso-ascorbic acid Content in Food Products", Standard Methods of Chemical Analysis, Vol. 3B, Sixth Edition 1966, F.J. Welcher (Ed.).

### 7.3 Phosphate

\* Recommended methods "Determination of the Phosphate Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.

- \* It should be pointed out that the recommended method of analysis for the determination of the phosphate content refers to the total phosphate content of the product, whereas the limitations stated in the various standards relate to added phosphates only.  
In this connection reference is made to a method given in the Laboratory Guidebook of the Consumer and Marketing Service, U.S. Department of Agriculture, according to which the added phosphates content can be calculated from the total phosphate content as follows:  
  
Added Phosphorous (p) = Total Phosphorous (P) content - 0.0106 (% Meat Protein) where 0.0106 = factor to correct for the phosphorous content of meat protein.  
  
The added phosphate content (expressed as P<sub>2</sub>O<sub>5</sub>) is then calculated by multiplying the added phosphorous content with the factor 2.29.  
It should be noted that this method of calculating the added phosphate content is influenced when non-meat proteins have been added to the product in question.

### 7.4 Protein

Recommended method: "The Protein Content in Meat and Meat Products", ISO Recommendation R 937.

### 7.5 Fat

Recommended method: "The Determination of the Total Fat Content of Meat and Meat Products", under elaboration by ISO/TC 34/SC 6/WG.