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CODEX ALIMENTARIUS COMMISSION  
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REPORT OF THE FOURTH SESSION OF THE  
CODEX COMMITTEE ON MEAT AND MEAT PRODUCTS  
Kulmbach, 18-20 June 1969

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REPORT OF THE FOURTH SESSION OF THE  
CODEX COMMITTEE ON MEAT AND MEAT PRODUCTS

INTRODUCTION

1. The Codex Committee on Meat and Meat Products held its fourth session from 18 to 20 June 1969 in Kulmbach, under the Chairmanship of Mr. J. Panek, Ministerialrat (Federal Republic of Germany). The session was attended by 57 delegates and observers from 26 countries. The list of participants is attached as Appendix I.
2. The session was opened and addressed by the Chairman, who welcomed those present and hoped that good progress would be achieved. Mr. Panek recalled that Dr. von Rümker had been in the chair for the first three sessions of this Committee and suggested that greetings be sent to him in the name of all present. Words of welcome were then expressed by Professor Dr. L. Schön, Director of the Federal Institute for Meat Research, and the Mayor of Kulmbach, Mr. W. Murrmann.

ADOPTION OF THE PROVISIONAL AGENDA

3. The Committee adopted the Provisional Agenda with only slight changes.

CONSIDERATION OF THE REPORT OF THE 4th SESSION OF SUB-COMMITTEE IV  
ON PROCESSED MEAT PRODUCTS AND CONSUMER PACKAGED MEAT  
(ALINORM 70/16)

4. The Chairman of the Sub-Committee, Dr. V. Enggaard (Denmark) introduced the Report drawing the Committee's attention to the progress made by the Sub-Committee and to the main changes in the standards examined. He pointed out that the Sub-Committee had considered the general problem of setting minimum limits for meat content and had also considered various approaches to its determination. The Committee was informed that governments had been asked to comment on this problem. The Committee also noted that Sub-Committee IV had decided to proceed with the elaboration of two separate standards for Canned Luncheon Meat and Canned Chopped Meat. The Committee was also informed that the Sub-Committee had drawn up a Code of Hygienic Practice for Processed Meat Products and that this Code had been sent to governments for comment at Step 3.
5. The Chairman of the Sub-Committee briefly discussed the problems with respect to the Sampling Plans for Prepackaged Foods adopted by the Commission at Step 5. He pointed out that the Sampling Plans had been primarily drawn up for processed fruits and vegetables, and their applicability to meat and meat products would have to be examined at a later session in the light of government comments. The Representative of FAO drew the Committee's attention to the Technical Procedure for Sampling of Foods drawn up by the Codex Committee on Methods of Analysis and Sampling and that commodity committees had been asked to express their opinion on this document. It was pointed out that these Technical Procedures dealt with legal and administrative aspects of sample taking, as well as procedures of handling and taking of samples, and that it might also be desirable to discuss the document in relation to meat.
6. The Delegation of the Federal Republic of Germany wished to reserve its position regarding the use of iso-ascorbic acid and artificial flavouring substances, a reservation which had been expressed in the Sub-Committee. The Delegation stated that cyclamates may be used in certain foods for special dietary uses.

7. The Delegation of Argentina drew the Committee's attention to the fact that, because of certain difficulties, a full Delegation from that country could not be present during the whole session of Sub-Committee IV and for this reason Argentina could not participate effectively in the discussion of the standards for Canned Hams, Canned Luncheon Meat and Canned Chopped Meat, and wished certain observations to be recorded in the Report of the present Committee. The Chairman of the Sub-Committee pointed out that the Delegation of Argentina had the opportunity to make these statements during the session of the Sub-Committee but that this was not done.

8. It was agreed that, as an exception, these observations would be attached as an appendix to this report (Appendix II). In the absence of further comments the Committee decided to accept the Report of the Codex Sub-Committee IV on Meat Products and Consumer Packaged Meat.

