



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET  
L'AGRICULTURE  
ORGANIZACION DE LAS NACIONES UNIDAS PARA LA AGRICULTURA Y  
LA ALIMENTACION  
00100 Rome, Via delle Term. di Caracalla. Cables: FOODAGRI, Rome. Tel.  
5797



WORLD HEALTH ORGANIZATION  
ORGANISATION MONDIALE DE LA SANTÉ  
1211 Genève, 27 Avenue Appia. Câbles: UNISANTÉ Genève. Tél. 34 60 61

---

ALINORM 70/20  
July 1969

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Seventh Session

Rome, 7-17 April 1970

REPORT OF THE SIXTH SESSION

OF THE

CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

Washington, D.C.  
12-16 May 1969

JOINT FAO/WHO FOOD STANDARDS PROGRAM  
CODEX ALIMENTARIUS COMMISSION  
REPORT OF THE SIXTH SESSION OF THE  
CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES  
WASHINGTON, D.C., U.S.A.  
12-16 May 1969

Introduction.

1. The Sixth Session of the Codex Committee on Processed Fruits and Vegetables was held at the Pan American Health Organization/WHO Building, Washington, D.C., U.S.A., under the chairmanship of the United States, with Mr. F. L. Southerland in the chair. Representatives and observers from 21 countries and observers from five international organizations attended the session. The list of participants appears as Appendix I to this report. The chairman introduced Mr. Floyd F. Hedlund, Director of the Fruit and Vegetable Division of the Consumer and Marketing Service, U.S. Department of Agriculture to the Committee, and welcomed the participants, particularly those who were attending for the first time. Mr. George Grange, U.S. Codex Coordinator, also welcomed the participants and referred to the progress which had been achieved by the Commission at its Sixth Session, alluding particularly to the fact that the Committee had now agreed upon an acceptance procedure for Codex Standards.

Adoption of the Agenda.

2. The provisional agenda was adopted with a small amendment to enable the Committee to discuss some matters of interest to it emanating from the Report of the Sixth Session of the Codex Committee on Food Hygiene.

Matters Arising from the Report of the Sixth Session of the Commission.

3. The Committee took note of the contents of a Secretariat paper covering matters dealt with by the Commission at its Sixth Session which were relevant to the work of the Committee (CX 5/5.3, April 1969). The paper covered the following matters:
  - (a) the confirmation of the chairmanship of the Committee under the Government of the U.S.A.
  - (b) standards considered by the Commission at Step 5 and advanced to Step 6
  - (c) inclusion of subtropical fruit cocktail in the work of the Committee, as suggested by the Delegation of China
  - (d) standards at Step 9, and decision of the Commission with regard to amendments proposed to certain of these standards by the Delegations of the Netherlands and the United Kingdom
  - (e) adoption by the Commission of a General Standard for the Labelling of Prepackaged Foods, and advice of the Commission regarding the manner of applying the General Standard to individual commodity standards.

- (f) amendment of the guidelines for Codex Committees concerning relations between Codex Commodity Committees and Codex General Subject Committees
  - (g) the need for including in Codex Committee reports summary statements indicating the status of the work of Committees
  - (h) criteria for the establishment of work priorities and for the establishment of new subsidiary bodies of the Commission
  - (i) position regarding standards for pistachios, dried figs, dried apricots and dates, being elaborated both by this Committee and the Working Party on Standardization of Perishable Foodstuffs of the United Nations Economic Commission for Europe, and
  - (j) the advancement of the Sampling Plan for Processed Fruits and Vegetables, which had been renamed by the Commission to read "Sampling Plan for Prepackaged Foods" to Step 6.
4. The Committee was given a verbal summary of the decisions of the Commission regarding:
- (a) acceptance of Codex Standards and withdrawal or amendment of acceptance
  - (b) amendments to the Procedure for the Elaboration of Codex Standards
  - (c) procedure for the consideration of standards by the Commission at Step 8
  - (d) guide to the Procedure for the Revision and Amendment of Recommended Codex Standards
5. The Committee agreed to consider certain matters arising out of par. 3 (d) above under "Other Business." Regarding par. 3 (i) above, the Committee stressed the need for ensuring, as far as possible, that the work of the UNECE on minimum requirements in standards for dried fruits should not be at variance with the requirements contained in standards for these products to be elaborated by this Committee.
- Matters Arising from the Reports of (a) Twelfth Session of the Executive Committee, (b) Fourth Session of the Codex Committee on Food Labelling, (c) Fourth Session of the Codex Committee on Methods of Analysis and Sampling and (d) Sixth Session of the Codex Committee on Food Hygiene.
6. The Committee had before it the Reports of the above Committees containing matters relevant to the work of this Committee. These matters were contained in paragraphs 31 to 35 of ALINORM 69/3, Appendices II and III of ALINORM 69/22, Part IV and Appendix IV of ALINORM 69/23, and paragraphs 13 to 19 of ALINORM 70/13.
- Executive Committee .
7. The Committee noted that the matters arising from the Report of the Twelfth Session of the Executive Committee relating to the Step 9 Standards for canned fruits and vegetables had been subsequently resolved by the Commission at its Sixth Session, with the exception of the Step 9 Standard for Canned Sweet Corn,

which the Executive Committee had instructed should not be sent to Governments for acceptance, in the absence of a provision for modified starches in the standard, and pending consideration of modified starches by the Joint FAO/WHO Expert Committee on Food Additives (see pars. 34 and 35 of ALINORM 69/3).

#### Labelling.

8. The Committee noted that the General Standard for the Labelling of Prepackaged Foods, as proposed by the Codex Committee on Food Labelling at its Fourth Session, had been amended by the Commission at its Sixth Session and adopted as a Recommended General Standard for the Labelling of Prepackaged Foods for issue to Governments for acceptance. The Committee noted, therefore, that, in considering the labelling requirements of the various commodity standards before it, it should be guided by the provisions of the Recommended General Standard, as well as by the advice given by the Commission regarding the manner of setting out the provisions of the Recommended General Standard in the labelling section of the commodity standards.

#### Methods of Analysis and Sampling.

9. The Committee noted that the Codex Committee on Methods of Analysis and Sampling had generally endorsed, with some modifications in some instances, the methods of analysis and sampling provisions which had been proposed by this Committee in the canned fruit and vegetable standards considered by that Committee at its Fourth Session. The Committee noted that the Codex Committee on Methods of Analysis and Sampling had endorsed the method proposed by the Committee for the determination of drained weight in the draft standards for canned asparagus and canned pineapple. The Committee noted that the method was set out in detail in Appendix IV of ALINORM 69/23, with the appropriate AOAC literature reference. The Committee also noted that, in considering the proposal of the Committee regarding methods for the determination of syrup measurements in the draft standard for canned pineapple, the Codex Committee on Methods of Analysis and Sampling had considered the question whether both the refractometric and the hydrometric methods should be endorsed. The Codex Committee on Methods of Analysis and Sampling had decided, in view of the limitations of the latter, to endorse only the refractometric method. The Committee noted that the method was set out in detail in Appendix IV of ALINORM 69/23, with the appropriate AOAC literature reference.

#### Food Hygiene.

##### Nisin.

10. At its Fifth Session, this Committee decided to ask the Codex Committee on Food Hygiene to express its views on the use of Nisin in canned vegetables (par. 4 (a) (ii) of ALINORM 69/20). The Committee noted that while the Codex Committee on Food Hygiene at its Sixth Session, held from 5 to 9 May, 1969, had acknowledged that there might be a case for the use of Nisin in canned vegetables in certain circumstances, it did not recommend the use of Nisin in canned vegetables, in view of the fact that the use of Nisin might give rise to certain hazards, such as the development of Cl. botulinum as a result of

underprocessing. The Committee also noted other considerations which led the Codex Committee on Food Hygiene to reach this conclusion.

Mould Count Provision in Draft Standard for Processed Tomato Concentrates.

11. The Committee was informed that the mould count provision in the hygiene section of the draft standard for processed tomato concentrates, which this Committee had included as a mandatory provision, had been considered by the Codex Committee on Food Hygiene. The Committee noted that the Codex Committee on Food Hygiene had recommended that this provision should be advisory. The Committee also noted the reasons given by the Food Hygiene Committee for making this recommendation. and agreed to consider this matter when it came to examine the draft standard. The Committee further noted the remarks of the Food Hygiene Committee concerning the Howard Mould Count Method as being a useful international method for determining mould contamination.

Question of Need for Endorsement of End-Product Specifications Recommended in Codes of Hygienic Practice and Adopted as Mandatory in Codex Commodity Standards.

12. The Committee noted that the Codex Committee on Food Hygiene had considered that when end-product specifications which it had recommended to specific Codex Commodity Committees were included as mandatory requirements in standards being elaborated by these Committees and were in conformity with the recommended end-product specifications, it was not necessary that these mandatory requirements should subsequently be referred back to the Codex Committee on Food Hygiene for formal endorsement. The Committee also noted that the Codex Committee on Food Hygiene had, however, agreed that where Codex Commodity Committees adopted, as mandatory requirements in standards, expanded versions of hygienic end-product specifications or parts of Codes of Practice other than end-product specifications, such mandatory requirements should be referred back to the Codex Committee on Food Hygiene for formal endorsement.

Question of Including Fourth Color Type "Green" Color Peaches in the Recommended Standard for Canned Peaches (Step 9).

13. The Committee noted the background to this question, which was set out in par. 3 of the Report of the Committee's Fifth Session (ALINORM 69/20). The Committee re-examined the request of Austria that a fourth color type green peaches be included in the Step 9 Recommended Standard for Canned peaches, in the light of a paper on the subject prepared by Austria and distributed to delegates during the course of the session. The Austrian paper indicated that no statistics concerning the extent of international trade in this particular color type was available, since it was not possible for Austria to furnish a statistical breakdown of the trade in the different varieties of peaches processed. The paper stressed that the peaches in question were green flesh peaches, that the skin of these peaches was slightly green even when ripe, and that there could be no mistaking them for unripe peaches. The Committee noted that the paper indicated that the significant feature about these peaches was the whitish-green color of the flesh when fully ripe.

14. In view of the above information, and recognizing that there was a trade in this product, even though statistics were not available the Committee saw no objection to the inclusion of this fourth color type in the Recommended Standard for Peaches, provided that these peaches were mature in accordance with the Product Definition in the standard, were appropriately labelled, and met the other requirements of the standard. The Committee agreed to leave it to Austria to consider whether these peaches should be described as "green" or "pale green." The Committee also agreed that Austria should be asked to draft an appropriate amendment to the standard in precise terms for submission to the Commission at its Seventh Session. The Committee agreed that Austria should, in submitting its proposed amendment to the Commission, follow the guidelines laid down in the "Guide to the Procedure for the Revision and Amendment of Recommended Codex Standards," which was adopted by the Commission at its Sixth Session (Appendix VII to the Report of the Sixth Session of the Commission). The Committee noted that it would be a matter for the Commission to decide whether an amendment of the Recommended Standard for Canned Peaches was desirable.

Modified Food Starches (Revised May 1969)

15. The Committee, at its Fifth Session, had noted that modified starches had been deleted by the Commission, at its Fifth Session, from the Standards for Canned Green and Wax Beans and Canned Sweet Corn, because modified starches had not been endorsed by the Codex Committee on Food Additives. The Committee had also noted that the Codex Committee on Food Additives had asked this Committee to define clearly which modified starches were meant. The Committee at its last session agreed on a list of modified starches to be used, and this had appeared as Appendix XII to the Report of this Committee's Fifth Session (ALINORM 69/ 20). Subsequently, at the request of the chairman of the Committee, the FAO Secretariat appended a proposed amendment to the list of food starches modified by chemical means in Appendix XII, since there were some omissions in the list. An FAO Secretariat Note attached to the proposed amendment made it clear that the proposed amendment had not been placed before this Committee for adoption.
16. The Committee, at the current session had before it for consideration a revised document on this subject, which included a revised list of modified starches. The document, which was prepared by the Delegation of the U.S.A. was referenced as "Proposed Revision, Appendix XII, ALINORM 69/20" dated February 1969. During the course of the discussions of this document, various amendments were agreed to, and the document, as revised by the Committee, appears as Appendix II to this report.
17. The Committee agreed that it wished to provide for the use in standards, as appropriate, of starches modified by physical and/or enzymatic and/or chemical treatment. The Committee considered that the definition of "modification by physical means" appearing in the Definition Section of the document adequately covered what was intended, and therefore agreed to delete the specific example of modification by physical means cited further on in the Annex to the document. As regards the question of indicating the enzymes referred to in "modification by enzymatic means," the Committee agreed that, at this stage it had in mind small amounts of starch splitting enzymes, including but not limited to, the amylases

and the proteases. The Committee thought, however, that it might be necessary to consider at a later stage whether other enzymes ought to be included.

18. The Committee was of the opinion that starch modified solely by physical means or enzymatic means should be considered as native or natural starches under the heading "Ingredients" in the standards, and should not be treated as food additives requiring endorsement by the Codex Committee on Food Additives.
19. The Committee agreed to draw to the attention of the Joint FAO/WHO Expert Committee on Food Additives and the Codex Committee on Food Additives that the Norms listed in the document were only suggested Norms and were intended to provide background information.
20. The Committee agreed that the revised document should be sent for consideration to the next session of the Joint FAO/WHO Expert Committee on Food Additives and of the Codex Committee on Food Additives.

Standard for Canned Asparagus Considered at Step 7.

21. The Committee considered the Standard for Canned Asparagus contained in document Codex/PFV 68/Asparagus, dated October 1968, in the light of Government comments received thereon. The standard, as revised by the Committee, is contained in Appendix III to this report. The following were the main points emerging from the Committee's deliberations:
  - (a) The Committee considered the general point made by the Delegation of the Netherlands at the Sixth Session of the Commission, and to which reference was made in the Report of the Sixth Session of the Commission, that it should be stated specifically in the canned fruit and vegetable standards that only the packing media, ingredients and additives listed in the standards were permitted to be used. The Committee recalled that it had discussed this matter at an earlier session, and had decided that a statement of this kind was not necessary, since it was clearly understood that the lists in question were positive lists and that anything not listed was not permitted. The Committee was of the opinion that there was no reason to depart from this view, and did not think it necessary to include in the standards a statement along the lines suggested by the Netherlands.
  - (b) The Committee agreed to provide for a fourth color type-- mixed color type-in the standard. The Delegation of the Netherlands reserved its position temporarily on this decision.
  - (c) The Delegation of France reserved its position regarding section 1.3 (c) of the standard defining the style "Tips," stating that these units should be not more than 6 cm and not less than 4 cm.
  - (d) The Committee amended and expanded the section of the standard entitled "Designation in Accordance with Size," to provide for the optional use of size nomenclature.
  - (e) In the Ingredients Section of the standard, the Committee extended the scope of the provision permitting the use of starch only when butter was an ingredient to include other edible animal or vegetable fats or oils.

- (f) The Committee amended the section of the standard dealing with Allowances for Defects. In doing so, the Committee clarified the meaning of the table containing the allowances for defects, amended the individual allowances for the various categories of defects and limited each category of defects to a maximum of 10 percent.
- (g) The Committee amended the Food Additive Section of the standard. The principal amendments were the listing in this section of the edible organic acids which the Committee wished to provide for, and the extension of the provision on stannous chloride to asparagus packed in fully enamelled (lacquered) cans. The Committee reiterated what it had stated at its previous session, that is, it was not aware of any suitable alternative to stannous chloride as an additive in asparagus packed in glass. Neither was it aware of any suitable alternative to stannous chloride as an additive in asparagus packed in fully enamelled (lacquered) cans, since the reason for the addition of this additive was the same in both cases. The reason was that the addition of stannous chloride was necessary to prevent discoloration of the product arising from the natural presence of rutin in asparagus. The Delegation of France reserved its position regarding the provision for monosodium glutamate, since the use of this additive was not permitted in France without limitation. The Delegations of the Federal Republic of Germany, France, and Poland reserved their positions regarding propylene glycol alginate, since the use of this additive was not permitted in these countries. The Delegations of the Federal Republic of Germany and Poland reserved their positions on the use of stannous chloride.
- (h) The Committee considered it advisable to introduce a new section "Contaminants" in the standard, and set a proposed limit for total residue of tin in the product.
- (i) A number of delegations proposed higher figures for minimum drained weight than appeared in the text under consideration, pointing out that their experience was that it was possible to pack more of the product in the can and still produce a satisfactory product. The Delegation of the U.S.A. cautioned that overfilling of the can could have a significant effect on the rate of heat penetration during processing, and, thus, might have an effect on the adequacy of the process. Since the product was heated by convection, overfilling would have the effect of reducing the total heat that would penetrate to the coldest spot in the container, and, thus, would reduce the effectiveness of the process. The Committee agreed to leave the figures unchanged in the standard and to invite Government comments on these figures, in the light of the foregoing considerations.
- (j) The Committee made certain amendments to the Labelling Section of the standard, and considered this section in the light of the provisions of the Recommended General Standard for the Labelling of Prepackaged Foods, which had been adopted by the

Commission at its Sixth Session. The Committee exercised its judgment in the application to this standard of those provisions in the Recommended General Standard which contained options. The Delegation of the Netherlands stated that it was not in agreement with the decision of the Committee that a complete list of ingredients be declared. It was clear to the Committee that a declaration of drained weight for canned asparagus in sauce would not be necessary. The Consult tee decided by a narrow majority that there should not be a mandatory declaration of drained weight for canned asparagus packed in brine, on the basis that this packing medium was not normally discarded in many cases before consumption. The Delegations of Australia, United Kingdom, Netherlands, Denmark and France considered that a declaration of drained weight should be mandatory.

22. In view of the substantial revision of the standard, and of the fact that there were points in the standard which the Committee would wish to consider further in the light of Government comments, the Committee agreed to return the standard to Step 6 for a further round of Government comments.

Standard for Canned Pineapple Considered at Step 7.

