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CODEX ALIMENTARIUS COMMISSION
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REPORT OF THE EIGHTH SESSION
OF THE
CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

Washington D.C.
7-11 June 1971

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Introduction.

1. The Eighth Session of the Codex Committee on Processed Fruits and Vegetables was held at the Pan American Health Organization Building under the chairmanship of the United States, with Dr. Floyd F. Hedlund in the chair, owing to illness of Mr. Fitzhugh L. Southerland. The Committee expressed its best wishes for the recovery of Mr. Southerland. Representatives and observers from 23 countries and observers from 7 international organizations attended the session. The list of participants appears as Appendix I to this report. The participants were welcomed by the Chairman and by Mr. George Grange, U. S. Codex Coordinator and a Vice-Chairman of the Commission. Mr. Grange briefly reviewed the relevant main points arising from the Report of the Sixteenth Session of the Executive Committee.

Adoption of the Agenda.

2. The Committee adopted the provisional agenda.

Matters Arising From the Reports of (a) the Seventh Session of the Codex Committee on Food Additives (ALINORM 71/12) and (b) the Sixth Session of the Codex Committee on Methods of Analysis and Sampling.

3. As at previous sessions, the Committee agreed that it would be best to consider the remarks in the above reports relating to the standards which were before it for consideration, when it came to discuss the standards individually. The Committee took note of the general remarks in paragraphs 23 and 24 of ALINORM 71/12 concerning (a) the desirability of fixing maximum levels for food additives rather than limiting the use by good manufacturing practice, and (b) the need for adhering to the General Provisions of Food Additives (Report of the Seventh Session of the Codex Alimentarius Commission, ALINORM 70/43, Appendix VI) in making provision for the use of food additives in Codex Standards.

Standard for Canned Mandarin Oranges Considered at Step 7.

4. The Committee considered the Standard for Canned Mandarin Oranges contained in Appendix VI to ALINORM 70/20, in the light of government comments received thereon. The standard, as revised by the Committee, is contained in Appendix II to this report. The main points emerging from the Committee's deliberations are set out hereunder.
5. The Committee agreed to make the necessary editorial and presentational amendments to the standard, in line with the changes which it had made at its last session, when considering the standard for canned plums and standards for other products at Step 7.
6. The delegation of China proposed that the Product Definition be expanded to include species similar to Citrus reticulata Blanco, such as Citrus Tankan Hayata. The delegation of China stated that this specie, which is a kind of mandarin orange, was not covered by the Product Definition as presently drafted. It was not a variety of Citrus reticulata Blanco. The Committee had doubts whether, if it were a separate specie, it could properly be regarded as mandarin oranges, and it decided, therefore, not to adopt the proposal of the delegation of China at this stage. It noted, however, that if the proposed schedule of Codex meetings for 1972/75 were agreed to by the Commission at its Eighth Session, there would be an opportunity to re-examine this point at its next session. Failing this, the matter could be considered by the Commission at its Ninth Session in the light of Step 8 comments. (See also paragraph 105 of this Report).
7. The Committee agreed to provide for the optional use of lemon juice as an acidifying agent or flavour enhancer.
8. The Committee considered proposals to reduce the number of syrup strengths and to alter some of the Brix figures. It was the general consensus in the Committee to adhere to the existing text which it had agreed to at its Sixth Session and which was the same as in a number of other standards. The delegation of Poland and the observer from the International Organization for Standardization suggested that it would be preferable to express the Brix values in terms of percentage of sucrose. It was pointed out, however, that it was clear from the method of analysis endorsed for syrup measurements that the results would be expressed as % m/m of sucrose ("degrees Brix").
9. As regards the Section on Quality Criteria, the Committee agreed to accept a proposal of the delegation of Japan to amend the definition of Broken Segment. The text adopted by the Committee is

set out in the revised version of the standard annexed to this report. In accepting the Japanese amendment, the Committee noted that only about 10% of the trade was in broken segments (90% of the trade being in whole segments), and recognized that a change to mechanized packing made it difficult to ensure that the provision as originally drafted could always be met. For this reason, the Committee, although it retained the reference to "at least one-half of the original apparent segment size", accepted the view that for practical technological reasons it was necessary to provide for a precise figure, which would apply only if it was not apparent that a portion of a segment was at least one-half of the original segment.

10. The Committee also accepted a proposal of the delegation of Japan to amend the provision on Whole Segment style (sub-section 2.3.5(a) of the standard). In agreeing to this proposal, which is set out in the revised version of the standard, the Committee recognized that it constituted a slight lowering of the quality criteria, but there were no strong views against the argument that with the introduction of automatic peeling and segmenting machines it would not be possible to achieve consistently the higher figures originally laid down in the draft standard.
11. The Committee agreed that the defect provisions in sub-section 2.3.6 of the standard should be based on sample average. It was confirmed that the sample size would always be the same (i.e. as laid down in the Sampling Plans for Prepackaged Foods), independent of whether a lot was being checked for compliance with requirements based on sample average (certain quality defects and Brix values) or for compliance with requirements based on individual units or containers, e.g. quality criteria such as colour, flavour, texture, wholeness.
12. As regards the Food Additives Section of the standard, the Committee noted that the Codex Committee on Food Additives had endorsed the use of citric acid, the amount which may be added being governed by good manufacturing practice. The Committee saw no reason, in the case of this additive, for proposing a figure for maximum level of use. On the basis of a paper which had been presented by the delegation of Japan, the Committee considered that a technological case had been established for the use of methyl cellulose (anti-clouding agent) at the level proposed of 10 mg/kg. The Committee noted that the Codex Committee on Food Additives had postponed taking a position on the use of this additive at the level proposed, pending a firm recommendation from the Committee on Processed Fruits and Vegetables. The Committee agreed to the specifications for methyl cellulose as now included in the revised version of the standard. These specifications were those in the U.S. Food Chemicals Codex. The delegation of Poland was opposed to the use of this additive and reserved its position.