#### CONSIDERATION OF THE REPORT OF THE THIRD SESSION OF SUB-COMMITTEE I ON CUTTING METHODS AND CUTS OF CARCASSES (ALINORM 70/15)

9. The Committee decided to accept the Report of the above Sub-Committee.

#### TRANSPORTATION AND STORAGE OF CARCASSES AND CUTS OF MEAT

(Revised Draft Standard prepared by Australia CODEX/MEAT/69/3, June 1969)\*

\* Note by the Secretariat: This document will be used for the elaboration of a comprehensive document covering all aspects of meat hygiene in the form of a Code of Practice. Please see paragraphs 15 and 16 of the Report.

10. During the discussion of the above document, the following points were made:

##### Paragraph 1 - Preparation of meat

The Committee agreed to consider the following change: "The animals from which the meat has been derived shall undergo ante-mortem and post-mortem examination in accordance with the provisions laid down in the country of origin, or with guidelines agreed upon with the country of destination."

##### Paragraph 2 - Facilities of Abattoirs and Meat Processing Establishments

Section (c): One Delegation questioned the reason for having different temperatures for various species of meat. The Committee was informed that the figures given were suggested to indicate a refrigerator capacity.

Sub-Section (ii): It was suggested that the air temperatures be raised and a temperature of 7° C be set for meat. Several delegations supported this suggestion.

Sub-Section (iii): Other freezing procedures in addition to those mentioned in these provisions should be included.

##### Paragraph 3 - Operating Practices

The author country (Australia) informed the Committee that the expression "fresh meat" had, in the past, always created difficulty in respect of the meaning of this expression. The author country, therefore, proposed to replace it with the term "cooled meat".

Section (A) - The Delegation of Argentina stated that it would prefer a lower temperature than 7° C for "cooled meat" in international trade and did not agree that a time interval of 72 hours between slaughter and arrival at the distribution point should be specified.

Section (B) - The Delegation of Argentina pointed out that the lowest temperature used for chilled beef and veal should be fixed at  $-1^{\circ}$  C. This would also apply to chilled mutton, lamb and pig meat.

Section (c) - paragraph 2: The Delegation of Ireland suggested that a carcass temperature of  $7^{\circ}$  C for short distance transportation should be permitted. This would also apply to the paragraph D on pig meat.

Section (C) - paragraph 4: The Delegation of New Zealand proposed the addition of the phrase "unless the room is equipped with artificial refrigeration" at the end of this paragraph. The Delegation of Argentina was of the opinion that this paragraph should be deleted.

Section (E), sub-sections (iii) and (iv): The Delegation of Argentina stated that it would prefer an air temperature of  $-12^{\circ}$ C instead of  $-15^{\circ}$ C in freezing rooms and tunnels to be reached in less than 15 hours, and that for beef quarters the internal temperature of  $-8^{\circ}$ C or less should be reached within 72 hours instead of 80 hours, and for pig carcasses and sides in 48 hours instead of 60 hours.

Section (F)(iii): In the opinion of the Delegation of Argentina, the temperature of  $1^{\circ}$ C should be reduced to reach  $-1^{\circ}$  C.

#### Paragraph 4 - Storage

Section (a)(i): The Delegation of Argentina wished to permit a storage temperature of  $-12^{\circ}$  C for beef, veal, mutton and lamb, instead of  $-14^{\circ}$ C.

Section (a)(ii): The Delegation of Denmark stated that a storage time of six months for pig meat was too restrictive.

Section (b): In the opinion of the Delegation of Argentina, the storage temperature for chilled meat should have a range from  $-1^{\circ}$ C to  $+2^{\circ}$ C.