23. The Committee considered the Standard for Canned Pineapple contained in document Codex/PFV 68/Pineapple, dated October 1968 in the light of Government comments received thereon. The standard as revised by the Committee, is contained in Appendix IV to this report. The following were the main points emerging from the Committee's deliberations:
- (a) The Committee agreed to delete the specific varieties listed under the Section "Varietal Type" and to redraft this provision to indicate that any commercially cultivated varieties suitable for canning may be used,
  - (b) The Delegation of Cuba reserved its position temporarily regarding the decision of the Committee to reduce the tolerance for blemishes in pineapple chips and crushed pineapple from two percent to one and one-half percent in the section of the standard dealing with Allowances for Defects.
  - (c) The Committee agreed that a number of the substances which had appeared under the Ingredients Section of the standard should be moved to the Food Additives Section. A number of delegations were opposed to the use of natural fruit essences in this product on the grounds that natural fruit essences could be used to compensate for inferior quality. Other delegations pointed out that it was normal practice in their countries to restore to the product the natural fruit essences recovered from pineapple. These delegations also pointed out that a similar provision had been incorporated in the Recommended Standard for Canned Peaches, and had been temporarily endorsed by the Codex Committee on Food Additives.
  - (d) Apart from providing for citric acid as an acidifying agent, the Committee considered a proposal to include in the standard

Dimethylpolysiloxane--an anti-foaming agent-- at a maximum level of 10 ppm. Having noted that pineapple juice is rich in natural foaming agents, and having considered a paper circulated during the course of the session by the U.S. Delegation setting out the technological justification for the use of this additive, the Committee was generally in agreement with the proposal to include this additive in the standard at the level stated above. The Committee noted that the U.S. Delegation had put forward its proposal to include Dimethylpolystloxane in the standard, because it had considerable experience of the anti-foaming properties of this particular additive, which had been approved for use by the competent U.S. authorities. The Delegation of the Federal Republic of Germany reserved its position on the use of this additive. The Committee agreed that the anti-foaming agent was a processing aid and should not be subject to labelling declaration in the list of ingredients.

- (e) The Committee agreed to introduce the same provision with respect to tin contaminants as in the Standard for Canned Asparagus.
  - (f) The Committee decided to delete the provision in the Hygiene Section of the standard, requiring that the product shall have received a processing treatment sufficient to destroy all spores of *Cl. botulinum*, because the product had a low pH (below 4.5).
  - (g) The Committee considered the Labelling Section of the standard in the light of the provisions of the Recommended General Standard for the Labelling of Prepackaged Foods.
24. The Committee agreed to send the Standard for Canned Pineapple forward to the next session of the Commission at Step 8.

Standard for Canned Pears Considered at Step 4.

25. The Committee considered the Standard for Canned Pears contained in Appendix VIII to ALINORM 69/20, in the light of Government comments received thereon. The standard, as revised by the Committee, is contained in Appendix V to this report. The following were the main points emerging from the Committee's deliberations:
- (a) The Delegations of Poland and France reserved their positions on Section 1.3 of the standard, permitting canned pears in whole style to be unpeeled and to have their steins and cores unremoved.
  - (b) In response to a comment of Argentina, the Committee wished to draw to that country's attention that, in fact, only nutritive sweeteners were permitted.
  - (c) The Committee considered a proposal to raise the Brix figures in the standard--particularly the Brix figure for light syrup--and decided by a narrow majority not to alter the figures in the standard. The Delegations of France, Federal Republic of

Germany, Hungary, Netherlands and Poland were in favor of higher Brix figures, particularly for light syrup.

- (d) The Committee noted that a number of the substances listed under "Other Ingredients" required to be moved to the Food Additive Section of the standard.
  - (e) The Committee wished to draw to the attention of Argentina that it did not consider it practicable to accept the suggestions made regarding allowances for defects.
  - (f) As regards the coloring agents listed in the Food Additive Section of the standard, the Committee was informed as to what the present position was regarding the establishment of an acceptable daily intake (ADI) for these colors. A majority of the Committee agreed that the use of these food colors ought to be provided for in the standard, noting that they were intended to be used in the production of specialty products, and would be subject to appropriate labelling enabling the consumer to see that the product was artificially colored. The Committee recalled its decision on the subject of the use of coloring substances in processed fruits and vegetables, as set out in par. 5 of its last Session (ALINORM 69/20). The Delegations of the Federal Republic of Germany, France, Poland and Norway were opposed to the use of artificial colors and reserved their position.
  - (g) The Committee agreed to insert the same provision with respect to tin contaminants as in the standards for Canned Asparagus and Canned Pineapple.
  - (h) The Committee agreed that Government comments should be sought on the figure of 50 percent in square brackets [ ] in respect of minimum drained weight for canned pears in whole style. The Delegation of France reserved its position on the minimum drained weight figures for canned pears in halves, quarters, slices and pieces. The drained weight figures for halves, quarters, slices, pieces and diced were amended.
  - (i) The Committee considered the Labelling Section of the standard in the light of the provisions of the Recommended General Standard for Prepackaged Foods.
26. The Committee agreed to send the Standard for Canned Pears forward to the next session of the Commission at Step 5.

Standard for Canned Mandarin Oranges Considered at Step 4.

27. The Committee considered the Standard for Canned Mandarin Oranges contained in Appendix IX to ALINORM 69/20, in the light of Government comments received thereon. The standard, as revised by the Committee, is contained in Appendix VI to this report. The following were the main points emerging from the Committee's deliberations:
- (a) The Committee amended the Product Definition to include all the commercial varieties of Citrus reticulata blanco suitable for canning.

- (b) As regards the packing media, the Committee agreed to include in the standard the four categories of syrup defined in the Standards for Canned Pears and Canned Pineapple.
- (c) The Committee considered a proposal to include in the Food Additives Section of the Standard a provision permitting the use of methyl cellulose at a maximum level of 10 ppm. The Committee noted that this additive was described as an anti-clouding agent. In the absence of precise information as to the purpose in using this additive in the product, the Committee could reach no decision on the additive at this stage and agreed to put the provision in square brackets. The Japanese Delegation was requested to prepare a paper explaining the technological need for the use of this additive and to send it to the Chairman of the Committee for consideration by the Committee when the standard would next be considered.
- (d) The Committee agreed to introduce the same provision with respect to tin contaminants as in the other standards referred to earlier in this report.
- (e) The Committee considered the Labelling Section of the standard in the light of the provisions of the General Standard for the Labelling of Prepackaged Foods.

28. The Committee agreed to send the Standard for Canned Mandarin Oranges forward to the next session of the Commission at Step 5.

Standard for Processed Tomato Concentrates Considered at Step 4.

29. The Committee considered the Standard for Canned Tomato Concentrates contained in Appendix X to ALINORM 69/20, in the light of Government comments received thereon. The standard, as revised by the Committee, is contained in Appendix VII to this report. The following were the main points emerging from the Committee's deliberations:
- (a) The Committee requested its Secretariat to check on the accuracy of the botanical name in the Product Definition.
  - (b) In Section 1.1 (d) of the standard, the Committee agreed to amend the minimum figure for concentration to read "8 percent natural soluble tomato solids" instead of "9 percent salt-free soluble solids." The Committee noted that the amended figure of 8 percent natural soluble tomato solids was to be determined using the AOAC Refractometric Method and that, in fact, it represented no change, so far as the actual concentration of the product was concerned, from the figure of 9 percent salt-free soluble solids.<sup>1/</sup> The basis of the amended provision was that an adjustment would not be made for salt naturally present in tomatoes, but only for salt added. The Delegations of France and the Federal Republic of Germany reserved their positions regarding the above figure of 8 percent.

- (c) (1) As regards the Product Designation, the Delegation of Canada suggested three designations for tomato concentrates as follows:
- (i) Tomato Puree-- not less than 8 percent natural soluble tomato solids,
  - (ii) Tomato Paste--not less than 17 percent natural soluble tomato solids,
  - (iii) Concentrated Tomato Paste--not less than 27 percent natural soluble tomato solids.
- (2) The Delegation of France made the following written proposal:

<sup>1/</sup> [Corrigendum by the Chairman: This statement of the Committee's action is correct, but the scientific facts are not accurate and need amending. Actually 8 percent natural soluble tomato solids as determined by the AOAC refractometric method is equivalent to approximately 8.4 percent total salt-free tomato solids by vacuum drying. ]

## 1.2 Product Designation

'Tomato concentrates' may be classified on the basis of their concentration, in accordance with either of the two methods of specification mentioned below:

- the terms 'Tomato Puree' or 'Tomato Paste' shall be applied when the concentrate meets these requirements:
  - (a) Tomato Puree - - Tomato concentrate that contains not less than 9 percent, but less than 25 percent, of salt-free soluble solids.
  - (b) Tomato Paste - - Tomato concentrate that contains 25 percent or more of salt-free soluble solids.
- The terms 'semi-concentrate of tomato', 'tomato concentrate', 'double concentrate of tomato', 'triple concentrate of tomato' shall apply to the tomato concentrate when it meets the following requirements:
  - (a) 'Semi-concentrate of tomato': soluble dry solids: not less than 9 percent.
  - (b) 'Tomato concentrate': soluble dry solids: not less than 18 percent.
  - (c) 'Double concentrate of tomato': soluble dry solids: not less than 28 percent.
  - (d) 'Triple concentrate of tomato': soluble dry solids: not less than 36 percent.

Note: This proposal is in addition to the reservation made by France with respect to the 8 percent minimum of dry solids.

### Item 6.2.1

- (b) To be completed by the following:
  - .... or the designation 'semi-concentrate of tomato', 'tomato concentrate', 'double concentrate of tomato', 'triple concentrate of tomato', as the case may be.

This proposal is intended to confirm French usages on the commercial plane as well as on the consumer plane; these usages have been taken from customary practice and procedure."

- (3) It was stressed that the figure of 8 percent fixed for natural tomato soluble solids represented the dividing line between tomato juice and concentrate .
  - (4) After a full exchange of views, the Committee decided by a majority to leave the text unchanged, except for such consequential alterations as were necessary, including changing the figure of 25 percent to 24 percent, following the Committee's decision in paragraph 29 (b) above.
  - d) The Committee agreed that the figure in square brackets in respect of mineral impurities should be brought to the attention of Governments for their comments.
  - e) The Committee noted that the provision on pH regulating agents, appearing in the Ingredients Section of the standard required to be moved to the Food Additives section. The Delegations of France and Poland reserved their position on the use of the acidifying agents.
  - f) The Committee considered the provision on preservatives in the standard, which had been requested by the Delegation of Denmark. The provision limited the use of the preservatives listed to glass packs of puree not over 15 percent solids. The purpose of the provision was to give this product which, in Denmark, was frequently used as a condiment, a certain shelf-life. The Committee agreed to retain this provision in the standard. The Delegations of France, Federal Republic of Germany and Japan reserved their positions regarding this decision.
  - g) The Committee introduced the same Contaminants Section with respect to tin into this standard as in the other standards considered.
  - h) The Committee noted the recommendation of the Sixth Session of the Codex Committee on Food Hygiene regarding the mould count provision in the Hygiene Section of the standard. The Committee was informed that the Hygiene Committee had considered that it would be difficult to obtain reproducible results with all analysts under all conditions. The Committee decided by a majority on a maximum figure of 50 percent positive fields and agreed that the provision should be advisory.
  - i) The Delegation of the Federal Republic of Germany reserved its position on minimum fill.
  - j) The Committee considered the Labelling Section of the standard in the light of the provisions of the Recommended General Standard for the Labelling of Prepackaged Foods.
30. The Committee agreed to send the Standard for Processed Tomato Concentrates forward to the next session of the Commission at Step 5.

Standard for Raisins Considered at Step 4.

31. The Committee considered the Standard for Processed Raisins contained in Appendix XI of ALINORM 69/20, in the light of Government comments received thereon. The standard, as revised by the Committee, is contained in Appendix VIII to this Report. The following were the main points emerging from the discussions:
- (a) The Committee agreed to change the name of the standard from "Processed Raisins" to "Raising," as this would be a more descriptive name for the product.
  - (b) The Committee agreed to add a sentence to section 2.3.2 of the standard defining the subtype "Natural," in order to make it clear that dipping in an alkaline lye and vegetable oil solution, as an aid to the drying process, was not considered as processing. The Delegation of the Federal Republic of Germany reserved its position regarding the use of the word "Natural" to describe this category of product.
  - (c) The Committee agreed to delete the section on sizing in the standard as countries had different systems of classifying the raisins as to size, and there appeared to be no prospect of reaching agreement on a system of sizing which would be satisfactory to all countries as an international system.
  - (d) The Committee agreed that the absence of a sizing provision was not detrimental to the interests of the consumer, whose interest was in obtaining a safe, sound, and acceptable product,
  - (e) The Committee agreed to incorporate a special provision in the standard for Malaga Muscatel raisins so far as the provision on defects relating to cap-stems and the provision on maximum moisture content were concerned.
  - (f) As regards sugared raisins, it was stressed that it was not uncommon for raisins to show some sugar formation after long periods of transit or storage. The Committee noted that the formation of sugar would have to be such as to seriously affect the appearance of the product before it could be regarded as a defect,
  - (g) It was agreed that Australia and U.S.A. should collaborate on the preparation of a paper on methodology for mineral impurities for consideration by the Committee at its next session.
  - (h) In response to comments made by Argentina, the Committee wished to draw to that country's attention that Codex standards did not provide for different grade or quality levels, but for a good and acceptable minimum level.
  - (i) In the section of the standard on Allowances for Defects, the Committee considered that Governments should be asked to comment particularly on tolerances for pieces of stem. As regards the tolerances set for cap-stems, the Delegation of Turkey reserved its position. The Delegation of the Netherlands considered that the tolerance of 15 percent for sugared raisins of

the nonseedless variety should be reduced from 15 percent to 10 percent.

- (j) As regards food additives, some delegations considered that the proposed level for sulphur dioxide, which was used to bleach the raisins, was too high. A majority of the Committee considered that the proposed provision should remain in the standard. The Delegations of the Federal Republic of Germany, France, and the Netherlands thought that the figure should be reduced to 1000 mg/kg and the Delegation of Poland thought that the figure should be reduced to 500 mg/kg. The Delegations of France, Federal Republic of Germany and Poland also reserved their positions regarding the inclusion of mineral oil in the standard.
- (k) As regards pesticide residues, the Committee noted that, in accordance with the Codex format, any levels for pesticide residues laid down by the Codex Committee on Pesticide Residues for this product would be indicated in the standard by reference. The Committee noted the current position regarding levels set by the Codex Committee on Pesticide Residues (see report of the Third Session of the Codex Committee on Pesticide Residues and also Report of the Sixth Session of the Commission).
- (l) As regards the section on Weights and Measures, the Committee considered that it was not yet in a position to adopt tolerances for net weights.
- (m) The Committee considered the Labelling Section of the standard in the light of the provisions of the General Standard for the Labelling of Prepackaged Foods.
- (n) The Delegation of the U.S.A. suggested that the D.F.A. (Dried Fruit Association of California) moisture tester would be very suitable as an international referee method. After some discussion the Committee agreed to include in the standard the AOAC method as the international referee method, but stated that the D.F.A. moisture tester might be suitable for control purposes. The Turkish Delegation reserved its position temporarily on the AOAC method.

32. The Committee agreed to send the Standard for Raisins forward to the next session of the Commission at Step 5.

Standard for Table Olives Considered at Step 2.

33. The Committee noted that the standard which was before it for Table Olives had been developed jointly by the International Olive Oil Council and the Delegation of the United States. The Committee also noted that a wide measure of agreement on this standard had been reached within the International Olive Oil Council, but that a number of problems still remained unresolved.

The Committee reviewed the draft and reached the following conclusions:

- (a) In section 2.2.1 (b) of the draft standard, replace the word "natural" with the word "untreated." In section 2.2.1 (5) (d) delete

the reference to "black (Oxidized) olives" and replace it with "California- style" black olives. The Committee was informed that some producing countries within the IOOC would not be in agreement with this. It was noted that when packed in the United States these olives would be described as "Ripe" olives on the label.

- (b) The Committee agreed that section 2.2.1.1 (5) (d) of the standard entitled "Olives Whose Trade Description Still has to be Decided Upon" should be changed to read "California-style" black olives and should be defined as follows:

"This style is obtained from olives which are not fully mature, which have been darkened by oxidation, from which the bitterness has been removed by an alkaline lye, and which are packed in brine and preserved by heat sterilization."

Section 2.2.2 of the standard was redrafted to read as follows:

"Olives may be offered in one or the other of the following styles as appropriate for the trade type."

It was agreed that it was not necessary to retain the sentence appearing at the end of 2.2.2, "Olives of other trade types are generally offered as whole."

- (c) The Committee considered that section 2.2.3 on sizing should be brought to the special attention of governments for their comments, particularly with a view to seeing whether the provisions would be suitable to green olives and other types. The Delegation of Turkey stated that in Turkey the unit range up to size 150/160 was 20 and from size 160/400 the unit range was 30.
- (d) The Committee agreed to add sugars to the list of ingredients.
- (e) The Committee agreed to include the California- style olives under the heading Green Olives in Table I of the standard.
- (f) The Committee agreed that the particular attention of Governments should be called to Table III of the standard.
- (g) As regards pesticide residues, the Committee agreed that the same provision should appear as in the Standard for Raisins.
- (h) As regards the food additives section of the standard, it was agreed that provision should be made for the inclusion of:

Sorbic acid		
Lactic Acid	Not	Limited
Citric Acid	"	"
Ascorbic Acid	"	"

The U.S. Delegation suggested the inclusion of Ferrous Gluconate as a processing aid to stabilize color. The Committee agreed that it would be necessary to consider setting a limit for Sorbic acid.

- (i) In the Hygiene Section it was agreed that the word "should" should be changed to "shall."
- (j) It was also agreed that the provision appearing in the end product specification of the Code of Hygienic Practice for Canned Fruit and Vegetable Products relating to *Cl. botulinum* should be included as a mandatory provision in the standard.
- (k) As regards minimum drained weight, Governments were invited to comment particularly on Table IV.

(l) Labelling

As regards Labelling, the Committee noted that the General Standard on Labelling which had been adopted by the Commission at its Sixth Session related only to prepackaged food. The attention of the Committee was directed to paragraph 54 of the Report of the Fourth Session of the Codex Committee on Food Labelling regarding the question of the labelling of bulk containers. The Committee drew particular attention to paragraph 3 (5) of the General Standard for the Labelling of Prepackaged Foods relating to the declaration of country of origin in the case of foods which undergo processing in a second country.

(m) Sizing

It was agreed that the Table Olive Size Counts suggested by the U.S. Delegation during the course of the session should be put in the standard for consideration by Governments.

TABLE OF SUGGESTED OLIVE SIZE COUNTS

COUNT DESIGNATIONS		COUNT DESIGNATIONS	
<u>Per Kilo</u>	<u>Per Pound</u> (Approximate)	<u>Per Kilo</u>	<u>Per Pound</u> (Approximate)
400/420	181-190	140/150	64-68
380/400	172-181	130/140	59-64
340/360	154-163	120/130	54-59
300/320	136-145	110/120	50-54
280/300	127-136	100/110	45-50
240/260	109-118	90/100	41-45
200/220	91-100	80/90	36-41
180/200	82-91	70/80	32-36
160/180	73-82	60/70	27-32
150/160	68-73		

34. The Committee agreed to send the Standard for Table Olives out to Governments for comments at Step 3. It was agreed that the comments should be made available to a meeting of the IOOC group of Experts on Table Olives which it was understood would be held in November 1969. The Committee would then have before it at its next session the views of the IOOC together with Government comments.