13. As regards contaminants, the Committee noted that the level of 250 mg/kg for tin had been temporarily endorsed by the Codex Committee on Food Additives, subject to review not later than two years following adoption of the standard by the Commission at Step 8. The same provision appeared in the Step 9 standard for Canned Pineapple. At its last session, however, the Committee decided that, with the exception of Canned Asparagus in which it laid down a maximum level for tin, it would be best not to lay down a figure or figures for tin in the standards which it had before it at the session, as it did not have adequate data on which to propose a figure or figures. Although work was now proceeding on the collection of data, both for tin and other heavy metals, the Committee was not yet in a position to propose definitive limits for tin or other heavy metals. The Committee agreed to retain the figure of 250 mg/kg for tin in this standard, recognizing that it might be necessary to amend this figure at a later stage when the necessary data became available. Taking into account that this level had been temporarily endorsed by the Codex Committee on Food Additives in this and certain other standards for processed fruits and vegetables, the Committee considered that, pending the fixing of definitive figures for tin, the figure of 250 mg/kg should be included in all the standards for processed fruits and vegetables, including those which will be considered by the Commission at its next session at Step 8. The delegation of Poland reserved its position on the figure of 250 mg/kg for tin, stating that, in its view, the maximum limit should be 150 mg/kg.
14. The Committee agreed that the delegation of the United Kingdom should collect the necessary data on tin and other heavy metals, including that available in other countries together with details of the methods employed, and present a paper with recommendations to the Committee as soon as possible. The Committee took note of the remarks of the U.S. delegation to the effect that the following observations were generally confirmed by most investigators.
- (a) Products packed in fully enameled (lacquered) cans have a low tin content. The fact that detectable amounts have been found can probably be attributed to imperfections in the lining exposing minute areas of the base plate.
 - (b) Certain products are generally packed in fully enameled cans, not only because of corrosive action on tin plate but also because of colour retention - e.g. peas, corn, dark cherries, most berries. One would, therefore, expect such products to be low in tin content.

- (c) Certain products require some tin to maintain desirable colour characteristics or prevent the formation of undesirable compounds - e.g. canned asparagus and most light coloured fruits.
 - (d) Certain products normally packed in cans with tin lining are low to moderate detinners (e.g. applesauce, peaches, pears, fruit cocktail) whereas certain products are characteristically more corrosive (e.g. asparagus, green beans, tomato concentrates).
 - (e) Products increase in tin content rather rapidly when allowed to stand in opened containers for more than 24 hours.
15. The Committee also agreed on the need for the development of suitable analytical methods for the determination of tin and other heavy metals as soon as possible.
16. As regards the hygiene section of the standard, the Committee noted that the provision relating to pathogenic microorganisms and toxic substances originating from microorganisms appeared in a number of Codex standards (fruit juices, cocoa products and chocolate, in addition to processed fruits and vegetables) but that it was differently expressed in the different sets of standards. With a view to arriving at a uniform text as far as feasible, the Committee agreed to amend sub-section 5.3 of the standard, in such a way that it was in line with the latest terminology agreed upon by the Joint ECE/Codex Group of Experts on Fruit Juices and the Codex Committee on Cocoa Products and Chocolate. The Committee agreed that sub-section 5.3 should read as follows:

"5.3 Microorganisms capable of development under normal conditions of storage shall not be present.

"5.4 The product shall not contain any substances originating from microorganisms in amounts which are toxic."

The Committee thought that the above phraseology would be suitable for most of the standards for processed fruits and vegetables including those being submitted to the next session of the Commission at Step 8. The delegation of the Netherlands was not in favor of this terminology, since it considered that it could be interpreted in different ways. The Committee recognized the need for the development of suitable methodology in this area and noted that this matter was being pursued by the Codex Committee on Food Hygiene.

17. The Committee considered a proposal by the delegation of Japan to amend sub-section 6.1.2.1 of the standard on minimum drained weight. The delegation of Japan proposed that where the product was packed in Heavy or Extra Heavy Syrup, the drained weight should be 52%. The delegation of China supported the delegation of Japan but indicated that China did not pack this product in Heavy or Extra Heavy Syrup. None of the other delegations present were convinced as to the need to change the provision as agreed upon at the Sixth Session of the Committee, and, taking into account that the other standards did not provide for different drained weights based on different syrup strengths and that, in any event, only a small portion of the product was packed in Japan in Heavy and Extra Heavy Syrup, the Committee decided to leave the text unaltered.
18. There was no change of substance made in the labelling section of the standard, but it was agreed that this section should be editorially amended to bring it into line with layout agreed upon in the standards considered at the last session and that the negative provision stating that "it shall not be necessary to declare the drained weight of the product" be deleted.
19. The Committee noted that the method which it had proposed at its last session for determining the water capacity of containers had been endorsed by the Codex Committee on Methods of Analysis and Sampling for all canned fruits and vegetables and that it would, therefore, be included in the revised version of the standard.

Advancement of the Standard for Canned Mandarin Oranges to Step 8.