#### Paragraph 5 - Transportation

Several delegations expressed the view that provision should be made under this heading for air transport and container transport, since this mode of transport was likely to become more important in the future. It was noted that there would be some difficulties in air transportation when carcasses were hanging in the aircraft. It was pointed out that stacking of carcasses in aircraft and other transport media was possible. The Delegation of Spain recommended the use of a thermograph for transportation over long distances and long periods of time. The Delegation of Italy drew the attention of the Committee to the Agreement for the transportation of perishable foods elaborated by the Economic Commission for Europe \* and recommended to bring in line the provisions of the document under consideration with those of the aforementioned document. In this connection the Representative of the author country stressed that the document under consideration was intended for application on a worldwide basis.

\* Agreement on special equipment for the transportation of perishable foodstuffs and on the use of such equipment for the international transportation of some of those foodstuffs, Geneva, 15 January 1962 (E/ECS/456, E/ECE/TRANS/526)

Section (c): The Delegation of the Netherlands enquired whether it was possible to have periods of transportation longer than 25 days. The

Representative of the author country stated that, based on long experience, this was possible. Periods of transportation of 40-50 days could be achieved with adequate hygienic precautions and the use of CO<sub>2</sub> or an inert gas.

#### Paragraph 6 - Thawing of frozen meat

Section (a): The Committee noted that the author country had included a provision for accidental thawing. It was said that such meat should not be re-frozen. An expert examination should be carried out and the meat judged on its suitability for human consumption.

Section (b): On the question whether it was appropriate to include provisions for intentional thawing into a text dealing with transportation, the Committee was informed that this was included in the terms of reference of the author country for drawing up the document under consideration. In any event, this was necessary because the quality of the meat might suffer when these specific provisions were not met, even if transportation was carried out under optimum conditions.

#### Paragraph 7 - Packaging and Packing Materials

The Representative of the author country informed the Committee that with regard to hot and cold meat, provisions for internal transfers were included in the document under consideration, but that the other provisions of this paragraph referred to international transportation. Concerning the various packing materials, it was pointed out that relevant provisions of the General Principles of Food Hygiene (Codex Alimentarius Recommendation CAC/RCP 1-1969) would apply and that, therefore, no material which could transmit to the product objectionable matter, could be used. Some Delegations mentioned that the thickness and depth specifications for internal wrapping material and container respectively were too restrictive.

11. The Delegation of France reserved its position on all technical provisions which would not be in conformity with its present or future obligations arising from international conventions to which France was party.

12. For information, the Australian document is attached to this Report as Appendix III.

#### REPORT ON THE STATE OF PROCEEDINGS IN THE FIELD OF MEAT HYGIENE

13. The Committee had before it a note prepared by the Secretariat (Codex/Meat/69/1) indicating the present state of work on this subject. The Committee noted that the Draft OECD Code of Sanitary Regulations for International Trade in Slaughter Stock and Fresh Meat had been revised by OECD and could now be regarded as final as regards technical content (AGR/T (66)1, Second Revision, 30 January 1968). The Committee also had before it comments from Australia on the above document contained in paper Codex/Meat/ 69/2. A note prepared by the Secretariat of OECD (AGR/T (69)2, 19 March 1969) containing comments from a number of OECD, as well as non-OECD, countries was mentioned in the discussion but was not submitted to the Committee. The Representative of the Codex Liaison Point reported that the papers from Australia and Poland, and the comments from New Zealand on OECD document AGR/T (66)1, Second Revision, had been forwarded to OECD and the WHO Contact Points.

14. The Committee decided not to discuss the revised OECD Code of Sanitary Regulations at this time and agreed that the various existing documents on the subject of meat hygiene and hygiene in general should be thoroughly examined in order to bring them into harmony.

15. The Committee discussed possible ways of producing a comprehensive document covering all aspects of meat hygiene in the form of a Code of Practice for the next session of the Committee. It was agreed that in view of the complex nature of the problem, the best way of approach would be to set up a small Drafting Group consisting of countries expert in this field, as was done by Sub-Committee IV. Dr. K. Gerigk (Federal Republic of Germany) agreed to act as a coordinator and to prepare a working paper for the next session.