General Standard for Fruit Preserves (Jams). Jellies and Marmalades PFV 69/2-26 Considered at Step 2.

35. The Committee agreed that time did not permit a detailed examination of the draft. However, on the basis of comments received, it was agreed that the General Standard be redrafted with particular consideration to the following points:
- (1) It be made clear in the Scope that this standard does not cover the product packed for bakery trade or similar remanufacturing purposes.
  - (2) It be clearly stated that the standard does not cover dietetic jams and jellies.
  - (3) A separate standard be drafted for product known as marmalade prepared from citrus - such standard to include also those products prepared from citrus ranging from one of a clear jelly to one containing substantial amounts of actual pieces of fruit and peel. The Committee would consider later whether marmalade would be in a separate standard or in the jam standard.
  - (4) With respect to "Composition" Governments were requested to provide the U.S.A. Delegate by October 1, 1969, their provisions or regulations with respect to the minimum amount of fruit required for the products covered by the standard.
  - (5) In the light of comments received the U.S.A. agreed to prepare a new draft of the General Standard and the U.K. will prepare a separate draft for citrus marmalade.

Other Business

Coloring Agents in the Standards for Canned Green and Wax Beans, Canned Applesauce, and Canned Pears.

36. The Committee noted that the provision on colors contained in the Standard for Canned Green and Wax Beans would be submitted to the next session of the Food Additives Committee for endorsement. As regards the Standards for Canned Applesauce and Canned Pears, a majority of the Committee agreed on a level of 200 mg/kg for these colors when used singly or in combination. It was noted that these provisions would likewise be submitted to the Codex Committee on Food Additives for endorsement at its next session.

Program of Future Work

37. The Committee agreed to consider at its next session the standards which had been passed by the Commission at its Sixth Session to Step 6, together with the Standard for Canned Asparagus, as well as the Standards for Table Olives and Jams, Jellies and Marmalades. It was agreed that the author countries of all the Step 2 Standards should redraft them to bring them into conformity with the Codex format where necessary and with the decisions reached by the Committee at its current session. These standards should be submitted to the chairman by December 1, 1969.

Status of Standards being Elaborated by the Committee

38. (a) Standards considered at the Sixth Session of the Committee

- (i) Standards considered at Step 7 and advanced to Step 8 Canned Pineapple
- (ii) Standards considered at Step 7 and returned to Step 6  
Canned Asparagus
- (iii) Standards considered at Step 4 and advanced to Step 5  
Canned Pears  
Canned Mandarin Oranges  
Processed Tomato Concentrates  
Raisins
- (iv) Standards considered at Step 2 and advanced to Step 3  
Table Olives
- (v) Standards considered at Step 2 and held at Step 2  
Fruit preserves (Jams), Jellies and Marmalades
- (b) Standards considered by the Committee at its Fifth Session and advanced by the Sixth Session of the Commission to Step 6  
Canned Green Garden Peas  
Canned Mushrooms  
Canned Strawberries  
Canned Plums  
Canned Raspberries  
Canned Fruit Cocktail
- (c) Standards, the consideration which has been postponed or which are held in abeyance. These standards are to be considered as soon as the Committee workload permits;
  - Texts before Sixth Session of the Committee at the Steps indicated
    - Canned Beans in Tomato Sauce - Step 2
    - Canned Beans, Mature Processed - Step 2
    - Canned Carrots - Step 2
    - Canned Fruit Salad (other than Tropical Fruit Salad) - Step 2
    - Canned Tropical Fruit Salad - Step 2
    - Canned Two Fruit Salad - Step 2
    - Dried Figs - Step 2
    - Cucumber Pickles - Step 2
  - Texts not before Sixth Session of the Committee
    - Dried Apricots - for future consideration at Step 2
    - Dates - for future consideration at Step 2
    - Pistachios - for future consideration

at Step 2

(d) Possible Future Standards

Walnuts ) See para. 35 of Report of Fifth Session of the  
Almonds ) Committee (ALINORM 69/20)

(e) New Standards proposed at the Sixth Session of the Committee for Consideration

None.

Date and Place of Next Session

39. The Committee noted that the next session of the Committee would probably be held about the same time next year and that the exact date would be subject to confirmation by the Codex Alimentarius Commission.

List of Appendices to this Report

40. Appendix I List of Participants  
Appendix II Modified Food Starches (Revised May 1969)  
Appendix III Canned Asparagus PFV 69/6-11  
Appendix IV Canned Pineapple PFV 69/8-13  
Appendix V Canned Pears PFV 69/5-17  
Appendix VI Canned Mandarin Oranges PFV 69/5-19  
Appendix VII Processed Tomato Concentrates PFV 69/5-16  
Appendix VIII Raisins PFV 69/5-12  
Appendix IX Table Olives PFV 69/3-15

JOINT FAO/WHO FOOD STANDARDS PROGRAM

CODEX ALIMENTARIUS COMMISSION

SIXTH SESSION

CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

Washington, D. C.

12-16 May 1969

LIST OF PARTICIPANTS

Chairman

Mr. F. L. Southerland  
Deputy Director  
Fruit and Vegetable Division  
Consumer and Marketing Service  
Department of Agriculture  
Washington, D. C. 20250

Rapporteurs

Mr. Edwin C. Williams  
Assistant Chief, Processed Products Standardization and Inspection Branch  
Fruit and Vegetable Division  
Consumer and Marketing Service  
Department of Agriculture  
Washington, D. C. 20250

Mrs. Elinore T. Greeley  
Head, Standardization Section  
Processed Products Standardization and Inspection Branch  
Fruit and Vegetable Division  
Consumer and Marketing Service  
Department of Agriculture  
Washington, D. C. 20250

FOOD AND AGRICULTURE ORGANIZATION

Representative

Mr. Henry J. McNally  
Liaison Officer  
Joint FAO/WHO Food Standards Program  
Food and Agriculture Organization of the United Nations  
Via delle Terme di Caracalla  
Rome, Italy

## COUNTRIES

### ARGENTINA

#### Delegate

Mr. Jorge Luis Sola  
Agricultural Counselor  
Embassy of the Argentine Republic  
1600 New Hampshire Avenue, N.W.  
Washington, D. C. 20009

### AUSTRALIA

#### Head of Delegation

Mr. W. J. Bettenay  
Chief Fruit Officer  
Department of Primary Industry  
11 Williams Street  
Melbourne

#### Delegate

Mr. John L. Smith  
Executive Officer  
Inspection Service  
Department of Primary Industry  
Canberra

### CANADA

#### Head of Delegation

Mr. E. P. Grant  
Director  
Fruit and Vegetable Division  
Department of Agriculture  
Sir John Carling Building  
Ottawa, Ontario

#### Delegates

Mr. K. H. Dean  
Chief, Processed Fruit and Vegetable  
Section  
Department of Agriculture  
Ottawa, Ontario

#### Delegates

Mr. C. J. Ross  
Scientific Research Manager  
Canadian Cannery Limited  
Box 540  
Hamilton, Ontario

### CHINA. REPUBLIC OF

#### Head of Delegation

Mr. J. T. Tseng  
Managing Director  
Food Industry Research and  
Development Institute  
P. O. Box 246  
Hsinchu, Taiwan

#### Delegates

Mr. Hui Hsun Chang  
Senior Food Processing Expert  
Council for International Economic  
Cooperation and Development  
Union Building  
9 Paoching Road  
Taipei, Taiwan

Mr. Yung-Sing Chang  
Food Technologist  
Rural Health Division  
Joint Commission on Rural  
Reconstruction  
Taipei, Taiwan

### CONGO

#### Delegate

Mr. Eloi K. Samba  
Counselor  
Embassy of the Democratic Republic  
of the Congo (Kinshasa)  
1800 New Hampshire Avenue N.W.  
Washington, D. C. 20009

### CUBA

#### Head of Delegation

Mr. Jose R. Viera Linares  
Counselor  
Permanent Mission of Cuba to the  
United Nations  
6 East 67th Street  
New York, New York 10021

Delegate

Mr. Rene Mujica Cantelar  
Adviser  
National Commission for Economic,  
Scientific and Technical Cooperation  
Calle B 389  
Entre Anita y Joicura  
Havana

DENMARK

Delegate

Mr.O. Hoybye  
Technical Director  
Danish Cannery Association  
A/S Beauvais  
Lyngbyvej 97  
2100 Copenhagen Ø

DOMINICAN REPUBLIC

Head of Delegation

Mr. Alfredo A. Ricart  
Counselor  
Embassy of the Dominican Republic  
1715 - 22nd Street, N.W.  
Washington, D. C. 20008

Delegate

Dr. Roberto T. Alvarez  
First Secretary  
Embassy of the Dominican Republic  
1715 - 22nd Street, N.W.  
Washington, D. C. 20008

FRANCE

Delegate

Mr. Yves Bleicher  
Principal Inspector  
Food and Drug and Quality Control  
Ministry of Agriculture  
42 bis, Rue de Bourgogne  
75, Paris VIIe

GERMANY, FEDERAL REPUBLIC OF

Delegate

Dr. Harald G. Haup  
Special Adviser to the German  
Government  
Federal Ministry for Health  
Deutschherrenstrasse 87  
532 Bad Godesberg

HUNGARY

Delegate

Dr. Balint Szaloczy  
Agricultural Attache  
Embassy of the Hungarian  
People's Republic 2437 - 15th Street,  
N.W. Washington, D. C. 20009

IRAN

Delegate

Dr. Houssein Alizadeh  
Deputy Director  
Institute of Standards and Industrial  
Research  
Ministry of Economy  
P. O Box 2937  
Tehran

ISRAEL

Delegate

Mr. Hananya Brisker Agricultural  
Attache Embassy of Israel 1621 -  
22nd Street, N.W. Washington, D.C.  
20008

JAPAN

Head of Delegation

Mr. Hiroya Sano  
First Secretary (Agriculture)  
Embassy of Japan  
2520 Massachusetts Ave., N.W.  
Washington, D. C. 20008

Delegates

Mr. Noboru Ioroi  
Assistant Chief  
Horticulture Economy Section  
Rawsilk and Horticulture Bureau  
Ministry of Agriculture and Forestry  
2 K-1, Kusumigaseki Chiyoda-Ku  
Tokyo

Mr. Masakazu Nakata  
Chief, Investigation Section  
Japan Canned food Inspection Assn.  
Kindai Building  
11-3-Chome Kyobashi  
Chuo-Ku, Tokyo

Mr. Kazuzo Ouchi  
Chairman  
Technical Research Committee  
Japan Tomato Processors Assn.  
c/o Kagome Co., Ltd.  
1-30 Nihonbashi Kakigaracho  
Chuo-Ku, Tokyo

NETHERLANDS

Delegate

Dr. G. F. Wllmink  
Cabinet Adviser  
Ministry of Agriculture and Fisheries  
The Hague

NORWAY

Delegate

Mr. Sigurd Endresen  
Attache  
Embassy of Norway  
3401 Massachusetts Avenue, N.W.  
Washington, D. C. 20007

POLAND

Head of Delegation

Mr. Jozef Kuziemski  
Director  
Quality Inspection Office  
Ministry of Foreign Trade  
Stepinska 9  
Warsaw

Delegates

Dr. Franciszek Morawski  
Chief of Section  
Quality Inspection Office  
Ministry of Foreign Trade  
Stepinska 9  
Warsaw

Mr. Wlclaw Orlowski  
Quality Inspection Office  
Ministry of Foreign Trade  
Stepinska 9  
Warsaw

SPAIN

Head of Delegation

Mr. Alvaro Cimenez Cuende  
Chief Inspector, S.O.I.V.R.E.  
Ministry of Commerce  
Asuncion 6  
Seville

Delegate

Mr. Jose Fernandez Trelles  
Commercial Attache  
Embassy of Spain  
2558 Massachusetts Ave., N.W.  
Washington, D. C. 20008

TURKEY

Delegate

Mr. Guzay Guidere  
Assistant Commercial Attache  
Embassy of the Republic of Turkey  
2523 Massachusetts Ave., N.W.  
Washington, D. C. 20008

UNITED KINGDOM

Head of Delegation

Mr. Harold M. Goodall  
Senior Executive Officer  
Food Standards Division  
Ministry of Agriculture, Fisheries and  
Food  
Great Westminster House  
Horseferry Road London, S.W. 1

### Delegates

Mr. Kenneth S. Saunders  
Food Manufacturers' Federation, Inc.  
4 Lygon Place  
London, S.W. 1

Mr. Harry Richard Hinton  
Food Manufacturers' Federation, Inc.  
4 Lygon Place  
London, S.W. 1

Mr. John D. Croker  
Food Manufacturers' Federation, Inc.  
4 Lygon Place  
London, S.W. 1

Dr. Dennis Hybs  
Food Manufacturers' Federation, Inc.  
4 Lygon Place  
London, S.W. 1

### UNITED STATES

#### Head of Delegation

Mr. Fred Dunn  
Chief, Processed Products  
Standardization and Inspection  
Branch  
Fruit and Vegetable Division  
Consumer and Marketing Service  
Department of Agriculture  
Washington, D.C. 20250

#### Delegates

Mr. Lowrie M. Beacham  
Acting Director  
Division of Food Chemistry &  
Technology  
Food and Drug Administration  
Department of Health, Education and  
Welfare  
Washington, D. C. 20201

#### Delegates

Mrs. Elinore T. Greeley  
Head, Standardization Section  
Processed Products Standardization  
and Inspection Branch  
Fruit and Vegetable Division  
Consumer and Marketing Service  
Department of Agriculture  
Washington, D. C. 20250

Mr. Floyd F. Hedlund  
Director  
Fruit and Vegetable Division  
Consumer and Marketing Service  
Department of Agriculture  
Washington, D. C. 20250

Dr. Ira I. Somers  
Research Director  
National Canners Association  
1133 - 20th Street, N.W.  
Washington, D. C. 20036

Mr. Arthur W. Hansen  
Manager  
Food Regulations and Standards  
Del Monte Corporation  
215 Fremont Street  
San Francisco, California 94105

Mr. Francis J. Erickson  
Vice President, Quality Control  
Michigan Fruit Canners, Inc.  
Lock Box 59  
Benton Harbor, Michigan 49022

### INTERNATIONAL ORGANIZATIONS

#### ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS

Mr. Victor Blomquist  
Chief, Food Technology Branch  
Division of Food Chemistry and  
Technology  
Food and Drug Administration  
Department of Health, Education and  
Welfare  
Washington, D. C. 20201

#### INTERNATIONAL GLUCOSE FEDERATION

Mr. Paul M. Karl  
Adviser  
International Glucose Federation  
3 Avenue du Manoir d'Anjou  
Brussels 15, Belgium

Dr. Cornelis Nieman  
Chairman, Expert Committee  
International Glucose Federation  
172 Joh. Verhulststraat  
Amsterdam (Oud-Zuid)  
Netherlands

EUROPEAN FEDERATION OF  
IMPORTERS OF DRIED FRUITS,  
PRESERVES, SPICES AND HONEY  
(FRUCOM)

Mr. Jan J. Mertens  
Vice President, FRUCOM  
30, St. Amelbergalei  
Schoten (Antwerpen), Belgium

INTERNATIONAL OFFICE OF VINES  
AND WINES

Mr. Basile Logothetis  
Chair of Winemaking  
University of Thessaloniki  
Thessaloniki,  
Greece

UNION OF INDUSTRIES OF THE  
EUROPEAN COMMUNITY

Mr. Louis Bolly  
Technical Director  
Institute for the Improvement of  
Canned Vegetables  
78, Rue du Long Chene  
Wezembeek-Oppem, Belgium



MODIFIED FOOD STARCHES

(Revised May 1969)

Definition

Modified food starches are starches of which one or more of their original characteristics have been modified, in accordance with good manufacturing practice, by physical and/or enzymatic and/or chemical treatment.

- a) Modification by physical means is any treatment of starches by heat, and/or pressure and/or mechanical action in dry or wet state including fractionation.
- b) Modification by enzymatic means is any treatment of starches in dry or wet state and in the presence of small amounts of starch- splitting enzymes, including but not limited to the amylases and proteases, so as to obtain solubilized and/or partly hydrolyzed products.
- c) Modification by chemical means is any treatment of starches in dry or wet state and in the presence of one or more of the chemical compounds listed in the Annex and subject to conditions mentioned therein.

Denomination

For the purpose of compositional requirements in Processed Fruit and Vegetable products "modified food starch" means starch modified by any of the treatments - physical, enzymatic, or chemical. Starch modified solely by physical or enzymatic means shall be considered as native or natural starches and not treated as Food Additives - i.e. they should appear in the commodity standards under the heading Ingredients; whereas starch modified by chemical means shall be considered as a class of food additives "chemically modified starches" and appear in the commodity standards under the heading Food Additives and be subject to approval by the Codex Committee on Food Additives.

With respect to chemically modified starches treatment may be by any of the methods prescribed in the attached Annex - Items 1 through 3. Modification may also be accomplished by 2 and/or 3 and any one of the treatments 4, 5, 6, 7, and 8.

Norms

- a) Starches modified in the presence of one or more of the processing substances listed in the Annex may contain residual amounts of these substances in quantities relevant to the maximum ingoing quantities or as specified under "Limitations."
- b) Moisture 15% maximum for cereal starch, 21% for potato starch, 18% for sago starch and tapioca starch.
- c) SO<sub>2</sub> maximum 80 rag. per kg.
- d) Ash maximum 2%.
- e) Flavour and taste must be normal.
- f) Protein maximum 0.5% (coefficient 6.25)
- g) Fat maximum 0.15% (Carbon tetrachloride CCl<sub>4</sub> Extraction).