20. During the adoption of the draft report, the delegation of Japan offered the following new proposal regarding size classification:

that in sub-section 1.3.1, the words "shall be reasonably uniform in size and" be deleted and that sub-section 1.3.1.1 be replaced by the following:

"1.3.1.1 Allowances for Size Classification

Canned mandarine oranges will be considered as meeting the requirement of the designated style when the number of segments deviates from the applicable limitation of the number of segments by less than 20% of it, provided that the containers with the deviation are less than 30% of all the containers constituting a single lot."

Since this proposal was put forward during the adoption of the draft report, the Committee was not in a position to give it consideration, and therefore, no action was taken on the proposal.

21. The Committee agreed to advance the standard to Step 8 for adoption by the Ninth Session of the Commission.

Standard for Canned Pears Considered at Step 7.

22. The Committee considered the standard for canned pears contained in Appendix V of ALINORM 70/20, in the light of government comments thereon. The standard, as revised by the Committee, is contained in Appendix III of this report. The main points emerging from the Committee's deliberations were as set out hereunder.
23. It was agreed that sub-section 1.1(b) of the Product Definition and sub-sections 1.3(a) and 1.3(b) under Styles should be clarified in the way set out in the revised version of the standard.
24. The delegation of the USA and the delegation of Belgium, in their written comments, drew attention to the need to provide in the standard for the use, in packing media, of juices other than pear juice. This proposal was the subject of considerable discussion, in that none of the other standards elaborated so far by the Committee permitted the use, in packing media, of juices other than the juice(s) of the product(s) covered by the standard concerned. It was pointed out that canned pears in packing media consisting of or containing juices other than the juice of pears was a specialty pack which had found ready consumer acceptance and that the standard should cover such products. It was also pointed out that such juices would be "compatible" juices, such as strawberry juice, orange juice and grape juice but not, for example, tomato juice. While the view was put forward that packing media consisting of or containing juice other than pear juice might be regarded as changing the nature of the product commonly known as "canned pears" to the extent that it could be regarded as a separate product and outside the scope of the standard, the Committee, after further consideration, decided that it would be in the interest of consumers to cover such specialty packs in the standard, subject to appropriate labelling, so that the consumer would be accurately informed as to the nature of such products.
25. The Committee agreed that where the packing medium consisted solely of juice(s) other than the juice of pears, the name(s) of such juice(s) should form part of the name of the product. The Committee agreed that, in declaring the packing medium on the label, there should be no reference to the fruit juice(s) added, unless the packing medium consisted solely of such fruit juice(s). It was also agreed that such juices should be single strength juices. The Committee further agreed that when sugar was added to juices other than pear juice, where such juices were the sole liquid packing medium, there should be an indication, as part of the name of the

product, that the pears had been sweetened and the degree of sweetening should be in accordance with the syrup categories laid down in the standard. It was also agreed that when the packing medium consisted of a pear juice other than a declared varietal name of canned pears, the variety of pear from which such juice was obtained should be indicated on the label. The delegation of France stated that, in its view, when the packing medium consisted of a pear juice other than a declared varietal name of canned pears, the term "flavoured" should also appear on the label. The sections on Basic Ingredients and Labelling were amended as shown in the revised version of the standard.

26. The delegation of the Netherlands proposed that the Brix figures for light syrup and heavy syrup be changed from 14° and 18° to 16° and 20°, respectively. The delegation of Poland associated itself with the delegation of the Netherlands on this point. The delegation of France stated that it was not in favor of providing for syrups with Brix figures of 10° and 14°. The delegation of the Netherlands stated that while it recognized that some countries produced varieties of pears which would enable a figure of 14° Brix to be met in the light syrup category without sugar, other countries - more especially northern countries, such as the Netherlands - would have difficulty in meeting this figure. It was pointed out that the four syrup categories had been the subject of a full discussion on the last occasion when the standard had been considered by the Committee; that the four categories with the Brix figures as given in the standards took into account the needs of all the producing countries, a number of which needed the four syrup strengths, with the Brix figures as in the standard, to meet consumer demand; that there was a demand in some countries for pears packed in light and extra light syrups; that while the four categories of syrup strengths were broad enough to cover the entire range of all countries' needs, they were at the same time sufficiently flexible not to place significant difficulties in the way of individual countries, as a range of syrup strengths was provided within each category. The Committee did not consider that the fact that some countries might need to add more sugar than at present to the syrup to make the product acceptable was a reason for raising the Brix figure. The majority view in the Committee, therefore, was to leave the text on syrup strengths unaltered.

27. The Committee agreed to provide for the optional use of lemon juice, in the list of permitted ingredients, as an acidifying agent or flavour enhancer. The provision on natural flavourings was transferred to the Food Additives Section of the standard. The Committee considered a written proposal of Sweden to provide for the use of brandy, rum, liqueurs, etc. in the packing medium. The Committee thought that because of laws affecting the use of spiritous liquors in foods in some countries, there might be difficulties in accepting the Swedish proposal, more especially as the proposal, if it were incorporated in the standard, might have a bearing on the acceptance of the standard for some countries.
28. The Committee amended the definition of Broken Pears and the sub-sections on Colour and on Uniformity of Size in the way indicated in the revised version of the standard.
29. The Committee amended the defect allowances governing Broken Pears and Peel. The Committee agreed that with increasing mechanization of packaging it would be difficult to meet consistently the tolerance for Broken Pears laid down in the standard and the Committee agreed, therefore, for practical reasons of technology, to increase the tolerance for Broken Pears. On the other hand, the Committee agreed that it would be possible to lower the tolerance for peel and reduced this tolerance in the standard.
30. As regards the Food Additives Section of the standard, a majority of the Committee agreed to provide for the use of a number of additional food colours namely Tartrazine (1956; C.I. 19140), Ponceau 4-R (1956; C.I. 16255) and Carmoisine W-5 (1956; C.I. 14720). These food colours would be added to those already provided for in the standard and the level of use for all would be 200 mg/kg singly or in combination. The Committee took this decision, recognizing that while some countries did not permit the use of colours others did, and the Committee accepted that in some countries their use was required to satisfy a long established consumer demand. The delegations of France and Poland were opposed to the use of any food colours in the standard. The delegation of Norway was opposed to the use of Erythrosine, Amaranth, Fast Green FCF and Green S, but was not in a position to indicate at this stage its attitude to the newly added colours. The delegation of the Netherlands was opposed to the use of Fast Green FCF. The delegation of Japan was against the use of Green S and Carmoisine.