16. The Committee was of the opinion that this should be done on the basis of the General Principles on Food Hygiene which had been adopted by the Codex Alimentarius Recommendation CAC/RCP 1-1969, the Australian document on the Transportation and Storage of Carcasses and Cuts of Meat (Codex/Meat/69/3), the revised OECD Code of Sanitary Regulations for International Trade in Slaughter Stock and Fresh Meat (AGR/T (66)1, Second Revision, January 1968) and comments thereon contained in document Codex/Meat/69/2 and AGR/T (69)2, as well as the Proposed Draft Code of Hygienic Practice for Processed Meat Products (Appendix II, Report of the Fourth Session of the Sub-Committee on Processed Meat Products and Consumer Packaged Meat, ALINORM 70/16). In this connection reference was also made to the work done by the Economic Commission for Europe of the U.N., and the European Economic Community. The Committee agreed to request information and comments from governments on the above four documents on which the working paper would be based. Information was needed not only from countries which were exporters and importers of meat, but also countries with a developing meat export industry. Such comments and information should be sent to Dr. K. Gerigk before the end of 1969.

17. The following Delegations expressed their countries' interest in participating in or supplying information to the Drafting Group: Australia, Austria, Denmark, Federal Republic of Germany, France, Italy, New Zealand, U.K and U.S.A. The Delegation of Australia stated that this was subject to confirmation by his Government. The Representative of WHO expressed his Organization's interest in the work of the Drafting Group and drew the Committee's attention to the work already being done by the Joint FAO/WHO Expert Committees on Food Microbiology and Meat Hygiene.

18. The Committee agreed that, on the basis of the working paper on meat hygiene prepared by the Drafting Group, it would be possible to decide at the next session how to further proceed with this work.

#### FUTURE WORK

19. The Committee agreed that no future work should be undertaken at this time.

#### OTHER BUSINESS

20. The matter of residues in meat and meat products arising from the use of pest control agents and chemo-therapeutic agents, hormones, etc was raised. The Committee noted that the Codex Committee on Pesticide Residues was establishing tolerances for various pesticide residues in food, including meat and meat products. It was also noted that the Codex Committee on Food Additives was considering such problems as residues of antibiotics, hormones and other substances used in the production of livestock. The subject of irradiation was being considered by a Joint Expert

Committee sponsored by FAO, IAEA and WHO and will also be considered by the Codex Committee on Food Additives. As regards residues resulting from radio active fall-out, the Committee was informed that this matter was also being dealt with by the IAEA and FAO.

21. At the request of the French-speaking Delegations, the Secretariat of the Committee undertook to make all efforts to ensure that documents translated into French would reflect accurately the contents of the original documents and would be made available in good time. In this respect, the appointment of rapporteurs may be of interest for future session.

#### Time and Place of next meeting

22. The Committee noted that there were a number of standards for processed meat products as well as the Draft Description of Cutting Methods of Commercial Units of carcasses, Halves and Quarters in International Trade, at Step 5 of the Procedure and that, for this reason, the next session of the Committee and its Sub-Committees I and IV should be envisaged to take place in the early Autumn of 1970.

#### Note by the Secretariat

The following is the status of the documents mentioned in this Report of the Fourth Session of the Codex Committee on Meat and Meat Products:

- I. Transportation and storage of carcasses and cuts of meat.(Document prepared by Australia) Attached for information as Appendix III to this Report.

The OECD Code of Sanitary Regulations for international trade in Slaughter Stock and Fresh Meat, and comments thereon, the Proposed Draft Code of Hygienic Practice for Processed Meat Products, the document referred to under I above, and the General Principles of Food Hygiene will be used by a small Drafting Group to prepare a comprehensive Code of Practice covering all aspects of meat hygiene.