ANNEX to Modified Food Starches  
May 1969

MODIFICATION BY CHEMICAL MEANS

<u>DESCRIPTION</u>	<u>TREATMENT</u> (Maximum amount of Substances)	<u>LIMITATIONS</u>
1. Roasted starch - (Acid Modified)	0.15 percent acid, calculated as hydrochloric acid anhydrous (100 percent) and based on dry starch	Final pH 2.5 to 7.0
2. Modified by Slurry Treatment	7 percent hydrochloric acid or 2.0 percent sulfuric acid	Final pH 4.8 to 7.0
3. Modified by Bleaching	Active oxygen obtained from hydrogen peroxide and/or peracetic acid, not to exceed 0.45 percent of active oxygen	-----
	Chlorine, as sodium hypochlorite, not to exceed 0.82 percent by weight of chlorine based upon dry starch weight	-----
	Potassium permanganate, not to exceed 0.2%	Residual manganese (calculated as Mn), not to exceed 50 parts per million
	Ammonium persulfate, not to exceed 0.075 percent and sulphur dioxide, not to exceed 0.05 percent	-----
4. Modified by Oxidation	Sodium chlorite, not to exceed 0.5 percent	-----
	Chlorine, as sodium hypochlorite, not to exceed 5.5 percent by weight of chlorine based upon dry weight	0.5 percent sodium chloride
	Acetic anhydride	Acetyl groups, not to exceed 2.5 percent
5. Modified by Esterification	Adipic anhydride, not to exceed 0.12 percent, and acetic anhydride	Acetyl groups, not to exceed 2.5 percent
	Succinic anhydride, not to exceed 4 percent	-----

		Phosphorus oxychloride not to exceed 0.1 percent	-----
		Sodium tripolyphosphate and/or sodium trimetaphosphate and/or orthophosphoric acid and/or sodium or potassium salts thereof	Residual phosphate not to exceed 0.4 percent, calculated as phosphorus
		1-Octenyl succinic anhydride, not to exceed 3 percent	-----
		1-Octenyl succinic anhydride, not to exceed 2 percent, and aluminum sulfate, not to exceed 2 percent	-----
		Sodium trimetaphosphate (when used alone)	Residual phosphate not to exceed 0.04 percent, calculated as phosphorus
		Vinyl acetate	Acetyl groups not to exceed 2.5 percent
6.	Modified by Etherification	Propylene oxide, not to exceed 10 percent	Residual propylene chlorohydrin not more than 5 parts per million
		Epichlorohydrin, not to exceed 0.3 percent	-----
		Acrolein, not to exceed 0.6 percent	-----
		Epichlorohydrin, not to exceed 0.1 percent, combined with propylene oxide, not to exceed 10 percent	Residual propylene chlorohydrin not more than 5 parts per million
7.	Modified by Alkaline Treatment	Sodium or potassium hydroxide, not to exceed 1.0 percent	Final pH 5.0 to 7.5
8.	Modified by Combination Treatment	Epichlorohydrin, not to exceed 0.3 percent and acetic anhydride	Acetyl groups not to exceed 2.5 percent
		Epichlorohydrin, not to exceed 0.3 percent, and succinic anhydride, not to exceed 4 percent	-----
		Phosphorus oxychloride, not to	Residual propylene

exceed 0.1 percent, and propylene  
oxide, not to exceed 10 percent

chlorohydrin not more  
than 5 parts per million

Acrolein, not to exceed 0.6 percent  
and vinyl acetate, not to exceed 7.5  
percent

Acetyl groups not to  
exceed 2.5 percent

APPENDIX III  
May 1969

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION

Committee on Processed Fruits and Vegetables

Standard No. PFV 69/6-II

CANNED ASPARAGUS

Returned to STEP 6

DRAFT STANDARD  
FOR  
CANNED ASPARAGUS  
Returned to Step 6

1. DESCRIPTION

1.1 Product Definition

Canned Asparagus is the product:

- (a) prepared from the edible portion of stalks of varieties of the asparagus plant conforming to the characteristics of Asparagus officinalis L., and may be peeled or unpeeled;
- (b) packed with water or other suitable liquid medium and may contain other ingredients appropriate to the product;
- (c) processed by heat in an appropriate manner before or after being sealed in a container, so as to prevent spoilage.

1.2 Colour Types

- (a) White: units are white, cream or yellowish white; not more than 20%, by count, of the units may possess blue, green, light green, or yellowish green tips.
- (b) White and Blue Tipped; White and Green Tipped; "Long Shoots", "Shoots" and "Tips" which are white, cream, or yellowish-white may have blue, green, light green or yellowish-green heads and adjacent areas not to exceed 4 cm, measured from the tip end; not more than 25%, by count, of the units may have blue or green tips longer than 4 cm.
- (c) Green: units are green, light green, or yellowish-green; not more than 20%, by count, of the units may possess a white, cream, or yellowish-white colour of the bottom portion of the stalk not to exceed 4 cm.
- (d) Mixed: consists of a mixture of white, cream, yellowish-white, blue, green, light green, or yellowish-green units.

1.3 Styles

- (a) Long Shoots or Long Spears: consist of the head and adjoining portion of the stalk not more than 18 cm, but not less than 15 cm in length.

- (b) Shoots or Spears: consist of the head and adjoining portion of the stalk not more than 15 cm, but not less than 9.5 cm in length.
- (c) Tips or Points: consist of the head and adjoining portion of the stalk not more than 10.5 cm, but not less than 4 cm in length.
- (d) Cuts-with-heads or Cut Tips: consist of stalks cut transversely into pieces with and without heads, not more than 6 cm, but not less than 2 cm in length. At least 20%, by count, of pieces with heads must be present.
- (e) Cuts: consist of portions of stalks cut transversely into pieces not more than 6 cm in length. Pieces with heads may be present.

1.3.1 Allowances for Styles

- (a) Long Shoots; Shoots; Tips -- will be considered as meeting the length of the designated style when not more than 10%, by count, of all the units may be more than 0.5 cm shorter or more than 0.5 cm longer (or combination thereof) than the predominant length of the units.
- (b) Cuts-with-heads; Cuts -- will be considered as meeting the length of the designated style when not More than 10%, by count, of all the units may be more than 2 cm shorter or more than 2 cm longer (or combination thereof) than the predominant length of the units.

1.4 Designations in accordance with size

Long Shoots; Shoots; Tips -- may be designated according to size in any one or more of the following manners:

- (1) An exact graphic representation of the average diameter (cross-section) of the units;
- (2) A statement of the average diameter (in ran. or fractional inches);
- (3) Size names as follows:

<u>Single sizes</u> --	<u>Diameter</u>
"Small"-----	Up to 10 mm.
"Medium" -----	over 10 mm. up to 15 mm.
"Large" -----	over 15 mm. up to 20 mm.
"Extra Large"-----	over 20 mm
 "Blend of Sizes" or "Assorted Sizes"-----	 a mixture of two or more single sizes.

1.4.1 Definition of "diameter"

The diameter of a long shoot, shoot, or tip is the maximum diameter across the base of the unit, measured at right angles to the longitudinal axis of the unit.

1.4.2 Compliance with "single size" names

When the size names in paragraph (3), other than "Blend of Sizes" or "Assorted Sizes," are used, the single size shall conform to the diameter specified, except that not more than 25%), by count, of all the units may belong to the adjacent size group (s).

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Basic ingredients

Asparagus and liquid packing medium appropriate to the product and other optional ingredients as follows:

2.1.1 Other permitted ingredients

- (a) Butter or other edible animal or vegetable fats or oils. If butter is added, it must amount to not less than 3% of the final product.
- (b) Salt, sucrose, invert sugar, dextrose, glucose syrup, dried glucose syrup; vinegar;
- (c) Starch, only when butter or other edible animal or vegetable fats or oils are ingredients.

2.2 Quality Criteria

2.2.1 Colour

The colour of the product shall be normal for the colour type. The liquid packing medium shall be practically clear except as it may be affected by other ingredients and only a very small amount of sediment or parts of asparagus may occur.

2.2.2 Flavour

Canned asparagus shall have a normal flavour and odour free from flavours or odours foreign to the product and canned asparagus with special ingredients shall have a flavour characteristic of that imparted by the substances used.

2.2.3 Texture

The asparagus units shall be reasonably free from units that are excessively fibrous or tough.

2.2.4 Defects

2.2.4.1 Definitions

- (a) Shattered heads and other shattered asparagus material - broken or shattered to the extent that the appearance of the product is seriously affected and includes pieces less than 1 cm in length.

- (b) Hollow units -- hollow to the extent the appearance of the unit is seriously affected.
- (c) Misshapen units -- includes shoots or heads badly crooked or any unit that is seriously affected in appearance by doubles or other malformations.
- (d) Damaged units - includes discolouration, mechanical injury, disease, or damage by other means to the extent that the appearance or edibility of the unit is seriously affected,

2.2.4.2 Allowances

- (a) The product shall be practically free from extraneous matter, such as sand, grit, or earth material;
- (b) The product shall be reasonably free from shattered asparagus material; and
- (c) The product shall be reasonably free from defects in 2.2.4.1 not exceeding the limits in the following table:

<u>Style</u>	<u>Total of all defects</u> <u>(b), (c), (d)</u> (% by count;	<u>Limitation</u>
Long shoots	15%	( 10%, by count, ( of any single ( group in (b), (c), ( (d) in 2.2.4.1
Shoots	15%	
Tips	15%	
Cuts-with-heads	20%	
Cuts	25%	

2.2.5 Classification of "Defectives"

A container that fails to meet the applicable quality requirements as set out in paragraphs 2.2.1 through 2.2.4 shall be considered a "defective".

2.2.6 Acceptance

A lot will be considered as meeting the requirements for those characteristics specified in paragraph 2.2.5 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

3. 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 or have been endorsed, or temporarily endorsed, by the Codex Committee on Food Additives, as indicated below:

	<u>Maximum level</u> <u>of use</u>	
(a) Monosodium glutamate	Not limited	(Endorsed)

- |     |                                                                                                                       |                                                              |                                                                                                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| (b) | Modified starch, vegetable gums, alginates, propylene glycol alginate -- only to be used in asparagus packs in sauces | ) Total -- not more than 1% of the net weight of the product | (Temporarily endorsed pending toxicological evaluation, <u>excluding modified starch</u> <sup>1/</sup> which is not yet endorsed) |
| (c) | Stannous chloride -- only for asparagus in glass or in fully enamel-lined (lacquered) cans                            | ) 25 mg/kg calculated as Sn                                  | (Subject to endorsement) <sup>2/</sup>                                                                                            |
| (d) | <u>Acidifying agents</u>                                                                                              |                                                              |                                                                                                                                   |
|     | Acetic acid                                                                                                           | )                                                            |                                                                                                                                   |
|     | Ascorbic acid                                                                                                         | )                                                            |                                                                                                                                   |
|     | Citric acid                                                                                                           | )                                                            | (Subject to endorsement)                                                                                                          |
|     | Malic acid                                                                                                            | )                                                            |                                                                                                                                   |
|     | Tartaric acid                                                                                                         | )                                                            | Not limited                                                                                                                       |

<sup>1/</sup> See paragraph 36 of the Report of the Fourth Session of the Codex Committee on Food Additives (ALINORM 68/12), and paragraphs 15 to 20 and Appendix II of the Report of the Sixth Session of the Codex Committee on Processed Fruits and Vegetables, May 1969.

<sup>2/</sup> See paragraph 37 of the Report of the Fourth Session of the Codex Committee on Food Additives (ALINORM 68/12), paragraph 149 of the Report of the Fifth Session of the Codex Alimentarius Commission (ALINORM 68/35). See also paragraph 21 (g) of the Report of the Sixth Session of the Codex Committee on Processed Fruits and Vegetables, May 1969.

#### 4. CONTAMINANTS

The following provision in respect of contaminants is subject to endorsement by the Codex Committee on Food Additives:

Total tin, maximum level -- 250 mg/kg, calculated as Sn

#### 5. HYGIENE<sup>3/</sup>

<sup>3/</sup> The end-product specifications Listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

- 5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Code of Hygienic Practice for Canned Fruit and Vegetable Products.
- 5.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 5.3 The product shall not contain any pathogenic microorganism;; or any toxic substances originating from microorganisms.
- 5.4 The product shall have received a processing treatment sufficient to destroy all spores of Clostridium botulinum.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The container shall be well filled with asparagus and the product (including packing medium) shall occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20 degrees C which the sealed container will hold.

6.1.2 Minimum Drained Weight

6.1.2.1 The drained weight of the product shall be not less than the following percentages, calculated on the basis of the weight of distilled water at 20 degrees C which the sealed container will hold:

Long Shoots - 61%

All other styles - 58%

6.1.2.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

6.1.3 Classification of "Defectives"

A container that fails to meet the requirements for minimum fill (90% container capacity) of 6.1.1 shall be considered a "defective".

6.1.4 Acceptance

A lot will be considered as meeting the requirements of 6.1.1 when the number of "defectives" does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

7. LABELLING

The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

7.1 The name of the food

- (a) The designation shall be "asparagus".
- (b) In the case of colour types "White" and "White and Blue Tipped" or "White and Green Tipped" -- the word "Peeled" or "Unpeeled", as appropriate, shall be declared.
- (c) If packed in a sauce, a declaration of the characteristic sauce, e.g. "With X" or "In X", when appropriate, shall be included in part of the name or in close proximity to the name. If the declaration is "With (or "In") Butter Sauce", the fat used shall only be butter.
- (d) The style: "Long Shoots", "Long Spears", "Shoots", "Spears", "Tips", "Points", "Cuts-with-heads", "Cut Tips", or "Cuts", as appropriate, shall be declared.

- (e) The colour: "White", "White and Blue Tipped", "White and Green Tipped", "Green", "Mixed Colours", as appropriate, shall be declared.

## 7.2 List of ingredients

- (a) A complete list of ingredients shall be declared on the label in descending order of proportion.
- (b) The provisions of Section 3 (2) (b) of the Recommended General Standard for the Labelling of Prepackaged Food shall apply.
- (c) Except as provided for in Section 7.1 (c) of the standard, the provisions of 3 (2) (c) of the Recommended General Standard for the Labelling of Prepackaged Food shall apply.
- (d) It shall not be necessary to declare the addition of water.

## 7.3 Net Contents

- (a) 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.
- (b) It shall not be necessary to declare the drained weight of the product.

## 7.4 Name and address

The provisions of Section 3 (4) (a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 7.5 Country of origin

The provisions of Section 3 (5) (a) and 3 (5) (b) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 7.6 Presentation of Mandatory Information

The provisions of Section 4 (1) and 4 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 7.7 Additional or different requirements

The provisions of Section 5 (1) and 5 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 7.8 Optional Labelling

- (a) The provisions of Section 6 (1) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- (b) If these size names comply with the applicable requirements of this standard, they may be stated as: "Small", "Medium", "Large", "Extra Large", "Blend of Sizes", or "Assorted Sizes", as appropriate, in the style of Long Shoots, Shoots, or Tips.
- (c) If a term other than the size names of this standard is used for the style of Long Shoots, Shoots, or Tips, it must be supported by:

- (i) an exact graphic representation of the average diameter (cross-section) of the units; and/or
  - (ii) A statement of the average diameter (in mm. or fractional inches).
- (d) In the style of Long Shoots, Shoots', or Tips — the number of units present in the container.

7.9 Definition of terms

The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

7.10 General Principles

The provisions of Section 2 (1) and 2 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

8. METHODS OF ANALYSIS AND SAMPLING

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

8.1 Sampling

Sampling shall be in accordance with the Sampling Plans for Prepackaged Foods.

8.2 Determination of Drained Weight \*

8.2.1 Definition \*

8.2.2 Materials \*

8.2.2.1 Specifications for circular sieves \*

- (a)
- (b)
- (c)

8.2.3 Procedure \*

8.2.4 Calculation and Expression of Results \*

8.2.5 Literature References \*

(Correct AOAC reference to "30.001")

(Delete ALINORM reference)

\* Text as given for "Determination of Drained Weight - Method I" in Appendix IV of ALINORM 69/23.

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION  
Committee on Processed Fruits and Vegetables

CANNED PINEAPPLE -- STEP 8

Standard No. PFV 69/8-13

to be submitted to the Seventh Session of the  
Codex Alimentarius Commission

for adoption as a

Recommended Standard

DRAFT STANDARD  
FOR  
CANNED PINEAPPLE  
Advanced to Step 8

1. DESCRIPTION

1.1 Product Definition

Canned Pineapple is the product:

- (a) prepared from fresh, frozen, or previously canned, mature pineapple, conforming to the characteristics of Ananas comosus and from which peel and core have been removed;
- (b) packed with water or other suitable liquid medium and may be packed with nutritive sweeteners, seasonings, or other ingredients appropriate to the product;
- (c) processed by heat in an appropriate manner before or after being sealed in a container, so as to prevent spoilage.

1.2 Varietal Type

Any commercially cultivated variety suitable for canning may be used.

1.3 Style or Form

Canned pineapple is packed in the following forms:

- (a) Whole: cylindrical whole unit with the core removed
- (b) Slices or Spiral Slices or Whole Slice or Rings: uniformly cut circular slices or rings cut across the axis of the peeled, cored pineapple cylinders.
- (c) Half Slices: uniformly cut, approximately semi-circular halves of slices
- (d) Quarter Slices: uniformly cut, one-fourth portions of slices
- (e) Broken Slices: arc-shaped portions which may not be uniform in size and/or shape
- (f) Spears or Fingers: long, slender pieces cut radially and lengthwise of the cored pineapple cylinder, predominantly 65 mm or longer
- (g) Tidbitst reasonably uniform, wedge-shaped sectors cut from slices or portions thereof, predominantly from 8 mm to 13 mm thick

- (h) Chunks: short, thick pieces cut from thick slices and/or from peeled cored pineapple and predominantly more than 12 mm in both thickness and width, and less than 38 mm in length
- (i) Diced or Cubes: reasonably uniform, cube-shaped pieces, predominantly 14 mm or less in the longest edge dimensions
- (j) Pieces: irregular shapes and sizes not identifiable as a specific style and does not include "chunks" or "chips" style
- (k) Chips: small, irregular shapes and sizes of pineapple pieces similar to that left over after dicing of pineapple; and which may be included in crushed style
- (l) Crushed or Crisp Cut: finely cut or shredded or grated or diced pieces of pineapple and which may include chips in the crushed mass

#### 1.4 Types of Pack

Canned pineapple is packed in the following types of pack:

- (a) Regular Pack: with a liquid packing medium
- (b) Heavy Pack: "Chips" or "Crushed" styles with or without sweetening ingredients and containing at least 73% drained fruit weight
- (c) Solid Pack: "Chips" or "Crushed" styles with or without sweetening ingredients and containing at least 78% drained fruit weight

## 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 2.1 Basic ingredients

Pineapple with or without liquid packing media or with dry sweeteners appropriate to the product and other optional ingredients as follows:

#### 2.1.1 Packing Media

Where a packing medium is used, it may consist of:

- (a) Water: in which water, or any mixture of water and pineapple juice, is the sole liquid packing medium;
- (b) Juice: in which natural pineapple juice, or clarified pineapple juice, is the sole liquid packing medium;
- (c) Dry sweetener: with one or more of the following nutritive sweeteners -- sucrose, invert sugar, dextrose, dried glucose syrup -- and without added liquid except such slight amounts of steam, water, or natural juice as occur in the normal canning of the product;
- (d) Syrup: in which water or juice is combined with one or more of the following nutritive sweeteners -- sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup -- and classified on the basis of cut-out strength as:

Extra Light Syrup	- not less than 10 degrees Brix
Light Syrup	- not less than 14 degrees Brix

Heavy Syrup - not less than 18 degrees Brix  
Extra Heavy Syrup - not less than 22 degrees Brix

2.1.1.1 Cut-out strength of syrup to be determined on sample average but no container may have a Brix value lower than that of the minimum of the next category below.