31. The Committee considered the wish of the delegation of Australia to provide in the standard for the use of essence of green ginger (05/0328), essence of mint (06/0941) and essence of cinnamon soluble (no number). The Committee agreed to alter the existing text on natural fruit essences to read "natural flavours and their identical synthetic equivalents", which would include the above essences.
32. As regards the section on Contaminants, the Committee agreed that its decision taken in the case of the standard for Mandarin Oranges was equally applicable to this product. The delegation of Poland reserved its position on the figure of 250 mg/kg for tin, wishing to see a figure of 150 mg/kg in the standard.
33. The Hygiene section of the standard was amended in the same way as for Mandarin Oranges.
34. As regards Minimum Drained Weight, the Committee agreed to remove the square brackets from the figure of 50% for Whole Style.
35. The Labelling section of the standard was amended as described in paragraph 25 of this report. In the case of whole pears, it was agreed that there should be an indication on the label as to whether the product was stemmed or unstemmed. Sub-section 7.1(d) concerning the declaration of artificial coloured pears was also amended.
36. The Committee noted that the method which it had approved at its last session for determining the water capacity of containers had been endorsed and would be included in the present standard.

Advancement of the Standard for Canned Pears to Step 8.

37. The Committee agreed to advance the standard for Canned Pears to Step 8 for adoption by the Commission at its Ninth Session.

Standard for Raisins considered at Step 7

38. The Committee considered the standard for Raisins contained in Appendix VIII to ALINORM 70/20, in the light of government comments received thereon. The standard, as revised by the Committee, is contained in Appendix VI of this report. The main points emerging from the Committee's deliberations were as set out hereunder.
39. The observer from the International Vine and Wine Office drew attention to the fact that dried currants were specifically excluded from the scope of the standard. The IWO thought that this should not be so, since both currants and raisins were the product of Vitis vinifera L. It was pointed out that the Committee had decided at an earlier session to exclude dried currants from the scope of the present standard, because they had different characteristics from raisins and were regarded as a separate item of commerce from raisins. It would be the intention of the Committee, at a later stage, to consider elaborating a standard for dried currants. The Committee made no change in the Scope section.
40. The Product Definition contained a provision requiring that raisins "be properly cleaned (including washing with water)". The attention of the Committee was drawn to the fact that, in response to demand from some countries, there was an international trade in raisins that had not been washed, but that such raisins were not offered for retail sale to the consumer, but were intended for further processing which included washing. The suggestion was put forward that raisins intended for further processing and labelled as such might be excluded from the scope of the standard, thus limiting the standard to raisins offered for sale to the consumer. The Committee considered, however, that as the major part of the trade in raisins was in bulk and not in consumer packs, it would be in the ultimate interest of the consumer to cover in the standard both the trade in bulk lots and the retail trade. The Committee agreed to amend the Product Definition in such a way that the washing of raisins would be optional, recognizing that the Product Definition required that the raisins must be properly cleaned, whether washed or unwashed. The Committee also amended the Product Definition to make it clear that raisins may be bleached or unbleached or dipped in an alkaline lye with oil solution, seeded or unseeded, and may be coated with one or more of the sugars permitted in the Ingredients Section of the standard.
41. As regards sub-section 2.2.2 of the standard, which provided for two sub-types, Natural and Bleached, a number of delegations indicated that they could not accept the use of the term "natural" to describe

a product which had been dipped in an alkaline lye and oil solution. These delegations stated that they would regard as "natural" only raisins which had been sun dried, with no alkaline dip. The Committee agreed that there were three sub-types (a) natural, (b) dipped in an alkaline lye and oil solution and (c) bleached, but considered that by suitably amending the Product Definition as referred to in paragraph 40 of this report, and with appropriate labelling requirements, the consumers would be adequately protected. It was agreed that where the raisins had been bleached, this fact would have to be indicated on the label and that if the raisins had been dipped in an alkaline lye and oil solution they could not be labelled as "natural".

42. The Committee saw no reason for retaining in the standard sub-section 2.3 Size Classes, which did no more than state that size classes did not form part of the standard.
43. As regards the Definitions of Defects, the Committee added a sentence to the definition of "Sugared Raisins" to make it clear that raisins to which sugar had been intentionally added were not regarded as "sugared raisins".
44. In connection with sub-section 3.2.3(b) of the standard, Mineral Impurities, the Committee agreed that there was a need for a suitable method for determining mineral impurities. The representative of ISO drew attention to the fact that there was an ISO recommended method for the determination of mineral impurities in fruits and vegetables. The representative of the AOAC referred to a new method, which had been evolved following collaborative studies, and stated that this new method of determining mineral impurities, which was largely the same as the ISO method, would probably be very suitable for raisins. The Committee agreed to include this new method in the standard but asked the delegations of the USA and Australia in cooperation with the AOAC to study it further in the light of experience and to suggest a level for consideration by the Committee at its next session.
45. In the sub-section on Allowances for Defects, the Committee agreed that the tolerance for pieces of stem in seedless types of raisins was unduly restrictive and difficult for the industry to meet consistently. The Committee agreed therefore to raise the tolerance from 1 piece to 2 pieces per kg. As regards the tolerance of 15% for "sugared raisins", the Committee noted that "sugared raisins" would be more common in bulk than in retail packs. While the Committee agreed to retain this tolerance in the standard, the delegation of the United Kingdom stated that, where consumer packs were concerned, it was not convinced that a tolerance as high as 15% was necessary or in the interest of consumers, as it would mean that a significant amount of a pack could consist of "sugared raisins".