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COMMENTS OF THE DELEGATION OF ARGENTINA ON THE REPORT OF  
THE FOURTH SESSION OF SUB-COMMITTEE IV ON PROCESSED MEAT  
PRODUCTS AND CONSUMER PACKAGED MEAT

Proposed Draft Code of Hygienic Practice  
for Processed Meat Products

D.5 Preservation of finished product

It is the general practice in Argentina to use 3 ppm of chlorine, determined at the furthest part of the treatment tank after a minimum period of contact of 20 minutes.

Standard for Canned Hams

6.B.(v) and (vi)

Argentina is not in agreement with the decisions of the Sub-Committee and wishes that, as a general rule for the labelling of the meat products contained in ALINORM 70/16, the declaration of the country of origin on the label and on the container, in a clear, legible and indelible manner, should be mandatory.

Standard for Canned Luncheon Meat

Argentina agrees with Appendix IV, Labelling, B (i) Name of the Product, indicating the species of animals from which the meat has been derived, and disagrees with the contradictory statement in the section on description in which it was decided that all reference to species of animals should be deleted. Argentina objects to the inclusion of spleens and lungs in the description section and considers that if such offals are included they must be declared on the label. Furthermore, Argentina considers this product as a shelf-stable one in cans of any size.

Standard for Canned Chopped Meat (Appendix V) 2.

2. Description

Argentina agrees that this product must be separated from Luncheon Meat under a different standard, and agrees with New Zealand that this product must be considered shelf-stable in cans of any size. The heat treatment must be sufficient to ensure shelf-stability, as was already stated in connection with the standard for Canned Corned Beef.

6. Labelling

Argentina reiterates its position on labelling, as stated already in connection with the standard for Canned Hams (6. B (v) and (vi)).



TRANSPORTATION AND STORAGE OF CARCASSES AND

CUTS OF MEAT

Revised Draft Standard \*

Prepared by Australia

\* Note by the Secretariat: This document will be used for the elaboration of a comprehensive document covering all aspects of meat hygiene in the form of a Code of Practice. Please see paragraphs 15 and 16 of the Report.

1. Preparation of meat

The animals from which the meat is derived should have undergone ante- and postmortem inspection in accordance with criteria established by the country of origin and acceptable to the country of destination.

2. Facilities at Abattoirs and Meat Processing Establishments

Hanging, cooling and freezing rooms should comply with the following requirements:

(a) Construction;

The room should be constructed with walls and floors that are impervious to water, free from cracks and holes and be capable of withstanding hot aqueous solutions of detergents and disinfecting solution used in cleaning the rooms.

(b) Hygiene;

Hanging, cooling and freezing rooms should be free of moisture absorbing material and be maintained in a clean condition.

(c) Refrigeration capacity;

(i) Cooling rooms should possess a system of refrigeration which is capable of reducing the temperature of carcasses and sides at the thickest point.

- in the case of beef and veal to 15°C (59°F) or below in less than 20 hours;
- in the case of mutton and lamb to 7°C (44.6°F) or below in 12 hours;
- in the case of pigs to 10°C (50°F) or below in less than 15 hours.

(ii.) Rooms in which meat is prepared by removal of the bones and division into cuts of meat should be equipped with facilities capable of maintaining an air temperature not exceeding 1° C (50° F).

(iii) Freezing rooms or freezing tunnels, whether equipped with forced air circulated or a contact freezing system, must be capable of reducing the temperature of meat in accordance with the requirements set out in 3(e)(iv) below.

- (d) Hooks and other hanging devices in hanging, cooling and freezing rooms should be clean and incapable of imparting extraneous material on to the meat.
- (e) For the purposes of this paragraph, any time limit specified should be measured from the time of entry of the meat into the relevant room.

### 3. Operating Practices

Following the completion of dressing and post-mortem inspection, carcasses or sides should be cooled at the establishment of slaughter in accordance with the following conditions:

#### (a) Fresh meat

Meat intended for transportation and distribution as fresh meat should be placed in a cooling room within one hour of completion of dressing operations. The meat should be reduced in temperature to 10° C (50° F) , and the temperature should not at any time be permitted to rise above that figure. Where the meat is to be distributed in international trade the temperature should not exceed 7°C Where the time elapsing between slaughter and arrival at the distribution point is likely to exceed 72 hours, the meat should be reduced in temperature to 5° C (41° F).