2.1.2 Other permitted ingredients Spices, spice oils, mint, vinegar,

2.3 Quality Criteria

2.3.1 Definition of Defects

- (a) Blemish - surface areas and spots which contrast strongly in colour or texture with the normal pineapple tissue or which may penetrate into the flesh. Such blemishes are normally removed in preparation of pineapple for culinary use and include deep fruit eyes, pieces of shell, brown spots, bruised portions and other abnormalities.
- (b) Broken - (considered a defect only in Sliced and Spear styles). A unit severed into definite parts; all of such portions that equal the size of a full-size unit are considered one defect in applying the allowances herein.
- (c) Excessive Trim - (considered a defect only in Whole, Quarter Slices, Sliced, Half-sliced and Spear styles). A unit trimmed to the extent that its normal shape and conformation is destroyed and detracts from the appearance of such unit.

2.3.2 Flavour

Canned pineapple shall have a normal flavour and odour free from flavours or odours foreign to the product, and canned pineapple with special ingredients shall have a flavour characteristic of that imparted by the substances used.

2.3.3 Colour

The colour of the product shall be normal for the varietal type. White radiating streaks may be present. Canned pineapple containing special ingredients shall be considered of characteristic colour when there is no abnormal discolouration for the respective ingredient used.

2.3.4 Texture

The canned pineapple shall have a reasonably good texture, the fruitlets shall be reasonably compact in structure, and the product shall be fairly free from porosity. The drained pineapple -of all styles - may contain no more than 7% by weight of "core material". In determining the percentage of core material the areas which consist of core material are trimmed from the pineapple unit and weighed against the drained fruit ingredient in the container.

2.3.5 Uniformity of Size and Shape

These requirements do not apply to canned pineapple in the styles of: Whole, Broken Slices, Pieces, Chips or Crushed.

- (a) Slices or Spiral Slices or Whole Slices or Rings - the weight of the largest slice in a container is not more than 1.4 times the weight of the smallest.
- (b) Half slices or quarter slices - the weight of the largest unit in a container is not more than 1.75 times the weight of the smallest, except for an occasional broken piece due to splitting or an occasional whole slice not completely cut through.
- (c) Spears or fingers - the weight of the largest unbroken unit in a container is not more than 1.4 times the weight of the smallest unbroken unit.
- (d) Tidbits - not more than 15% of the drained weight of pineapple in the container may consist of tidbits, each of which weighs less than three-fourths of the average weight of the untrimmed tidbits.
- (e) Chunks - not more than 15% of the drained weight of pineapple in the container may consist of pieces which weigh less than 5 grams each.
- (f) Cubes or Diced
  - (i) not more than 10% of the drained weight of pineapple in the container may consist of units of such size that they will pass through a screen that has square openings of 8 mm;
  - (ii) Not more than 15% of the drained weight of pineapple in the container may consist of pieces which weigh more than 3 grams each.

2.3.6

Allowance for Defects

Canned pineapple shall not contain excessive defects (whether or not specifically defined or as allowed in this standard). Certain common defects shall not be present in amounts greater than the following limitations:

<u>Styles</u>	<u>Units with Excessive Trim</u>	<u>Blemishes or Blemished Units</u>
Whole	10% by count of fruit units (cylinders) <sup>1/</sup>	3 blemishes per fruit unit (cylinder)
Slices/ or Spiral Slices or whole slices;	1 unit if 10 or less per can;	1 unit if 5 or less per can;
Half slices; Quarter slices	2 units if over 10 but not over 27 per can;	2 units if over 5 but not over 10 per can; 4 units if over 10 but not over 32 per can;
	<u>or</u> 7 1/2% by count if over 27 per can	<u>or</u> 12 1/2% by count if over 32 per can
Spears	15% by count of all units	(Same as for Slices and Half Slices)

Broken Sliced; Tidbits; [Not applicable] Chunks; Cubes; Pieces	12 1/2 % by count of all units
----------------------------------------------------------------------	-----------------------------------

Chips; Crushed	[Not applicable]	Not more than 1 1/2 % by weight of the drained fruit
----------------	------------------	------------------------------------------------------------

<sup>1/</sup> Based on the average from all containers in the sample.

2.3.7 Classification of "Defectives"

A container that fails to meet the applicable quality requirements as set out in paragraphs 2.3.2 through 2.3.6 shall be considered a "defective".

2.3.8 Acceptance

A lot will be considered as meeting the requirements for those characteristics specified in paragraph 2.3.7 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

3. 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 by the Codex Committee on Food Additives;

	<u>Maximum level of use</u>
Natural fruit essences	Not limited
Mint flavouring (mint oil)	Not limited
<u>Acidifying agent</u>	
Citric acid	Not limited
<u>Anti-foaming agent</u>	
Dimethylpolysiloxane	10 p.p.m.

4. CONTAMINANTS

The following provision in respect of contaminants is subject to endorsement by the Codex Committee on Food Additives:

Total tin, maximum level -- 250 mg/kg, calculated as Sn

5. HYGIENE <sup>1/</sup>

<sup>1/</sup> The end-product specifications listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Code of Hygienic Practice for Canned Fruit and Vegetable Products.

5.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.

5.3 The product shall not contain any pathogenic microorganisms or any toxic substances originating from microorganisms.

## 6. WEIGHTS AND MEASURES

### 6.1 Fill of Container

#### 6.1.1 Minimum Fill

The container shall be well filled with fruit and the product (including packing medium) shall occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20 degrees C which the sealed container will hold.

#### 6.1.2 Minimum Drained Weight

6.1.2.1 The drained weight of the product shall be not less than the following percentages, calculated on the basis of the weight of distilled water at 20 degrees C which the sealed container will hold:

- |     |                                                                              |       |
|-----|------------------------------------------------------------------------------|-------|
| (a) | All styles other than Whole or Crushed or Chips styles                       | - 58% |
| (b) | <u>Regular packs</u><br>Crushed, or Chips styles                             | - 63% |
| (c) | <u>Heavy pack</u><br>Crushed or Chips styles when designated as "Heavy Pack" | - 73% |
| (a) | <u>Solid Pack</u><br>Crushed or Chips styles when designated as "Solid Pack" | - 78% |

6.1.2.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

#### 6.1.3 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90% container capacity) of 6.1.1 shall be considered a "defective".

#### 6.1.4 Acceptance

A lot will be considered as meeting the requirement of 6.1.1 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

## 7. LABELLING-

The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

7.1

The name of the food

- (a) The designation shall be "pineapple".
- (b) The style, as appropriate, shall be declared:
  - "Whole";
  - "Slices" or "Spiral Slices" or "Whole Slices" or "Rings";
  - "Half Slices";
  - "Quarter Slices";
  - "Broken Slices";
  - "Spears" or "Fingers";
  - "Tidbits";
  - "Chunks";
  - "Diced" or "Cubes";
  - "Pieces";
  - "Chips";
  - "Crushed" or "Crisp Cut",
- (c) The packing medium shall be declared as part of the name or in close proximity to the name: "Water", "Juice", the name of the dry sweetener, "Extra Light Syrup", "Light Syrup", "Heavy Syrup", or "Extra Heavy Syrup", as appropriate.
- (d) As part of the name or in close proximity to the name, any characteristic seasoning shall be declared: e. g. "With X," when appropriate.

7.2

List of Ingredients

- (a) Except as provided for in Section 7.2 (c) of the standard, a complete list of ingredients shall be declared on the label in descending order of proportion.
- (b) The provisions of Section 3 (2) (b) and 3 (2) (c) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- (c) It shall not be necessary to declare Dimethylpolysiloxane since it is used as a manufacturing aid.

7.3

Net Contents

- (a) 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.
- (b) It shall not be necessary to declare the drained weight of the product.

7.4

Name and address

The provisions of Section 3 (4) (a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

- 7.5 Country of origin  
The provisions of Section 3 (5) (a) and 3 (5) (b) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.6 Presentation of Mandatory Information  
The provisions of Section 4 (1) and 4 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.7 Additional or different requirements  
The provisions of Sections 5 (1) and 5 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.8 Optional Labelling
- (a) The provisions of Section 6 (1) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
  - (b) When "Crushed" or "Crisp Cut" style is packed in natural pineapple juice (whether clarified or not), the following may be stated on the label in addition to the declaration of packing medium:  
"Unsweetened" or "No sugar Added."
  - (c) When "Crushed" or "Crisp Cut" style is packed in pineapple juice and sugar, the packing medium may be declared as:  
"Lightly sweetened" in lieu of "Light Syrup";  
"Heavily sweetened" in lieu of "Heavy Syrup";  
"Extra Heavily sweetened" in lieu of "Extra Heavy Syrup".
  - (d) The type of "Heavy Pack" or "Solid Pack" for "Crushed" or "Crisp Cut" or "Chips" styles may be stated on the label, if the pack complies with the appropriate requirements of paragraph 6.1.2.1 of this standard.
  - (e) The varietal type may be declared.
- 7.9 Definition of terms  
The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.10 General Principles  
The provisions of Section 2 (1) and 2 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
8. METHODS OF ANALYSIS AND SAMPLING  
The methods of analysis and sampling described hereunder are international referee methods, which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.
- 8.1 Sampling  
Sampling shall be in accordance with the Sampling Plans for Prepackaged Foods

- 8.1.1 Size of Sample Unit
- 8.1.1.1 In ascertaining the quality requirements for all styles other than Tidbits, Cubes, Crushed or Chips styles, the entire container shall be the sample unit.
- 8.1.1.2 In ascertaining the quality requirements for Tidbits, Cubes, Crushed or Chips styles, the sample unit shall be:
- (a) the entire container when it holds 1.0 litre or less; or
  - (b) 600 grams of drained fruit (of a representative mixture) when the container holds more than 1.0 litre.
- 8.2 Determination of Drained Weight \*
- 8.2.1 Definition \*
- 8.2.2 Materials
- 8.2.2.1 Specifications for circular sieves \*
- (a)
  - (b)
  - (c)
- 8.2.3 Procedure \*
- 8.2.4 Calculation and Expression of Results \*
- 8.2.5 Literature References \*
- (Correct AOAC reference to "30.001")
- (Delete ALINORM reference)
- 8.3 Syrup measurements \*\*
- 8.3.1 Procedure \*\*
- 8.3.2 Calculation and Expression of Results \*\*
- 8.3.3 Literature References \*\*

\* Text as given for "Determination of Drained Weight - Method I" in Appendix IV of ALINORM 69/23.

\*\* Text as given for "Syrup Measurements (Refractometric method)" in Appendix IV of ALINORM 69/23.

APPENDIX V  
May 1969

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION

Committee on Processed Fruits and Vegetables

CANNED PEARS -- STEP 5

Standard No. PFV 69/5-17

to be submitted to the Seventh Session of the

Codex Alimentarius Commission

for adoption as a

Draft Standard

PROPOSED DRAFT STANDARD  
FOR

CANNED PEARS

Advanced to Step 5

1. DESCRIPTION

1.1 Product Definition

Canned pears is the product:

- (a) prepared from pears of proper maturity of commercial canning varieties conforming to the characteristics of *Pyrus communis* or *Pyrus sinensis*;
- (b) peeled, cored, and stemmed for all styles except for the appropriate kinds in whole and halves style;
- (c) packed with water or other suitable liquid packing medium and may be packed with nutritive sweeteners, seasonings, or other ingredients appropriate to the product;
- (d) processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

1.2 Varietal Type

Any suitable variety of cultivated pears may be used.

1.3 Styles

- (a) Whole - peeled or unpeeled and with or without stems and cores removed.
- (b) Halves - peeled or unpeeled and cut into two approximately equal parts.
- (c) Quarters - peeled and cut into four approximately equal parts.
- (d) Sliced - peeled and cut into wedge-shaped sectors.
- (e) Diced - peeled and cut into cube-like parts.
- (f) Pieces or Irregular Pieces - peeled and comprising irregular shapes and sizes.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Basic ingredients

Pears, packing media, and other ingredients appropriate to the product and as follows:

- (a) Water -- in which water or any mixture of water and pear juice is the sole liquid packing medium; or

- (b) Syrup -- in which water or juice is combined with one or more of the following nutritive sweeteners -- sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup -- and classified on the basis of cut-out strength as:

Extra Light Syrup -- not less than 10° Brix.

Light Syrup -- not less than 14° Brix.

Heavy Syrup — not less than 18° Brix.

Extra Heavy Syrup — not less than 23° Brix.

2.1.1 Cut-out strength of syrup to be determined on sample average, but no container may have a Brix value lower than that of the minimum of the next category below.

## 2.2 Other permitted ingredients

Spices, spice oils, mint, or other natural flavourings.

## 2.3 Quality Criteria

### 2.3.1 Definitions

- (a) Blemishes - surface discolouration and spots that definitely contrast with the over-all colour and which may penetrate into the flesh. Examples include bruises, scab, and dark discolouration.
- (b) Broken - is considered a defect only in whole, halves and quartered styles in a liquid medium pack. In halves and quartered styles a unit severed into two or more parts; two or more broken pieces shall be considered one unit when aggregated to the approximate size and shape of an average unit in the container.
- (c) Core Material - the seed cell, whether loose or attached, with or without seeds. Such material aggregating approximately one-half of a core is considered one unit in applying the allowance hereafter.
- (d) Peel - that which adheres to pear flesh or is found loose in the container. Peel is not considered a defect in Unpeeled styles.
- (e) Seed - any one pear seed or the equivalent in pieces of one seed not included in core material.
- (f) Harmless plant material - leaf or similar vegetable material, including stems in styles in which the stem is customarily removed.
- (g) Trim - means units that have deep gouges (whether due to physical trimming or other means) and which definitely detract from the appearance. Trim is considered a defect only in whole, halved, and quartered styles.

### 2.3.2 Colour

The colour of the product shall be normal for the varietal type, taking into consideration any added artificial colour. Canned pears containing other

permitted ingredients shall be considered of characteristic colour when there is no abnormal discolouration for the respective ingredient used.

2.3.3 Flavour

Canned pears shall have a normal flavour and odour free from flavours and odours foreign to the product and canned pears with special ingredients shall have a flavour characteristic of that imparted by the substances used.

2.3.4 Texture

The pears may be variable in tenderness but shall neither be mushy nor excessively firm.

2.3.5 Uniformity of Size

Whole, Halves, Quarters - in 95 percent by count of units that are most uniform in size, the weight of the largest unit shall be no more than twice the weight of the smallest unit, provided that, if there are less than 20 units, one unit may be disregarded. Where a unit has broken in the container, the broken pieces may be considered as a single unit.

2.3.6 Defect Allowances

The product shall be substantially free from defects such as harmless extraneous material, peel (in peeled styles), core material, blemished units, and broken units. Certain common defects shall not be present in amounts greater than the following limitations:

	<u>Maximum limits</u>
(a) <u>Blemishes and trim</u> -----	(i) <u>Total</u> , 30% by count; or 3 units per container when count is less than 10; provided the sample average is no more than 30%; ---- but limited to -----
	ii) 20% by count blemished; or 2 units per container when count is less than 10; provided the sample average is no more than 20% for blemished.
(b) <u>Broken</u> ----- (In Halves and Quartered styles only)	10% by count; or 1 unit per container when count is less than 10; provided the sample average is no more than 10% .
(c) <u>Core material (Average)</u> -----	2 units per kg of total

- |     |                                                                           |                                                                               |
|-----|---------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|     | (Except in "Whole - Not cored" style)                                     | contents .                                                                    |
| (d) | <u>Peel (Average)</u> -----<br>(Except in "Unpeeled" styles)              | 15 cm <sup>2</sup> (15 sq. cm)<br>aggregate area per kg<br>of total contents. |
| (e) | <u>Harmless plant material</u> -----<br>(All styles)                      | 0.2% by weight of total<br>contents.                                          |
| (f) | <u>Seeds (Average)</u> -----<br>(Except in "Whole - Not cored"<br>styles) | 8 per kg of total<br>contents.                                                |

2.3.7 Classification of "Defectives"

Except for those requirements based on averages in 2.3.2 through 2.3.6, a container that fails to meet the applicable quality requirements shall be considered a "defective".

2.3.8 Acceptance

A lot will be considered as meeting the requirements for those characteristics specified in paragraph 2.3.7 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods

3. 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 by the Codex Committee on Food Additives:

<u>Acidifying agents</u>	<u>Maximum level of use</u>
--------------------------	-----------------------------

Citric acid Malic acid Tartaric acid Lactic acid f	Not limited
-------------------------------------------------------------	-------------

Colouring matters

Erythrosine (Colour Index (1956) No. 45430)	200 p.p.m. (singly or in combination)
Amaranth (Colour Index (1956) No. 16185)	
Fast Green FCF (Colour Index (1956) No. 42053)	
Green S (Colour Index (1956) No. 44090)	

Natural fruit essences ----- Not limited

4. CONTAMINANTS

The following provision in respect of contaminants is subject to endorsement by the Codex Committee on Food Additives:

Total tin, maximum level -- 250 mg/kg, calculated as Sn

5. HYGIENE <sup>1/</sup>

<sup>1/</sup> The end-product specifications listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Code of Hygienic Practice for Canned Fruit and Vegetable Products.

5.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.

5.3 The product shall not contain any pathogenic microorganisms or any toxic substances originating from microorganisms.

6. WEIGHTS AND MEASURES

6.1 Fill of container

6.1.1 Minimum fill

The container shall be well filled with fruit and the product (including packing medium) shall occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20° C which the sealed container will hold.

6.1.2 Minimum drained weight

6.1.2.1 The drained weight of the product, based on the weight of distilled water at 20° C which the sealed container will hold, shall be as follows:

Whole Style----- 50%

Halves, Quarters, Slices, Pieces ----- 53%

Diced ----- 60%

6.1.2.2 The requirement for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

6.1.3 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 6.1.1 shall be considered a "defective".