46. As regards the Food Additives Section of the standard, the Committee noted that the Food Additives Committee had endorsed the use of sulphur dioxide at a level of 2000 mg/kg and mineral oil at a level of 0.5% by weight. The Committee noted that the Joint FAO/WHO Expert Committee on Food Additives had established specifications for food grade mineral oil which limited any impurities present. The Committee noted that the use of sulphur dioxide, which was for the purpose of maintaining the colour, was confined to bleached raisins. A number of delegations were in favour of reducing the level for sulphur dioxide. It was pointed out that although after sulphuring, which was carried out at the time the raisins were dried, the level of SO₂ might reach 2000 mg/kg, the amount of SO₂ present by the time the product reached the consumer should be less. The delegations from countries which used SO₂ for this purpose agreed that a figure of 1500 mg/kg of SO₂ would be satisfactory and the provision was amended accordingly. The Committee agreed to retain the provision on mineral oil at a level of 0.5%. The delegation of Japan reserved its position on the use of these two additives, as it was not convinced that they were technologically necessary. The delegation of France considered that the level of 1500 mg/kg for sulphur dioxide was too high and stated that it could accept a maximum level of 1000 mg/kg. The delegation of Poland was also opposed to the level agreed upon for sulphur dioxide and stated that it could accept a maximum level of 500 mg/kg. The delegation of Poland also reserved its position on the use of mineral oil.
47. The Committee considered a proposal of the delegation of the USA to provide for the use of Sorbitol at a level of 0.5%, for the purpose of retaining the moisture of the raisins. Some delegations had doubts as to whether there was a technological need for the use of this additive and the question was raised by the representative of the International Organization of Consumer Unions whether proper packaging would not make the use of this additive unnecessary. It was stated in reply that this additive was used extensively in other products, that there was a need for it in raisins for the reason given above, and that very frequently the housewife did not use the entire contents of a package of raisins when she opened the package. The Committee agreed to provide for the use of Sorbitol in the standard at a level of 0.5%, but a number of delegations were not convinced as to the need for this additive.

48. As regards the section on Pesticides Residues, the Committee noted that, in accordance with the Format for Codex Commodity Standards, this section would include, by reference, any levels for pesticide residue that had been laid down by the Codex Committee on Pesticide Residues for this product. The Committee was informed that levels had been adopted by the Commission at Step 9 for certain pesticide residue tolerances applicable to raisins and dried fruits. The appropriate levels would be referenced in the standard when the final version of the report of the present session was sent to governments. It was agreed that this section of the standard should read as follows, pending editing at the time when the final version of the report would be issued to governments: "Levels for pesticide residues for raisins that have been laid down by the Codex Committee on Pesticide Residues shall apply (precise references to be given in final edited version of the standard as now revised)". The Committee recalled that at its Fifth Session held in May 1968, it had agreed to bring to the attention of the Codex Committee on Pesticide Residues its wish that the following tolerances for pesticide residues be considered for raisins -- Malathion, not more than 8 mg/kg; Methyl Bromide, not more than 125 mg/kg calculated as Br; Methyl (or Ethyl) Formate, not more than 250 mg/kg calculated as formic acid. The Secretariat was requested to report on the above to the Committee at its next session.
49. The Hygiene section of the standard was amended in the same way as the Hygiene section of the other standards considered at the present session of the Committee at Step 7. Concerning sub-section 6.1 of the standard which recommended that, in the preparation of this product, the Code of Hygienic Practice for Dried Fruits be followed, the Committee noted that Section III B (4) "Protection of the Product from Contamination" contained the necessary safeguards concerning microbiological contamination and the presence of insects, etc.
50. As regards the Labelling section of the standard, most of the amendments adopted by the Committee related to the sub-section on Name of the Food. Apart from the amendments referred to in paragraph 40 of this report, the Committee agreed that, as an alternative to the designation "Raisins", the designation "Sultanas" could be used in those countries where this designation had been traditionally used to describe certain types of raisins. The Committee also agreed, with reference to sub-section 8.1(a)(i) that it was only when the raisins were other than seedless that the type group and/or style should be indicated on the label, as given in the revised version of the standard. It was agreed that

if Malaga Muscatel raisins were declared as Malaga Muscatel, there would be no need to give any information about seeds. It was agreed that sub-section 8.1(a)(ii) should be completed by some form of words, the effect of which would be that the provision would read substantially as follows: "Coated with X, where X is the name of the sugar used". The Committee also agreed to add a third sub-section under 8.1(a) which would provide, in substance, that the name shall include the term "bleached" or the term "golden" or any other name which is meaningful to the consumers. It was agreed that if the raisins were unstemmed this fact should mandatorily be indicated on the label. The Committee considered the question whether it would be necessary to inform the consumer that the product had been washed. The Committee agreed that this was not meaningful to the consumer and that, in any event, the consumer was protected by the fact that the product definition required the product to be properly cleaned. So far as raisins for further processing were concerned, whether the raisins were washed or unwashed, the buyer and seller could be presumed to protect their own interests and no label declaration on this subject appeared to be necessary.