#### (b) Beef and Veal

- Beef and veal should be placed in a cooling room within one hour of the completion of dressing operations on the slaughter floor. Beef and veal intended for further treatment, such as boning or cutting, should be reduced in temperature to 7°C (44.6°F) or below before removal from the cooling room.
- Beef and veal intended to be transported or distributed in a chilled condition should be reduced in temperature to 1° C (33.8° F) or-below, measured at the centre of the thickest part of the carcass or side before removal from the cooling room.
- Beef and veal intended to be frozen without removal of the bones may be removed from the cooling room for freezing when the meat has "set" and the temperature at the centre of the thickest part has been reduced to 15° C (59° F) or below. Provided facilities are adequate for beef and veal to be frozen in accordance with the requirements of 3E (iv) the intermediate chilling stage may be eliminated.

#### (c) Mutton and Lamb

- Mutton and lamb intended to be transported or distributed in a cooled or chilled condition or to be cut up or boned out, should be placed in a cooling room within one hour of the completion of dressing operations.
- Mutton and lamb intended for further treatment, such as boning or cutting, should be reduced in temperature to 7° C (44.6° F) or below before removal from the cooling room.
- Mutton and lamb carcasses intended for transportation in a chilled condition should be reduced in temperature to 1° C (33.8° F) or below before removal from the cooling room.

- Mutton and lamb carcasses that are to be frozen should be moved, immediately after dressing, to a freezing room or a cooling room or moved to a special hanging room where they may be allowed to hang for a period not exceeding 10 hours.

(d) Pig Meats

- Pig carcasses intended for transportation and distribution in a chilled condition should be placed in a cooling room within one hour of the completion of dressing. Pig carcasses intended for further treatment, such as boning or cutting, should be reduced in temperature to 7° C (44-6° P) or below before removal from the cooling room.
- Pig carcasses intended for transportation in a chilled condition should be reduced in temperature to 1°C (33.8°P) or below before removal from the cooling room.
- Pig carcasses that are to be frozen should be moved, immediately after dressing, to a freezing room or moved to a cooling room.

(e) Freezing of meats

- (i) Meat in the form of bone-in carcasses, sides or quarters should be frozen in a hanging state. Other pieces may be frozen either in containers or separately before packing.
- (ii) Prior to the introduction of carcasses, sides, quarters or packaged meats into freezing rooms or tunnels, the air temperature of the tunnel or room should not exceed -10° C (14° F).
- (iii) After completion of the loading of freezing rooms and tunnels, the air temperature should be reduced to -15°C (5°F) or below in less than 15 hours.
- (iv) Meat should remain in freezing rooms or tunnels until all parts of the meat have been reduced to a temperature of -8° C (17-6 °F) or less within the time specified in the following table:

Beef quarters	80 hours
Pig carcasses and sides	60 hours
Mutton and lamb carcasses	48 hours
Meat packed in cartons	48 hours

The same time/temperature conditions should apply if freezing is carried out in plate freezers.

- (v) Hard frozen meat may be stacked for storage and transport.

(f) Meat for transport or distribution in chilled form

The following special precautions and conditions should apply to meat for transport and distribution as chilled meat.

- (i) The highest standards of handling and cleanliness should be observed.
- (ii) The walls and floors of the cooling rooms used should be thoroughly cleaned after the completion of chilling of each batch of meat.

- (iii) All parts of carcasses or aides of meat should be reduced in temperature to 1°C (33.8°F) or lower within 48 hours from the time of entry into the cooling room.
- (iv) Protective wrapping materials should not be placed on chilled meat until the initial cooling has been completed. Before use, such wrapping material should be rendered virtually sterile by hot air sterilisation or other officially approved means.