6.1.4 Acceptance

A lot will be considered as meeting the requirements of 6.1.1 when the number of "defectives" does not exceed the acceptance number (c) of the

appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

## 7. LABELLING

The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

### 7.1 The name of the food

- (a) The designation shall be "pears".
- (b) The style, as appropriate, shall be declared:
  - "Whole"
  - "Whole - Cored"
  - "Whole-Unpeeled"
  - "Halves"
  - "Halves - Unpeeled"
  - "Quartered" or "Quarters"
  - "Sliced" or "Slices"
  - "Diced" or "Dice" or "Cubes"
  - "Pieces" or "Irregular Pieces".
- (c) The packing medium shall be declared as part of the name or in close proximity to the name: "Water", "Extra Light Syrup", "Light Syrup", "Heavy Syrup", or "Extra Heavy Syrup".
- (d) A declaration, as part of the name or in close proximity to the name, shall be made of "Artificially Coloured" when canned pears are artificially coloured.
- (e) A declaration, as part of the name or in close proximity to the name, shall be made of any characteristic seasoning: e.g. "With X", when appropriate.

### 7.2 List of ingredients

- (a) A complete list of ingredients shall be declared on the label in descending order of proportion.
- (b) The provisions of Section 3 (2) (b) and 3 (2) (c) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

### 7.3 Net contents

- (a) 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.
- (b) It shall not be necessary to declare the drained weight of the product.

### 7.4 Name and address

The provisions of Section 3 (4) (a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

- 7.5 Country of origin  
The provisions of Section 3 (5) (a) and 3 (5) (b) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.6 Presentation of Mandatory Information  
The provisions of Section 4 (1) and 4 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.7 Additional or different requirements  
The provisions of Section 5 (1) and 5 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.8 Optional Labelling  
(a) The provisions of Section 6 (1) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.  
(b) The name of the product may include the varietal type or designation of "Dessert" type.
- 7.9 Definition of terms  
The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.10 General Principles  
The provisions of Section 2 (1) and 2 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
8. 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.
- 8.1 Sampling  
Sampling shall be in accordance with the Sampling Plans for Prepackaged Foods.
- 8.2 Determination of Drained Weight \*  
8.2.1 Definition  
8.2.2 Materials  
8.2.2.1 Specifications for circular sieves \*  
(a)  
(b)  
(c)  
8.2.3 Procedure \*  
8.2.4 Calculation and Expression of Results \*  
8.2.5 Literature References \*  
(Correct AOAC reference to "30.001")

(Delete ALINORM reference)

8.3 Syrup measurements \*\*

8.3.1 Procedure \*\*

8.3.2 Calculation and Expression of Results \*\*

8.3.3 Literature References \*\*

\* Text as given for "Determination of Drained Weight - Method I" in Appendix IV of ALINORM 69/23.

\*\* Text as given for "Syrup Measurements (Refractometric method)" in Appendix IV of ALINORM 69/23.

APPENDIX VI  
May 1969

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION

Committee on Processed Fruits and Vegetables

CANNED MANDARIN ORANGES -- STEP 5

Standard No. PFV 69/5-19

to be submitted to the Seventh Session of the

Codex Alimentarius Commission

for adoption as a

Draft Standard

PROPOSED DRAFT STANDARD  
FOR  
CANNED MANDARIN ORANGES  
Advanced to Step 5

1. DESCRIPTION

1.1 Product Definition

Canned mandarin oranges is the product:

- (a) prepared from sound, mature mandarin oranges conforming to the characteristics of Citrus reticulata Blanco (including all the suitable commercial varieties for canning)- Before processing, the fruit is properly washed and peeled and the membrane, fiber strands originating from albedo or core, and seeds (if any) are substantially removed from the segments;
- (b) packed with a suitable liquid packing medium which may include nutritive sweeteners;
- (c) processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

1.2 Style or Form

Canned mandarin oranges may be packed as:

- (a) Whole Segments; or
- (b) Broken Segments; or
- (c) Pieces.

1.3 Sizes in Whole Segment Style

1.3.1 Single Sizes

Canned mandarin oranges shall be reasonably uniform in size and may be designated as to the size classifications that follow:

Large -- 20 or less segments per 100 grains of drained fruit.

Medium -- 21 to 35 segments per 100 grams of drained fruit.

Small -- 36 or more segments per 100 grams of drained fruit.

1.3.1.1 Definition of "reasonably uniform in size"

In 95% by count, of units that are most uniform in size, the weight' of the largest unit shall be no more than twice the weight of the smallest unit. Where a unit has broken in the container, the broken pieces may be considered as a single unit.

1.3.2

Mixed Sizes

Canned oranges may also be designated as a mixture of any two adjacent sizes as:

Medium-Large

(or)

Small-Medium

2.

ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1

Basic Ingredients

Mandarin oranges and packing media appropriate to the product as follows:

2.2

Packing Media

- (a) Water -- in which water or a mixture of water and mandarin orange Juice is the liquid packing medium; or
- (b) Syrup: in which water or juice is combined with one or more of the following nutritive sweeteners -- sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup -- and classified on the basis of cut-out strength as:

Extra Light Syrup ---	not less than 10°	Brix.
Light Syrup -----	not less than 14	Brix.
Heavy Syrup -----	not less than 18°	Brix.
Extra Heavy Syrup--	not less than 22°	Brix.

2.2.1

Cut-out strength of syrup to be determined on sample average, but no container may have a Brix value lower than that of the minimum of the next category below.

2.4

Quality Criteria

2.3.1

Definitions

- (a) Whole segment -- a practically intact segment which retains its original form but may be split just slightly.
- (b) Slightly broken segment -- a fairly intact segment which is split or may show slight disintegration.
- (c) Broken segment -- a portion of a segment which retains at least one half of the apparent original segment size and is neither a "whole segment" or a "slightly broken segment".
- (d) Pieces -- irregular and broken pieces of segments which do not meet the definition for "Broken segment", but which are large enough to remain on a screen having 8 mm. square openings, formed by wire of 2 mm. diameter.

- (e) Developed seed -- a seed that measures more than 4.0 mm. in any dimension. (Small, undeveloped., embryonic seeds are not considered as defects).

2.3.2 Colour

The colour of the segments shall be a rich, yellow to orange, typical colour of properly prepared and properly processed fruit, free from any brown tinge; and the liquid packing medium shall be reasonably clear.

2.3.3 Flavour

Canned Mandarin Oranges shall have a normal flavour and odour free from flavours or odours foreign to the product.

2.3.4 Texture

The texture shall be reasonably firm and characteristic for the canned product and reasonably free from dry cells or fibrous portions affecting the appearance or edibility of the product.

2.3.5 Wholeness

- (a) Whole Segment style -- As defined in 2.3.1, not less than 85% by count of the units shall be "whole segments", and the remainder may be "slightly broken segments" and "broken segments", provided not more than 7.5%, by count, of all the segments are "broken segments".
- (b) Broken Segment style -- Canned mandarin oranges which do not meet the requirements of "wholeness" for Whole Segment style; but as defined in 2.3.1, the broken segments comprise not less than 85% of the drained weight.
- (c) Pieces style -- Canned mandarin oranges which do not meet the requirements for Broken style and consist substantially of pieces, as defined in 2.3.1.

2.3.6 Defects

The finished product shall be prepared from such materials and under such practices that it shall be reasonably free from extraneous fruit matter such as membrane, developed seeds, and fiber strands originating from albedo or core, and shall not contain parts of peel nor contain other excessive defects whether specifically mentioned in this standard or not. Certain common defects shall not be present in amounts greater than the following limitations in all styles:

- (a) Membrane -- aggregate area of not more than 7 cm<sup>2</sup> (7 sq. cm) per 100 grams of drained fruit.
- (b) Fiber strands -- aggregate length of not more than 5 cm per 100 grams of drained fruit.
- (c) Developed seeds -- Not more than 1 seed per 100 grams of drained fruit.

2.3.7 Classification of "Defectives"

A container that fails to meet the applicable quality requirements as set out in paragraphs 2.3.2 through 2.3-6 shall be considered a "defective".

2.3.8 Acceptance

A lot will be considered as meeting the requirements for those characteristics specified in paragraph 2.3.7 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

3. 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 by the Codex Committee on Food Additives:

	<u>Maximum level of use</u>
<u>Acidifying agent</u>	
Citric acid	Not limited
<u>Anti-clouding agent</u>	10 p.p.m.
Methyl cellulose	

4. CONTAMINANTS

The following provision in respect of contaminants is subject to endorsement by the Codex Committee on Food Additives:

Total tin, maximum level -- 250 mg/kg, calculated as Sn

5. HYGIENE <sup>1/</sup>

<sup>1/</sup> The end-product specifications listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Code of Hygienic Practice for Canned Fruit and Vegetable Products.

5.2. To the extent possible in good manufacturing practice the product shall be free from objectionable matter.

5.3 The product shall not contain any pathogenic microorganisms or any toxic substances originating from microorganisms.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The container shall be well filled with fruit and the product (including packing medium) shall occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20° C which the sealed container will hold.

6.1.2 Minimum Drained Weight

6.1.2.1 The drained weight of the product, based on the weight of distilled water at 20° C which the sealed container will hold, shall be as follows:

Whole Segment style -----55%

Broken Segment and Pieces styles ----- 58%,

6.1.2.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

6.1.3 Classification of "Defectives"

A container that fails to meet the requirement for minimum Till (90 percent container capacity) 6.1.1 shall be considered a "defective".

6.1.4 Acceptance

A lot will be considered as meeting the requirement of 6.1.1 when the number of "defectives" does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

7. LABELLING

The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

7.1 The name of the food

- (a) The designation shall be "Mandarin Oranges";
- (b) The style, as appropriate, shall be declared as a part of the name or in close proximity to the name:

"Whole Segments"

"Broken Segments"

"Pieces"

- (c) The packing medium shall be declared as part of the name or in close proximity to the name: "Water", "Extra Light Syrup", "Light Syrup", "Heavy Syrup", or "Extra Heavy Syrup".

7.2 List of Ingredients

- (a) A complete list of ingredients shall be declared on the label in descending order of proportion.
- (b) The provisions of Section 3 (1) (b) and 3 (2) (c) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

7.3 Net Contents

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

- (b) It shall not be necessary to declare the drained weight of the product.

7.4 Name and address

The provisions of Section 3 (4) (a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

7.5 Country of origin

The provisions of Section 3 (5) (a) and 3 (5) (b) of the Recommended General Standards for the Labelling of Prepackage Foods shall apply.

7.6 Presentation of Mandatory Information or,

The provisions of Section 4 (1) and 4 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

7.7 Additional or different requirements

The provisions of Section 5 (1) and 5 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

7.8 Optional Labelling

- (a) The provisions of Section 6 (1) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- (b) A size classification for Whole Segment style may be stated on the label if the pack complies with the appropriate requirements of paragraph 1.3.1 or 1.3.2 of this standard.

7.9 Definition of terms

The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

7.10 General Principles

The Provisions of Section 2 (1) and 2 (2) of the Recommended General Standard for the Labelling; of Prepackaged Foods shall apply.

8. 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.

8.1 Sampling

Sampling shall be in accordance with the Sampling Plans for Prepackaged Foods.

8.2 Determination of Drained Weight \*

8.2.1 Definition \*

8.2.2 Materials \*

8.2.2.1 Specifications for circular sieves \*

- (a)
- (b)

(c)

8.2.3 Procedure \*

8.2.4 Calculation and Expression of Results \*

8.2.5 Literature References \*

(Correct AOAC reference to "30.001")

(Delete ALINORM reference)

8.3 Syrup measurements \*\*

8.3.1 Procedure \*\*

8.3.2 Calculation and Expression of Results \*\*

8.3.3 Literature References \*\*

\* Text as given for "Determination of Drained Weight - Method I" in Appendix IV of ALINORM 69/23.

\*\* Text as given for "Syrup Measurements (Refractometric method)" in Appendix IV of ALINORM 69/23-

APPENDIX VII  
May 1969

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION  
Committee on Processed Fruits and Vegetables

PROCESSED TOMATO CONCENTRATES -- STEP 5

Standard No. PFV 69/5-16

to be submitted to the Seventh Session of the

Codex Alimentarius Commission

for adoption as a

Draft Standard

PROPOSED DRAFT STANDARD  
FOR  
PROCESSED TOMATO CONCENTRATES  
Advanced to Step 5

1. DESCRIPTION

1.1 Product Definition

- (a) Processed tomato concentrate is the food prepared by concentrating the liquid obtained from substantially sound, mature red tomatoes (*Lycopersicum esculentum*). Such liquid is strained or otherwise prepared to exclude skins, seeds, and other coarse or hard substances in the finished product.
- (b) Suitable seasoning ingredients may be added.
- (c) The product is preserved by physical means with or without the addition of preservatives.
- (d) The concentration shall be 8 percent natural soluble tomato solids or more but not dehydrated to a dry powder or flake form.

1.2 Product Designation

Tomato concentrate may be considered "Tomato Puree" or "Tomato Paste" when the concentrate meets these requirements:

- (a) Tomato Puree -- Tomato concentrate that contains not less than 8 percent, but less than 24 percent, of natural soluble tomato solids.
- (b) Tomato Paste -- Tomato concentrate that contains 24 percent or more of natural soluble tomato solids.

1.2.1 Acceptance -- For Natural Soluble Tomato Solids

A lot will be considered as meeting the applicable minimum natural soluble tomato solids requirement: Provided, That

- (1) The average of the values of all containers or sub-samples tested meets at least the minimum requirement; and
- (2) No individual test value is more than 1 percent soluble solids below the minimum requirement.

Example: If samples average at least 8% ranging slightly below and above, no single sample may be less than 1%.]

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Other Permitted Ingredients

2.1.1 Seasoning or Flavourings --

Salt, spices, natural vegetable products (basil leaf, onions, etc.) but not sugars or other sweeteners.

2.2 Quality Criteria

2.2.1 Colour

The product when diluted with water to reach approximately 8 percent natural soluble tomato solids shall have a fairly good red colour, free from abnormal colours for the product.

2.2.2 Texture

The concentrated product shall have a homogeneous, evenly divided texture indicative of good manufacturing practices.

2.2.3 Flavour

The product when diluted with water to reach approximately 8 percent natural soluble tomato solids shall have a good flavour characteristic of properly processed tomato concentrates without any objectionable flavour foreign to the product.

2.2.4 Defects

Processed Tomato Concentrates shall be prepared from such materials and *under* such practices that the product is substantially free from extraneous plant materials or similar objectionable substances and shall not contain excessive defects (whether or not specifically mentioned in this standard).

Certain common defects -- when so large or numerous or of such contrasting colour or nature as to seriously affect the appearance or useability of the product -- include:

- (a) Dark specks or scale-like particles;
- (b) Seeds or objectionable particles of seeds;
- (c) Objectionable tomato peel because of colour and/or size;
- (d) Harmless vegetable materials other than those used as seasonings;
- (e) [Mineral impurities (as ----- 30 mg/kg, based on  
Ash insoluble in HCl) diluted product of  
4.5% solids
- (f) Other similar and objectionable defects.

2.2.5 Classification of "Defectives"

A container that fails to meet the applicable quality-requirements as set out in paragraphs 2.2.1 through 2.2.4 shall be considered a "defective".

2.2.6

Acceptance

A lot will be considered as meeting the requirements for those characteristics specified in paragraph 2.2.5 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

3.

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 by the Codex Committee on Food Additives:"

Preservatives

Maximum level of use

In glass packs of Puree, not over 15% solids:

Sodium Benzoate or Benzoic Acid-----	
Sorbic acid-----	1,000 p.p.m.

pH regulating agents

Sodium bicarbonate-----	only in such amounts as to not raise the pH level above 4.3
-------------------------	-------------------------------------------------------------

Citric acid		to maintain a pH level of not more than 4.3
Malic acid		
Tartaric acid		
Lactic acid		

4.

CONTAMINANTS

The following provision in respect of contaminants is subject to endorsement by the Codex Committee on Food Additives:

Total tin (in final, concentrated product) -- maximum level --250 mg/kg, calculated as Sn

5.

HYGIENE <sup>1/</sup>

<sup>1/</sup> The end-product specifications listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

5.1

It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Code of Hygienic Practice for Canned Fruit and Vegetable Products.

5.2

To the extent possible in good manufacturing practice the product shall be free from objectionable matter.

5.3

The product shall not contain any pathogenic microorganisms or any toxic substances originating from microorganisms.

5.4

The diluted product (at approximately 8% natural soluble tomato solids) shall not contain mould filaments in a quantity indicative of unsuitable raw material or unsanitary processing lines. A guide in determining

compliance with these requirements would be a mould count, as determined by the Howard Method, not in excess of 50% positive fields, based on the diluted product (at approximately 8%, natural soluble tomato solids).

## 6. WEIGHTS AND MEASURES

### 6.1 Fill of container

#### 6.1.1 Minimum fill

Containers shall be filled as full as commercially practicable having regard, for the concentration of the product. The product shall occupy not less than 90% of the water capacity of the container. The water capacity is the volume of distilled water at 50° C which the sealed container will hold.

#### 6.1.2 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 6.1.1 shall be considered a "defective".

## 7. LABELLING

The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

### 7.1 The name of the food

- (a) The designation shall be:
  - (i) "Tomato Concentrate"; or
  - (ii) When the respective criterion for soluble solids is met, the name of the product may be shown as "Tomato Puree" or "Tomato Paste", whichever is applicable.
- (b) A declaration, as part of the name or in close proximity to the name, shall be made of any characteristic seasoning or flavouring; e.g. "With X", when appropriate.

### 7.2 List of Ingredients

- (a) A complete list of ingredients shall be declared on the label in descending order of proportion.
- (b) The provisions of Section 3 (2) (b) and 3 (2) (c) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

### 7.3 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.

### 7.4 Name and address

The provisions of Section 3 (4) (a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

- 7.5 Country of origin  
The provisions of Section 3 (5) (a) and 3 (5) (b) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.6 Presentation of Mandatory Information  
The provisions of Section 4 (1) and 4 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.7 Additional or different requirements  
The provisions of Section 5 (1) and 5 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.8 Optional Labelling
- (a) The provisions of Section 6 (1) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
  - (b) The percentage solids may be included on the label in either of the following manners:
    - (i) The minimum percentage of natural soluble tomato solids:  
[Example: "Minimum Solids - 20%"]
    - or
    - (ii) A range within 2% of the natural soluble tomato solids:  
[Example: "Solids - 20)% to 22%"]
- 7.9 Definition of Terms  
The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 7.10. General Principles  
The provisions of Section 2 (1) and 2 (2) of: the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
8. 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.
- 8.1 Sampling  
Sampling shall be in accordance with the Sampling Plans for Prepackaged Foods.
- 8.2 Test Procedures
- 8.2.1 Natural Soluble Tomato Solids  
For the purpose of this standard, the percentage of "natural soluble tomato solids" is determined in accordance with the Refractometric Method for Concentrated Tomato Products of the Official Methods of Analysis of the Association of Official Analytical Chemists (Reference: Journal of the Association of Official Analytical Chemists, Vol. 50, No. 3, 1967, "Relation Between Refractive Index, Specific Gravity, and Total

Solids of Tomato Juice, Puree, and Paste, by Frank Lamb"). This procedure involves:

- (1) Ascertaining the Refractive Index of the product, corrected for temperature;
- (2) Converting the resultant index to "% Sucrose" in accordance with the International Scale of Refractive Indices of Sucrose at 20° C; and
- (3) Deducting the percentage of added salt. Percent added salt in serum equals total salt (% in serum) minus (0.016 X natural soluble tomato solids).