51. In considering the section of the standard on Methods of Analysis and Sampling, the Committee noted that the sampling plan in sub-section 9.1 reflected practices in the USA and, in effect was applied to domestic production, since the U.S. was not an importer of raisins. There were certain difficulties with the plan. It gave no indication as to what constituted an appropriate lot size nor as to how the sample was to be judged as to whether it was acceptable. It was agreed that sampling should not apply at the retail level or to small lots, following the idea of the Sampling Plan for Prepackaged Foods. The delegation of the USA undertook to elaborate a revised plan in collaboration with the delegations of the United Kingdom and Australia, which would be sent to governments for comment. This subject should be brought to the particular attention of the leading producing countries. The Committee agreed to delete the existing text on sampling, that is sub-section 9.1, from the standard.
52. As regards the test procedure for moisture content, the Committee noted that the Codex Committee on Methods of Analysis and Sampling had, at its last session, confirmed its endorsement of the method as reproduced in the latest edition of the AOAC Methods 1970, 22.012, Par. 2 (See Par. 51 of ALINORM 71/23). The representative of AOAC drew attention to a new method which had been developed

for the determination of moisture in raisins by the Dried Fruit Moisture Tester. The Committee was informed that the method determined conductivity of raisins. Conductivity had been correlated with the oven method for "Moisture in Dried Fruits" 22.012, 11th edition, AOAC for raisins. The variance for the AOAC method 22.012 was 7.83 times that of the conductivity method which consumes only a fraction of the time for the test. The conductivity method was applicable to all dried fruit for which correlation had been made with the oven method. The new method was referenced as JAOAC, 52(4) 1969,858.

53. As indicated in Paragraph 44 of this report, a new method for determination of mineral impurities (sand test) had been evolved by the AOAC and the Committee agreed that this new method would be referenced in the revised version of the standard, but would be considered further by the Committee at its next session.
54. The Committee noted that AOAC had developed a method for determination of sulphur dioxide in dried fruit and agreed that this method should be referenced in the standard. The delegation of the United Kingdom stated that the Codex Committee on Methods of Analysis and Sampling generally favoured methods having the widest possible applicability and that, in this connection, the Tanner method would probably be regarded as suitable.
55. The attention of the Committee was also drawn by the observer of the AOAC to an AOAC method which would be suitable for the determination of mineral oil. The Committee agreed to reference this method in the standard.
56. The Committee agreed that it would also be necessary to have a method of analysis for Sorbitol.

Return of Standard for Raisins to Step 6.

57. In view of the fact that the sampling section, which was an important part of the standard, had to be reconsidered further by the Committee together with certain methods of analysis, the Committee agreed to return the standard for raisins to Step 6 for government comments on the sampling plan.

Standard for Tomato Concentrates considered at Step 7.

58. The Committee considered the standard for Tomato Concentrates contained in Appendix VII to ALINORM 70/20 at Step 7, 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 discussions.
59. The Committee agreed to introduce a Scope section into the standard to make it clear that the standard did not apply to products commonly known as tomato sauce, chili sauce and ketchup or similar products, which were highly seasoned products of varying concentrations containing characterizing ingredients such as pepper, onions, vinegar, sugar, etc. in quantities that materially altered the flavour, aroma and taste of the tomato component.
60. It was agreed that the standard should permit the use of salt and also, for products such as tomato paste which would be covered by the standard, certain seasoning ingredients but not including sugars or other sweeteners. It was also agreed that the Product Definition should be amended to delete the reference to the optional use of preservatives (see also paragraph 67). Thus, the products covered by the standard could not have preservatives added to them.
61. As regards the figures of 8% and 24% natural tomato soluble solids, which were the minimum concentrations laid down in the standard for Tomato Puree and Tomato Paste, respectively, there was some discussion as to whether these figures corresponded to the figures of 9% and 25% salt-free soluble solids which had appeared in the version of the standard considered by the Committee at its Fifth Session in 1968 and which has been amended as above. The delegation of the USA explained the reason for the confusion on this point. For many years in the USA, the minimum percent total solids by the oven drying method were set at 8.37% for puree and 25% for paste. Two years ago, the US industry and regulatory agencies changed over to the refractometric method, which measures natural tomato soluble solids on the basis of the International Sucrose Scale. When this was done, it was found that puree which measured 8.37% total tomato solids by the drying method measured 8% natural tomato solids by the refractometric method. Correspondingly the paste which measured 25% by the drying method measured 24% by the refractometric method. Thus, the levels for paste and puree in the USA have been changed to 24% and 8%, respectively, without changing the actual degree of concentration. The products were still the same as they had been historically. The Committee agreed not to change the figures of 8% and 24%, recognizing that the product was long established at those levels and that the USA was one of the most significant producers.