#### 4. Storage

##### (a) Frozen meat

- (i) The air temperature of freezing rooms in which beef, veal, mutton and lamb are stored after freezing should not exceed -14° G (6.8°s P) and the duration of storage should not exceed nine months.
- (ii) The air temperature of freezing rooms in which pig meats are stored after freezing should not exceed -18°C (-0.4° F) and the duration of storage should not exceed six months.

##### (b) Chilled meat

Chilled meat should be stored at an air temperature of between 0° C (32° F) and -1° C (30.2°F) with a relative humidity within the range 85% to 96%, but preferably 87% to 91%.

Hot meat should not be introduced into cooling rooms in which chilled meat is stored.

#### 5. Transportation

- (a) Vehicles and cargo spaces used for transporting meat should be lined with a corrosion resistant material that is impervious to water and capable of being thoroughly cleaned with hot detergents and sterilising solutions.
- (b) Vehicles and cargo spaces should possess a system of refrigeration or insulation capable of transporting a maximum ambient air temperature:
  - (i) In the case of fresh meat at 10°C (50°F) or, if the time elapsing between slaughter and arrival at the distribution point is likely to exceed 72 hours, at 5°C (41°F);
  - (ii) In the case of chilled meat at 1°C (33.8°F) in. less than 12 hours or, if the time of transportation is likely to exceed seven days, at -1°C (30.2°F);
  - (iii) In the case of frozen meat, at -10° C (14° F).
- (c) If the period of transportation of chilled meat is likely to exceed 25 days, it may be necessary to maintain a concentration of an inert gas or 10% carbon dioxide in the surrounding atmosphere to retard microbial attack on the meat.
- (d) Cooled or chilled meat in the form of carcasses, sides or quarters, or packed meat other than meat in cartons or cases, should be transported as a hanging load and be stowed so that movement of the meat is kept to a minimum while still allowing sufficient space between units to assure free air movement. Meat packed in cartons or cases should be stowed

with sufficient dunnage to permit free circulation of air around the packages or pieces.

6. Thawing of frozen meat

(a) Accidental thawing

Every effort should be made to avoid thawing at any time during storage and transport, and if accidental thawing takes place, the meat should be evaluated for acceptance on the same basis as meat which has never been frozen.

(b) Intentional thawing

Thawing should be conducted:

- (i) in rooms with an ambient temperature not exceeding 10°C (50°F) preferably with a relative humidity of 70% to 75% and a mild forced air circulation;
- (ii) by immersion in flowing water at a temperature of 10°C (50°F) provided that the water used should be potable and continually filtered;
- (iii) By infra-red irradiation or use of electrical induction heating provided that the surface temperature of the meat at any time does not exceed 10° C (50°F).

7. Packaging and packing materials

(a) Hot and cooled meat for internal transfer

The use of wraps or shrouds on hot or cooled meat transferred either within an establishment or from establishment to establishment in the country of origin should be optional, but where used the wraps or shrouds should be cleaned (sterilised, if re-used) and should consist of a material that does not shed fibres on to the meat.

(b) Chilled and frozen beef and veal

Beef and veal, other than piece or boneless meat packed in cartons or cases, should be wrapped in clean new stockinette or other approved material and then in clean new hessian or other approved material.

(c) Chilled and frozen pig meats, mutton and lamb

Meat in the form of carcasses or sides should be wrapped in clean new stockinette or other approved material.

(d) Piece meats and boneless meats

These meats should be packed in cartons or cases with an inner liner of polyethylene of a minimum thickness of .0015" or other approved internal wrapping materials provided that where pieces are individually wrapped before packing, an internal liner will not be necessary. Where such meat is to be frozen in the container, the depth of the container shall not exceed 18 centimetres.

(e) The container should conform to any standard specification issued by the appropriate agency.

NOTE:

It is recognised that appropriate cognisance will need to be taken of international agreements establishing criteria concerning any of the foregoing requirements when such agreements have been finalised.