#### 8.2.2 Salt (NaCl)

For the purpose of this standard, salt (NaCl) shall be determined in accordance with the Potentiometric method (by pH meter) of the Official Methods of Analysis of the Association of Official Analytical Chemists (Reference: Tenth Edition, 1965; 6.103, 6.104, 6.105, using the factor 5.8442 for NaCl).

#### 8.2.3 Mineral Impurities

For the purpose of this standard, mineral impurities shall be determined in accordance with the methods of the Official Methods of Analysis of the Association of Analytical Chemists (Reference: Tenth Edition, 1965; Sand and Silica, Plants, 6.005, and based on diluted product of 4.5% solids).

#### 8.2.4 Mould Count

Mould Count shall be determined in accordance with the method for "Tomato Products (Not Dehydrated)" in the Official Methods of Analysis of the Association of Official Analytical Chemists.

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION  
Committee on Processed Fruits and Vegetables

RAISINS — STEP 5

Standard No. PFV 69/5-12

to be submitted to the Seventh Session of the

Codex Alimentarius Commission

for adoption as a

Draft Standard

PROPOSED DRAFT STANDARD  
FOR  
RAISINS  
Advanced to Step 5

1. SCOPE

Raisins are prepared from properly matured grapes that are dried either naturally (sun-dried) or by artificial dehydration.

They may be prepared from either seedless or seed-bearing type grapes and depend upon low moisture to assure preservation over relatively long periods of time under normal dry storage conditions.

In some countries "Seedless" raisins are called Sultanas.

This standard does not include a similar dried vine fruit known as Dried Currants.

2. DESCRIPTION

2.1 Product Definition

Raisins is the product prepared from substantially sound dried grapes of varieties conforming to the characteristics of *Vitis vinifera* L. (but excluding currant types) which are suitable for preparation into a form of marketable raisins. The dried grapes are properly cleaned (including washing with water); are stemmed; are cap-stemmed except for styles (or forms) of cluster raisins and except for Malaga Muscatel raisins-and are reduced in moisture to a level that will assure preservation of the product.

2.2 Designation

2.2.1 Type Groups

Seedless ----- prepared from grapes that are naturally seedless or almost seedless.

Seed-bearing -- prepared from grapes that possess seeds, which may or may not be removed in processing.

2.2.2 Sub-types

Natural ----- not treated nor processed to change materially the colour of the dried grapes (or raisins). Dipping in an alkaline lye and oil solution as an aid to drying is not considered treating or processing.

Bleached ----- raisins subjected to bleach treatment by chemical means and further processed by drying.

2.2.3

Styles

Non-Seeded --- with seeds not removed in seed-bearing (or Unseeded) types.

Seeded ----- with seeds removed mechanically in seed-bearing types.

Clusters ----- with main bunch stem attached.

2.3

Size classes

Size classes are not a part of this standard.

3.

ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1

Other Permitted Ingredients

Raisin oil and other edible vegetable oils such as to permit free-flowing raisins, sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup, and honey as may be appropriate to the product.

3.2

Quality Criteria

3.2.1

Definitions of Defects

- (a) Piece of stem ----- portion of the branch or main stem.
- (b) Cap-stem----- small woody stems exceeding 3 mm in length which attaches the grape to the branch of the bunch and whether or not attached to a raisin.

(Cap-stems are not considered a defect in "Unstemmed" Malaga Muscatel type raisins. In considering allowances for cap-stems on a "percentage by count" basis, cap-stems that are loose are counted as being on a raisin).

- (c) Undeveloped Raisins ----- refers to raisins that:
  - a) are extremely light-weight berries, lacking in sugary tissue indicating incomplete development
  - b) are completely shriveled with practically no flesh and
  - c) may be hard
- (d) Damaged Raisins ----- raisins affected by sunburn, scars, mechanical injury, or other similar means which seriously affect the appearance, edibility, keeping quality, or shipping quality.

In Seeded forms, normal mechanical injury resulting from normal seeding operations is not considered "damage".

In "Seedless" type, normal mechanical injury resulting from removal of cap-stems is not considered "damage".

- (e) Sugared Raisins ----- external or internal sugar crystals which are readily apparent and seriously affect the appearance of the raisin.
- (f) Seeds (in seeded forms) -- substantially whole, fully developed seeds which have not been successfully removed during processing of seeded forms.

3.2.2 Maturity Characteristics

Raisins shall show development characteristics of raisins prepared from properly matured grapes, as indicated by proper colour and texture for the type, and such raisins shall include a substantial portion of berries that are fleshy and of high sugar content.

No more than a total of 6% of the raisins may be indicative of very immature grapes, including no more than the allowances (2% or 3% for the respective type) permitted for undeveloped raisins (see 3.2.4).

3.2.3 Minimum Quality Requirements

Raisins shall be prepared from such materials and under such practices that the finished product shall possess normal colour, flavour, and maturity characteristics for the respective type and in addition comply with the following requirements:

- (a) Moisture Content --

	Maximum
Malaga Muscatel type	31%
Seeded (seeds removed) style --	19%
All other styles and/or types -	18%

- (b) Mineral Impurities - may not be present to the extent that the eating quality or usability is materially affected. (See also 6.2 of this standard).

[Level to be supplied, pending development of methodology ]

- (c) Other Defects ----- substantially free from stems, extraneous plant material and damage.

3.2.4 Allowances for Defects

Raisins shall not contain excessive defects (whether or not specifically defined or as allowed in this standard).

Certain common defects as defined in paragraph 3.2.1 may not exceed the limitations specified in paragraph 3.2.4.

DEFECTS	SEEDLESS TYPES	SEED-BEARING TYPES
	Maximum	
Pieces of stem (in stemmed forms)	1 per kg	2 per kg
Capstems (except in "Unstemmed" Malaga Muscatel type)	50 per 500 grams	25 per 500 grams
Undeveloped	3% by weight	2% by weight
Damaged	5% by weight	5% by weight
Sugared	15% by weight	15% by weight
Seeds (in seeded forms)	---	20 per 500 grams

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 by the Codex Committee on Food Additives.

Maximum Level of Use

<u>Sulphur Dioxide</u>	2,000 mg/kg
<u>Mineral Oil</u>	0.5% by weight

(See attachment 1 of this Appendix for specifications)

5. **CONTAMINANTS**

**Pesticide Residues**

Levels for pesticide residues for dried fruits that have been laid down by the Codex Committee on Pesticide Residues shall apply to Raisins.

6. **HYGIENE** <sup>1/</sup>

<sup>1/</sup> The end-product specification listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Draft Provisional Hygienic Code of Practice for Dried Fruits.

6.2 To the extent possible in good manufacturing practice the product shall be free from stones and other objectionable matter.

6.3 The product should not contain any pathogenic microorganisms or any toxic substance originating from microorganisms.

7. **WEIGHTS AND MEASURES**

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of content for the product

8. **LABELLING**

The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

- 8.1 The name of the food
- (a) The designation shall be "Raisins" or other recognized product name, together with the following designations, if applicable:
- (i) As to type group and/or style;
- "Seedless"  
"Seeded" or "With Seeds Removed"  
"Clusters"
- (iii) As to any characteristic coating:
- (e.g. "Coated with X ")
- (b) (See also 8.8 Optional Labelling)
- 8.2 List of Ingredients
- (a) A complete list of ingredients shall be declared on the label in descending order of proportion.
- (b) The provisions of Section 3 (2) (b) and 3 (2) (c) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 8.3 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.
- 8.4 Name and Address
- The provisions of Section 3 (4) (a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 8.5 Country of Origin
- The provisions of Section 3 (5) (a) and 3 (5) (b) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 8.6 Presentation of Mandatory Information
- The provisions of Section 4 (1) and 4 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 8.7 Additional or Different Requirements
- The provisions of Section 5 (1) and 5 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- 8.8 Optional Labelling
- (a) The provisions of Section 6 (1) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.
- (b) The following designations, if applicable or as appropriate, may be stated on the label in connection with, or in close proximity to, the product name, type group, and/or style:

"Golden" in lieu of "Bleached"  
"Golden Bleached"  
"Natural"  
"Non-Seeded" or "Unseeded" or "With Seeds"  
"Unstemmed".

(c) The product name may include the variety or varietal type group of raisins.

8.9 Definition of Terms

The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

8.10 General Principles

The provisions of Section 2 (1) and 2 (2) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

9. 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.

9.1 Sampling

9.1.1 Gross Sample

From each portion of 5,000 kg, or fraction thereof, select not less than 300 grams from each of 10 cases to make a combined sample of approximately 3,000 grams.

9.1.2 Sub-samples for Quality Criteria

From each combined sample select the following amounts for each sample or sub-sample needed to ascertain compliance with the requirements of this standard.:

Pieces of Stems                      Use entire composite of 3,000 grams.

Other Defects    )  
Colour            ) ----- Use a well-mixed sub-sample of 500 grams from composite.  
Maturity

Moisture ----- Use a sufficient well-mixed sample from composite for appropriate test -- approximately 500 grams.

9.2 Test Procedures

9.2.1 Moisture

Determination of moisture in raisins shall be made in accordance with the method for "Moisture in Dried Fruits" of the Official Methods of Analysis of the Association of Official Analytical Chemists (Tenth Edition).

9.2.2 Sand Test

[To be developed]

## PROPOSED

Specifications for Liquid, Semi-Liquid and Solid Mineral Hydrocarbons

1. Liquid mineral hydrocarbon—
  - (a) shall be a transparent, almost colourless and tasteless mixture of liquid mineral hydrocarbons;
  - (b) shall have an ultra-violet extinction (otherwise called absorbance) over the range 240 - 280 millimicrons not greater than 0.04 for a 1 centimetre layer of solution in iso-octane containing 1 gram per litre, that is to say,  $E \frac{1\%}{1 \text{ cm}}$  shall not be greater than 0.04 where  $E = \log_{10} (10/I)$  and 10 and 1 are the Intensities of the incident radiation and of the transmitted radiation respectively; and
  - (c) shall comply with the tests for acidity- or alkalinity, carbonisable substances solid paraffins, and sulphur compound given in the monograph for Liquid Paraffin in the British Pharmacopoeia 1963.

*Specification for semi-liquid mineral hydrocarbon*

2. Semi liquid mineral hydrocarbon —
  - (a) shall be a white translucent unctuous mixture, barely fluorescent in daylight, of semi-liquid mineral hydrocarbon
  - (b) shall contain not more than 0.1 per cent, by weight of sulphated ash;
  - (c) shall have an ultra-violet extinction (otherwise called absorbance) at 290 millimicrons not greater than 1.0 for a 1 centimetre layer of a solution in iso-octane containing 1 gram per litre, that is to say,  $E \frac{1\%}{1 \text{ cm}}$  shall not be greater than 1.0 where  $E = \log_{10} (10/I)$  and 10 and 1 are the intensities of the incident radiation and of the transmitted radiation respectively; and
  - (d) shall comply with the tests for acidity or alkalinity and sulphur compounds given in the monograph for Liquid Paraffin in the British Pharmacopoeia 1963.

*Specification for solid mineral hydrocarbon other than any solid mineral hydrocarbon used or intended for use in chewing compounds*

3. Solid mineral hydrocarbon other than any solid mineral hydrocarbon used or intended for use in any chewing compound—
  - (a) shall be an almost odourless and tasteless mixture of solid mineral hydrocarbon;
  - (b) shall contain not more than 0.1 per cent, by weight of sulphated ash;

- (c) shall comply with the test for acidity or alkalinity given in the monograph for Liquid Parafin in the British Pharmacopocia 1963;
- (d) shall comply with the test for sulphur compounds given in the monograph referred to in the preceding sub-paragraph of this Schedule: Provided that such test shall be carried out at 7°C, or at 5°C. above the congealing point, of the solid mineral hydrocarbon, whichever is the higher;
- (e) shall comply with the requirements specified in one of the following sub-paragraphs, namely—
  - (i) shall have been tested, before being used in the composition or preparation of any fond, for the presence of polycyclic hydrocarbon by the method described in Part II of this Schedule with the result described in paragraph 6 of the said Part II, and if such solid mineral hydrocarbon is tested subsequently by the said method, shall give (the said result, or
  - (ii) have a viscosity at 99°C. not greater than 7.0 centistokes and an ultra-violet extinction (otherwise called absorbance) at 290 millimicrons not greater than 0.04 for a 1 centimeter layer of solution in iso-octane containing 1 gram per liter, that is to say,  $E \frac{0.1\%}{1 \text{ cm}}$  shall not be greater than 0.04 where  $E_{10}$  and  $E_1$  are the intensities of the Incident radiation and of the transmitted radiation respectively
  - (iii) have a viscosity at 99° C not less than 10.0 centistokes and an ultra-violet extinction (otherwise called absorbance) at 290 millimicrons not greater than 1.0 for a 1 centimetre layer of a solution in iso-octane containing 1 gram per here that is to say,  $E \frac{0.1\%}{1 \text{ cm}}$  shall not be greater than 1.0 where  $E_{10}$  and  $E_1$  are the intensities of the Incident radiation and of the transmitted radiation respectively.

APPENDIX IX  
May 1969

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION  
Committee on Processed Fruits and Vegetables

Proposed Draft Standard

for

TABLE OLIVES -- STEP 3

Standard No. PFV 69/3-15

PROPOSED DRAFT STANDARD  
FOR  
TABLE OLIVES  
Advanced to Step 3

---

NOTE: Changes, additions, etc. made at the May 1969 meeting of the Committee on Processed Fruits and Vegetables are indicated by "PFV-69 \*\*".

---

1. SCOPE

This standard applies to the fruit of certain varieties of the cultivated olive tree (*Olea europaea*) which have been subjected to suitable treatments and processes to produce an edible product and ensure its preservation as a commercial article. This standard covers all or practically all of the types, styles and varieties of olives habitually produced and marketed ready for consumption.

2. DESCRIPTION

2.1 Product Definition

"Table Olives" applies to fruit of specific varieties of the cultivated olive tree (*Olea europaea sativa* Hoffg, Link) which is sound, has been picked at proper stage of ripeness and is fit to undergo the necessary treatments and processes described in the following paragraphs to produce an edible product that can be satisfactorily preserved as a trade article ready for delivery to the consumer, it being understood that said operations may allow for addition of various products or spices of good table quality.

2.2 Product Designation

2.2.1 According to trade types

Table olives are classified according to the trade types described below, in the establishment of which both the stage of ripeness of the fruit and the processes undergone are taken into account:

(1) Green olives:

- PFV-69 \*\*-- (a) green olives in brine, treated <sup>1/</sup>  
(b) green olives in brine, untreated <sup>2/</sup>

<sup>1/</sup> In French "confites" and in Spanish "aderezadas" or "curadas". In English it means bitterness removed by treatment with an alkaline lye.

<sup>2/</sup> In a number of countries this style is known under the designation "natural", in French "au naturel". In English "untreated" or "natural".

(2) Olives turning colour ("tournantes", green-ripe):

- (a) treated olives turning colour  
(b) natural olives turning colour <sup>3/</sup>

(3) Black olives in brine:

- (a) treated black olives
  - (b) natural black olives
  - (c) naturally shrivelled black olives
- (4) Black olives in dry salt:
- (a) treated black olives in dry salt
  - (b) natural black olives in dry salt
  - (c) naturally shriveled black olives in dry salt
  - (d) pierced black olives in dry salt
- (5) Other trade types:
- (a) bruised olives <sup>4/</sup>
  - (b) treated split olives
  - (c) natural split olives
  - (d) "California Style" Black Olives <sup>5/</sup>
  - (e) Specialties
- PFV-69 \*\* --

<sup>3/</sup> In certain regions these olives turning colour are known and marketed as "rougeottes" or "golden" olives.

<sup>4/</sup> Purposely bruised; known in French as "cassées", in Spanish as "partidas".

<sup>5/</sup> This is the type packed in California commonly known as "California Ripe Olives"

#### 2.2.1.1 Description of Trade Types

- (1) Green olives: These are prepared from green olives harvested while still ripening, but before full ripeness is attained, when the fruit has reached its normal size. Green olives are firm, sound, resistant to a slight pressure between the fingers and without marks other than the natural pigmentation, subject to the tolerances later provided for. The colour of the fruit may vary from clear green to straw yellow.
- (a) Treated green olives in brine: They are treated with an alkaline lye and then stored in brine and preserved;
    - (i) by natural lactic fermentation;
    - (ii) by slight natural fermentation, possibly followed by pasteurization;
    - (iii) by sterilization, pasteurization or addition of the preserving agents allowed by the Codex Committee on Food Additives.
  - (b) Green olives in brine, natural: These are placed directly in brine,

(2) Olives turning colour ("tournantes", green-ripe): These are obtained from fruit of rose, wine-rose or brown colour, harvested before the stage of complete ripeness is attained, which may or may not have been subjected to alkaline treatment and which are ready for consumption.

(a) Treated olives turning colour: This style is obtained from fruit treated with an alkaline solution and preserved:

- (i) in brine
- (ii) by heat sterilization
- (iii) in brine and by heat sterilization

(b) Natural olives turning colour: Olives preserved in brine and ready for consumption.

(3) Black olives in brine: Black olives in brine are firm, smooth and with a glossy skin. Owing to their methods of preparation they may present slight depressions. The colour varies according to production region and time of harvesting from reddish black through violet black, deep violet, yellowish black to deep chestnut.

Natural black olives retain a more pronounced fruity taste than treated black olives and, possibly, a trace of bitterness.

(a) Treated black olives: These are obtained from firm and practically ripe fruit treated with lye and, after natural oxidation, preserved in brine and/or by sterilization, pasteurization and/or the addition of preserving agents.

(b) Natural black olives: These are prepared from firm fruit harvested when fully ripe or slightly before full ripeness is attained and placed directly in brine,

(c) Naturally shrivelled black olives: These are obtained from olives harvested when fully ripe, after they have become shrivelled on the tree, and placed directly in brine.