62. As regards the Product Description, the Committee considered various proposals providing for a range of designations covering different concentrations of tomato concentrates additional to the two given in the standard. While the Committee recognized that these designations might be meaningful in the countries proposing them, it appeared that it would be difficult to reconcile these proposals and reach agreement on them for the purposes of an international standard. Many of the proposed designations would not be meaningful to the consumer in many countries.
63. The Committee agreed to retain the existing two designations in the standard, Tomato Puree and Tomato Paste, and to deal with the various other concentrations on the market by appropriate labelling.
64. The Committee agreed to amend sub-section 1.2.1, Acceptance - For Natural Soluble Tomato Solids, in the way indicated in the revised version of the standard.
65. The delegation of Japan reserved its position on the use of lemon juice as an acidulant.
66. In the sub-section on Allowances for Defects, the Committee agreed to alter the tolerance for mineral impurities to 60 mg/kg based on diluted product of 8% solids. The delegation of Japan reserved its position on this.
67. In the Food Additive Section of the standard, the Committee noted that the preservatives listed were used only in Denmark on the domestic market in glass packs of puree not over 15% solids. As Denmark appeared to be the only country where these preservatives were used in this product, and as the product was not exported by Denmark, it was agreed that it would be better to delete the provision on preservatives from the standard. This would not place Denmark in any difficulty vis-a-vis other countries and when, in due course, the standard was sent to Denmark for acceptance, Denmark could take a minor deviation in respect of these preservatives. The delegation of France stated that it was opposed to the use of all additives in these products. The delegation of Poland stated that it was opposed to the use of citric, malic, l-tartaric, or lactic acids, but could accept citric acid. The delegation of France was also opposed to the use of l-tartaric acid.
68. The Committee agreed to deal with the section on Contaminants in the same way as it had dealt with this section in the other standards. The delegation of Poland reiterated its reservation on tin.
69. The Hygiene Section was also amended as in the other standards considered.

70. As regards Minimum Fill, the Committee amended this section to exclude non-rigid containers from the provision that the product must occupy not less than 90% of the water capacity of the container. The requirement that the container should be filled as full as commercially practicable having regard for the concentration of the product would still be applicable. The Committee noted that it would be necessary to include the usual provision on acceptance after sub-section 6.1.2 "Classification of Defectives".
71. The Committee agreed to amend the labelling of the name of the product as set out in the revised version of the standard. The revised provision would have the advantage of providing for the alternatives of either the use of the name "tomato concentrate" together with a declaration of the percentage of tomato solids, or an established name such as tomato paste, tomato puree, double concentrate or triple concentrate in those countries where such names were understood by the consumer. The delegation of Japan stated that, in its view, the standard should provide for a mandatory declaration of the date of manufacture.
72. As regards the section on Methods of Analysis and Sampling, the Committee agreed that in sub-section 8.2.1 "Natural Soluble Tomato Solids", it would be sufficient simply to reference the appropriate AOAC method, which had been endorsed by the Codex Committee on Methods of Analysis and Sampling. The observer from the International Organization for Standardization (ISO) drew the attention of the Committee to Recommended Method No. 2173 for the determination of total soluble solids by refractometer which had just been submitted to ISO for final approval. This method, with a correction for added salt, would, in his opinion, be suitable for this purpose. As regards the methods for mineral impurities and mould count, the Committee agreed that the latest appropriate AOAC references should be included in the standard. The delegation of Japan reserved its position on sub-section 9.2.3 of the standard.

Advancement of Standard for Tomato Concentrates to Step 8.

73. The Committee agreed to advance the standard for Tomato Concentrates to Step 8 for consideration by the Commission at its Ninth Session.

Standard for Canned Green Peas Considered at Step 7.

74. The Committee considered the standard for Canned Green Peas contained in Appendix V of ALINORM 71/20 in the light of government comments thereon following its return to Step 6 at the previous meeting. The standard as revised by the Committee is contained in Appendix V of this report. The main points discussed are set out below.

75. Provision was included for the use of quick frozen peas. The Committee reaffirmed its decision that size grading should be voluntary, while regarding it as essential to include a provision in the optional labelling section of the standard which, the Committee thought, would result in governments dealing with the question when notifying their acceptances.
76. Some delegations were still of the view that the two sets of figures which had been included at its last session for (i) round-seeded or smooth-seeded and (ii) wrinkle-seeded and other types would fit in most closely with the practice in countries in which size grading was practiced, while other delegations still preferred to see a single set of figures based, to the maximum possible extent, on those in the Recommended Standard for Quick Frozen Peas. The Committee considered several combinations in which the categories "very small", "small", "medium", and "large" were given values related to one or other of the tables previously included in the standard. An alternative also considered was that a provision on the following lines:
- "If size designations or names are declared, the declaration shall be accompanied by an accurate pictorial representation and/or a statement of exact measurements"
- should be included as an optional alternative to one of the specific provisions or as the sole requirement.
77. After a very full discussion, the Committee recognized that it was not possible to reach an agreement on a provision in which descriptions were related specifically to size and therefore agreed to delete the provisions in Section 1.3 and to include a provision allowing optional size labelling according to national legislation, which would enable governments to consider the problem of sizing canned peas in the light of their present law and practices and also in the light of the standard for quick frozen peas. The Committee expressed the hope that it would be able in due course to develop a more specific size labelling requirement and asked the Secretariat to draw the attention of governments to the need to give special consideration to the point when dealing with the acceptance procedure. The Committee agreed that proposals for sizing which had been suggested by the delegations of Denmark, Netherlands, United Kingdom and USA, together with the sizing figures appearing in the draft standard under discussion at the session, as well as the sizing figures appearing in the Step 9 standard for Quick Frozen Peas, should be annexed to the Report for the information of governments. (See Appendix XII of this Report.)