- (4) Black olives in dry salt: Black olives in dry salt have a shrivelled or furrowed appearance, though the skin is intact. Natural black olives in dry salt retain a slightly bitter taste and a more pronounced fruity flavour than treated black olives in dry salt.
- (a) Treated black olives in dry salt:  
These are obtained from firm, practically ripe, fruit which, following slight alkaline treatment, is preserved in alternating layers of olives and dry salt or by sprinkling dry salt over the olives.
- (b) Natural black olives in dry salt:  
These are obtained from fruit harvested when fully ripe, placed immediately, or after partial drying, in alternating layers of olives and dry salt or by sprinkling dry salt over the olives.
- (c) Naturally shrivelled black olives in dry salt: These are obtained from fruit harvested when fully ripe, after they have become shrivelled on the tree, preserved in alternating layers of olives and dry salt or by sprinkling dry salt over the olives.
- (d) Pierced black olives in dry salt:  
These are obtained from fruit harvested when fully ripe which, after the skin has been pierced, is preserved in alternating layers of olives and dry salt or by sprinkling dry salt over the olives.
- (5) Other trade types
- (a) Bruised olives<sup>1/</sup>: These are obtained from whole fruit, fresh or previously treated in brine, subjected to a process whereby the flesh is bruised or crushed and the stone left whole and untouched within the fruit. They may be treated in weak lye to remove the bitter principle and are preserved in brine, possibly spiced.
- There are two types of bruised olives:

- (i) bruised green olives
- (ii) bruised olives turning colour (green-ripe olives).
- (b) Treated split olives: This style is obtained from green olives, olives turning colour or black olives split lengthwise after treatment in an alkaline solution and before being preserved in vinegary brine or not, with the addition or not of olive oil and/or, possibly, aromatic substances.
- (c) Natural split olives: This style is obtained from green olives, olives turning colour or black olives split lengthwise and placed in a vinegary brine or not, with the addition or not of olive oil and/or, possibly, aromatic substances.
- PFV-69 \*\* - (d) "California Style" Black Olives: This style is obtained from olives which are not fully mature, which have been darkened by oxidation, from which the bitterness has been removed by an alkaline lye, and which are packed in brine and preserved by heat sterilization.
- (e) Specialties: Olives may be prepared by means distinct from or additional to the above. Such specialties shall retain the description "olive" as long as the fruit employed comes within the general definitions laid down in this Standard. Descriptions of such olives shall be sufficiently explicit as not to create confusion in the buyer's or consumer's mind where the nature and origin of the products are concerned and, in particular, with respect to the designations laid down in this Standard.

<sup>1/</sup> Purposely bruised; in French "cassées" and in Spanish "partidas".

### 2.2.2 According to Style

PFV-69 \*\* -- Olives may be offered in one or the other of the following styles as appropriate for the trade type:

Whole: Olives of natural shape from which the stone has not been removed.

(a) Stemmed - With stems removed

(b) With Stem - With stems attached

Whole stoned (Pitted): Olives of essentially natural shape from which the stone has been removed.

Whole stuffed: Whole stoned olives which have been stuffed with a suitable product (Pimiento, onion, almond, celery, anchovy, olive, etc.).

Halved: Whole stoned (pitted) and/or stuffed olives that have been split into two approximately equal parts.

Sliced: Whole stoned (pitted) and/or stuffed olives that have been sliced into parallel segments of fairly uniform thickness.

Chopped or Minced: Stoned (pitted) olives that have been cut into small pieces of random shapes and sizes.

Broken<sup>1/</sup> Olives that have been accidentally broken while being stoned or stuffed.

<sup>1/</sup> In Spanish "rotas"

Deleted PFV-69 \*\* -- Olives of other trade types are generally-offered-as-whole.

PFV-69 \*\* -- See attachment 1 of this standard for "Table of Suggested Olive Size Counts"

### 2.2.3 According to Size

Table olives must be of uniform shape and size in one and the same container. Grading by size shall be according to the number of fruit in one kilogram or hectogram. The size shall be indicated by two whole numbers separated one from the other by an inclined stroke and representing the minimum and maximum number of olives in each unit of weight adopted by each country. When this unit is the kilogram, these figures shall terminate in noughts, the difference between the two being ten units (olives) up to size 150/160, and 20 units (olives) from this up to size 380/400. Above this latter size such difference may be of 100 units (olives).

When this unit of weight is the hectogram, the difference between the two whole figures in question shall be one unit (one olive) up to size 15/16 and 2 units (olives) from this up to size 38/40. Above this latter size such difference may be of 10 units (olives).

The above size grading provisions, do not apply to the preparations mentioned in paragraph 2.2.1.6 [except whole style (d)] nor to Sliced, Chopped or Broken Olives. Bruised ("cassées"; "partidas") olives may be prepared using fruit of different a ires, but the number of olives per kilogram shall in no case exceed 500.

## 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

### 3.1 Ingredients

Olives and as appropriate for the respective type of pack:

PFV-69 \*\* -- (a) Water, salt (sodium chloride), vinegar, olive oil, and sugars.

(b) Suitable stuffing material such as pimiento, onion, almond, celery and anchovy

(c) Spices and seasonings

## 3.2

### Quality criteria

#### 3.2.1

##### Brines

The brines used in the preservation of table olives must comply with the following characteristics:

- be obtained by dissolving commercially pure sodium chloride in potable water;
- be clean, with no abnormal smell or taste;
- be absolutely clear in the case of brine to be used for Covering green olives packed in small containers for delivery direct to the customer. Brines used in transport containers and small containers containing olives other than green olives may be less clear, but must be free of all foreign matter;
- have a minimum of 67. of sodium chloride for green olives, 8% for black olives in brine and 107. for black olives in dry salt. Such percentage may be reduced to 57. for green olives packed in hermetically sealed containers and 37. for pasteurized or sterilized olives;
- in the case of green olives that have undergone natural fermentation have a minimum acid content in terms of lactic acid of 0.47.;
- in the case of treated green olives, have a pH not exceeding 4 for hermetically sealed containers and 4.5 for casks. In the case of natural black olives, the pH shall not exceed 5.

#### 3.2.2

##### Organoleptic characteristics

Table olives shall be prepared from sound fruit, of a single variety. They are prepared from fruit meeting minimum quality requirements of fruit recognized as fair and marketable according to trade practice.

Table olives shall have a colour, appearance, firmness and flavour characteristic of the type and variety, having due regard for the treatment undergone by them. The olives shall not be fibrous, and shall not contain defects in excess of the allowances provided for herein.

Defects caused by microbial deterioration or defective fermentation are not allowed.

#### 3.2.3

##### Description of tolerated defects

- (a) Harmless extraneous material: any vegetable matter, for example leaves, separated stems, not injurious to health, nor esthetically undesirable.
- (b) Stem: means the immediate stem attached to the olive and which measures more than 3 mm. in length and is not considered a defect in whole olives presented with stem attached.

- (c) Stone or stone fragments (except for whole olives), means a whole pit (stone), or pieces of pit which weigh at least 5 milligrammes.
- (d) Skin blemishes:
  - In the case of green olives, olives turning colour and black treated olives: superficial marks which affect the appearance of the olive, but do not penetrate far into the flesh;
  - In the case of natural black olives and naturally shrivelled black olives picked when fully ripe or after reaching maturity: olives which have been mechanically damaged, crushed or torn.
- (e) Internal damage: means imperfection or damage to the flesh which definitely detract from the appearance and may be associated with superficial marks.
- (f) Abnormally shrivelled: means a whole olive in the styles of whole, whole stuffed and whole pitted (except for those styles and types that are characteristically shrivelled) that is so wrinkled as to affect the appearance of the fruit.
- (g) Mutilated: means an olive in whole pitted style that is damaged by tearing to the extent that the pit cavity is exposed or a substantial portion of the flesh.
- (h) Poor texture: olives which are excessively or abnormally flabby or fibrous in comparison to the trade type.
- (i) Off colour: olives the colour of which is distinctly different from that which is characteristic of the trade type under consideration.
- (j) Discolored stuffing: (in the case of stuffed olives): major defects due to handling or defective colouring of the stuffing, thus materially affecting the appearance.
- (k) Other defects: olives affected by pathological, mechanical defects [or insect damage] so as to be objectionable in appearance or quality, and which have not been described above,<sup>1/</sup>

<sup>1/</sup> portion in square brackets added by USA

### 3.2.4 Defect Allowance

The product shall be practically free of harmless extraneous matter; other defects shall not exceed, in one and the same container, the limits shown in the following tables.

It is clearly understood that in applying the allowances in the following tables:

- Table I includes Whole and Halved styles
- Table II includes Broken, Sliced and Chopped styles
- Extraneous matter is on a "percent by weight" basis
- Stone (pit) is expressed as "percent by count" in Table I and "number of pieces per 200 grams" in Table II

-- All other defects are expressed as "percent by count" in Table I and "percent by weight" in Table II.

TABLE I (Whole or Halved Styles)

Defects	Size for each defect compared to the fruit's surface (S) and to the Vol. (V)	PFV-69 **		
		Green O. and Calif. Style Olives	O. turning col. and black O. in brine	Natural black O. and nat. shrivelled black O.
a) Harmless Extraneous matter (percentage by weight)		0.5	0.5	0.5
<u>Percentage by Count</u>				
b) Fruits with stems (except for the style with stems)				
- container ≤ 5 kg		3	3	3
- container > 5 kg		6	6	6
c) Stone (Pit) or fragments thereof		2	1 <sup>1/</sup>	1 <sup>1/</sup>
d) Skin Blemish	≠ S/8	10	10	15
	> S/8 but < S/4	5	5	10
e) Internal Defects	≠ V/8	10	10	10
	> V/8 but < V/4	5	5	5
f) Abnormally shrivelled fruit		10	10	10
g) Mutilated (Stoned or Pitted Styles)		10	1 <sup>1/</sup>	1 <sup>1/</sup>
h) Poor Texture		5	5	15
i) Off Colour		5	5	15
j) Discoloured Stuffing		5	5	5
k) Other Damage (Serious)		2	2	2
Total Limit--Defects b) through k)		30	30	30

1) Dacus infested fruit or other insects	For green olives		
- container ≠ 5 kg	included in skin	6	10
- container > 5 kg	defects or internal defects	10	20

≠ ( ) equal or less than  
 < less than  
 > greater than

<sup>1/</sup> Applies only to the style of stoned or pitted olives.

TABLE II (Broken, Chopped and Sliced Styles)

DEFECT	TOLERANCE
- Harmless extraneous matter	0.57% by weight
- Stone (pit including fragments)	One per 200 grams
- Other defects	10% by weight

TABLE III SIZING DEFECTS  
(Whole Olivea)

Description	PFV-69 ** -- Green O. and Calif. Style Olives	O. turning col. and black. O. in brine	Natural Black O. and nat. shriv. black O.	
			Tolerance (Percent by Count)	
- in fruit being of an immediately higher or lower size				
- container < 5 kg	5	-	-	-
- container > 5 kg	8	-	-	-
- in fruit being of an immediately higher or lower size in cases where the fruit are greater than size 240	-	20	20	
- in fruit being of the two sizes immediately above or below in cases where the fruit are smaller than that in size 240	-	20	20	

Note: Sizing requirements for the styles of whole stoned (pitted) and whole stuffed to be developed using the criteria that would relate to the size of the olives and the pit.

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 by the Codex Committee on Food Additives.

	Maximum Level of Use (to be considered)
Sorbic Acid	
Lactic Acid - - - - -	Not limited
Citric Acid - - - - -	Not limited
Ascorbic Acid - - - - -	Not limited

5. CONTAMINANTS

Pesticide Residues

Such levels as may be laid down by the Codex Committee on Pesticide Residues shall apply.

6. HYGIENE <sup>1/</sup>

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Codex Alimentarius Provisional Hygienic Code of Practice for Canned Fruit and Vegetable Products.

6.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.

6.3 The product shall not contain any pathogenic microorganisms or any toxic substance originating from microorganisms.

PFV-69 \*\* --

6.4 Olives preserved by heat sterilization (as in California Style Black Olives) shall have received a processing treatment sufficient to destroy all spores of Clostridium botulinum.

7. WEIGHTS AND MEASURES

7.1 Container fill

Containers shall be adapted to the net weight of drained olives to be packed in them in such a manner that they are always sufficiently filled with olives covered by brine.

In all cases the olives and brine shall occupy at least 90% of the container's capacity.

7.2 Minimum drained weight

When olives are packed in hermetically sealed containers in brine the weight of the drained olives shall be not less than indicated in the following Table IV.

[The figures in the table are tentative and subject to change after review by governments]

<sup>1/</sup> The end-product specification listed in this section are in conformity with those recommended by the Codex Committee on Food Hygiene.

TABLE IV DRAINED WEIGHT

Minimum drained weight by percentages compared to  
the water capacity of a container at 20 C

Trade type, style and size	Contents of Containers				
	250 gr. and 251 to 500 loss	501 to gr.	501 to 2,000 gr.	2,001 to 5,000 gr.	5,001 to 13,000 gr.
<u>Green olives:</u>					
<u>Whole and stuffed</u>					
Sizes:					
- over 300 fruits/kilo	60	65	68	70	
- 150 to 300 fruits/kilo	52	55	60	60	
- less than 150 fruits/kilo	45	52	55	55	
<u>Pitted</u>					
- over 150 fruits/kilo	55	60	63	65	
- less than 150 fruits/kilo	45	55	58	60	
<u>Halved</u>					
	45	52	55	55	
<u>Sliced</u>					
	50	55	60	60	
<u>Chopped</u>					
	80	85	90	90	
<u>Black olives in brine:</u>					
Sizes:					
- over 300 fruits/kilo	62	68	70	70	
- 150 to 300 fruits/kilo	55	58	60	65	
- less than 150 fruits/kilo	48	55	57	57	
<u>Black olives in dry salt</u>					
	50	58	60	60	

8. LABELLING (For containers of 5 kilo or less)

PFV-69 \*\*- The following provisions in respect of the labelling of the product are subject to endorsement by the Codex Committee on Food Labelling:

8.1 The Name of the Food

8.1.1 The name of the product shall include:

- the name of the product which is "Table Olives" or "Olives",
- designation of the product in terms of the trade type such as "Green Olives", "Olives Turning Colour", "Natural Black Olives in Salt" etc.,
- the style of product such as "Whole", "Sliced", "Halved", "Stuffed", etc.<sup>1/</sup>
- the size of whole olives, either by a reasonably exact graphic representation of the whole olive or in terms of the number of olives per kilo, number per pound or number per other well understood unit of weight.<sup>1/</sup>

<sup>1/</sup> This information may be omitted from the label in the case of transparent containers.

8.2 List of Ingredients

8.2.1 A complete list of ingredients (including food additives and preserving agents) shall be declared on the label in descending order of proportion.

8.2.2 The provisions of section 3(2)(b) and 3(2)(c) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

8.3 Net Contents

The net drained weight shall be declared 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.

8.4 Name and Address

The provisions of Section 3»4(a) of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

8.5 Country of Origin

The country of origin of the product shall be declared unless it is sold within the country of origin, in which case the country of origin need not be declared. If the product undergoes processing in a second country which essentially 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.

8.6 Presentation of Mandatory Information

The provisions of section 4.1 and 4.2 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 8.7 Optional Labelling

- variety,
- gross weight of container,
- year harvested, in the case of containers of more than 5 kgs, <sup>2/</sup>
- if need be, mention of heat sterilization or pasteurization.

The provisions of section 6.1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

<sup>2/</sup> Where this information does not appear on containers it must figure on the documents accompanying the merchandise.

## 8.8 Definition of Terms

The definition of terms contained in Section 1 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 8.9 General Principles

The provisions of section 2.1 and 2.2 of the Recommended General Standard for the Labelling of Prepackaged Foods shall apply.

## 9. UNIFORMITY OF PACK

Except within the limits of the tolerances provided in this standard, each container shall only contain fruit of the same variety, trade type, style, size and quality class, prepared in the same way, of uniform colour and of clean appearance.

[Note by USA: - This paragraph would be more appropriate as an Introduction in paragraph 8. LABELLING or paragraph 3. ESSENTIAL COMPOSITION AND QUALITY CRITERIA]

## 10. CONTAINERS

The containers in which table olives are packed must be new or in very good condition, be leakproof and be manufactured of materials which cannot impart any foreign smell or taste to the olives or subject these to the effects of any toxic substances. Metal containers must be new and their inner surface must be perfectly resistant to corrosion.

The competent authorities or organizations in each country may draw up a list of approved containers, in accordance with particular trade usages, stipulating their technical characteristics - especially where containers made of new materials are concerned - taking into account both the foregoing provisions and the recommendations in the matter adopted by the Codex Committee on Food Hygiene.

In the case of transparent containers (glass, plastic, etc.), olives may be stowed in orderly fashion, or in bulk.

## 11. 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.

- 11.1 Test procedures
- 11.1.1 Drained Weights

In accordance with the applicable Drained Weight Method for Processed Fruit and Vegetable Products of the 'Methods of Analysis of the Association of Official Analytical Chemists'.
- 11.1.2 Other Tests

[To be developed]
- 11.2 Sampling
- 11.2.1 Containers Not Exceeding 13.5 kilos

Sampling and lot acceptance shall be in accordance with the Sampling PFV-69 \*\* -- Plans for Prepackaged Foods.
- 11.2.2 Containers Larger Than 13.5 Kilos

5% of the number of containers. [Provisional Measure]
- 11.3 Lot Acceptance

In applying the sampling plans specified in section 11.2 a container will be considered as a "defective" when, for one defect only, the percentage in less than half of the samples is higher than the tolerance but less than the figure obtained after increasing the latter by 1071, the lot shall notwithstanding be considered as complying with regulations if the average percentage for said defect in all the samples inspected remains less than or, at most, equal to said tolerance.

TABLE  
OF SUGGESTED  
OLIVE SIZE COUNTS

COUNT DESIGNATIONS		COUNT DESIGNATIONS	
<u>Per Kilo</u>	<u>Per Pound</u> (Approximate)	<u>Per Kilo</u>	<u>Per Pound</u> (Approximate)
400/1+20	181-190	140/150	64-68
380/400	172-181	130/140	59-64
340/360	154-163	120/130	54-59
300/320	136-145	110/120	50-54
280/300	127-136	100/110	45-50
240/260	109-118	90/100	41-45
200/220	91-100	80/90	36-41
180/200	82-91	70/80	32-36
160/180	73-82	60/70	27-32
150/160	68-73		