78. The figure of 21% of alcohol insoluble solids for all types of peas which had been included in the standard at the Committee's Fifth Session was confirmed after further consideration had been given to alternative figures. The Committee finally decided that a maximum of not more than 21% would provide an appropriate international standard for all types, although it was recognized that other figures might well be thought to fit in more closely with consumer preferences, canning practices and the varieties of peas found in individual countries. The delegation of Canada said that it would have preferred a figure of 16% for all types. The delegation of Poland preferred a figure of 18% for all types. The delegation of the USA reserved its position in respect of round-seeded or smooth-seeded for which it considered 23.5% would be more appropriate. The delegation of the Netherlands expressed support for the views of the USA and the delegation of France said that the figure of 21% was much too low and that 28% would be more suitable for round-seeded or smooth-seeded.
79. A definition of yellow peas was included.
80. As regards the Food Additive section of the standard, it was agreed to permit the addition of monosodium glutamate but only to the product when made with a sauce, as had already been done for modified starches. The delegation of Norway stated that the use of monosodium glutamate was not permitted in Norway. The delegation of Japan stated that the additive was not used in canned peas in Japan. As regards the provision on colours which was retained unaltered in the standard except for an editorial amendment to Carotene, several delegations indicated their objection to one or more or all of the colours. The delegation of France was opposed to the use of firming agents in this product. The delegation of France was also opposed to the use of modified starches and the delegation of Poland was against the use of alginates and propylene glycol alginate.
81. The delegations of France and the Netherlands said that they considered the drained weight minimum of 60% should be raised to 63% in small cans and 66% in large cans. The delegation of the USA explained that due to the wide variation in the types and maturity of peas it would, in its view, be preferable, in the interest of ensuring that the consumer received a full pack of peas, to put greater reliance on the provision for maximum fill as determined by the method which was included as Attachment No. 1 and which had been endorsed by the CCMAS subject to editing. The Committee agreed to an edited version of the method and decided to include it in the standard. The figure for drained weight was left unchanged at 60%. The delegations of France and the Netherlands stated that the determination should be on drained weight only.

82. The delegation of USA offered to make available an explanatory working paper giving its experience of the operation of the minimum fill requirement.
83. The delegations of Canada, France and Poland expressed the view strongly that the attention of the consumer should be specially drawn to the fact whenever canned peas had been artificially coloured. They again suggested that the declaration "artificially coloured" should form part of the name of the product. The Committee decided not to depart from the policy set out in paragraph 6(k) of the Report of its Seventh Session (ALINORM 71/20). The policy was to rely on the inclusion of "colour" in the declaration of ingredients.
84. The Committee recognized that it was important that the consumer should be able readily to see the declaration of ingredients and, while noting that there were requirements in the General Standard for Food Labelling which applied to all mandatory information, asked that the attention of the CCFL be drawn to the possible need to consider whether more specific requirements were necessary for the declaration of ingredients.

Advancement of the Standard for Canned Green Peas to Step 8.

85. The Committee agreed to advance the standard for Canned Green Peas to Step 8 for adoption by the Commission at its Ninth Session.

Standard for Jam (Fruit Preserves) and Jellies considered at Step 4.

86. The Committee considered the standard for jams (fruit preserves) and jellies. The following is a summary of the agreed amendments (other than editing) and of the important points made in this session.
87. 2.1.1(c) - The reference to "the application of heat" was retained. The delegation of the Netherlands undertook to provide well in advance of the next session, a technological paper setting out methods by which a product closely resembling fruit preserves could be produced without the application of heat. The French delegation considered that products based on fruits and sugar which have not been subjected to appropriate heat treatment designed to ensure their preservation without the addition of chemical preservatives could not be considered as jams, such as covered by the present draft standard. The French delegation considered, therefore, that these products were imitation products which should be defined under another standard and which should not be marketed except under a name which did not contain the word 'jam' or any other equivalent term liable to result in confusing these products with jam.

88. 2.2 - The provision was revised so as to include fruits and vegetables traditionally used in a country while excluding others.
89. 2.3/2.4 - These provisions were combined to provide for definitions of "fruit ingredient" for use in jams and jellies respectively. Reference was included to the use of quick frozen and canned fruit but the use of dried fruit was excluded.
90. 3.1.1(2) - Honey was transferred to the "optional ingredients" section. Fruit juice or concentrated fruit juice was added in the optional ingredients section. The delegation of France reserved its position on essential oils in the optional ingredients section
91. It was agreed to leave the section on Fruit Content (3.2.1) unchanged with a single figure of 40% for the fruit content of a jam or a jelly with a footnote to the standard that the figure was subject to review. Delegations expressed reservations about the figure of 40%. The delegation of Canada considered that the figure should be 45%. The Netherlands delegation drew attention to the three levels of fruit content being applied in some countries and suggested that a more appropriate minimum figure would be 35%. The delegation of Norway called attention to the need to provide for exceptions to the minimum for certain fruits such as black currants for which a lower minimum was essential due to the nature of the fruit. The Committee decided to ask Governments to comment on the figure for the fruit content which should be applied generally and for detailed technological and other reasons for any individual exceptions such as black currants together with figures for such exceptions. The Committee expressed the view that it would wish to include a list of such exceptions in the standard. The Committee also decided to ask for detailed comments on the provision for mixed fruits, e.g. for proportions of the two or more fruits used.
92. 3.3 Soluble Solids (Finished Product). Some delegations proposed a reduction in the minimum figure of 65% but the Committee decided to leave the figure unchanged. It was noted that the elaboration of standards for diabetic or dietetic products could be proposed separately, as they were excluded in the Scope section. The existing requirements of not less than 65% would cover products moving in international trade and would, with proper processing and hygiene, give a satisfactory shelf-life after opening the container. The delegation of Norway reserved its position because it did not consider it necessary to have any minimum limit for soluble solids content. The delegation of Morocco stated that it would wish to see more flexibility in the standard and requested that the figure should be set at 62% because, in its opinion, the taste was too sweet.

93. 3.4.1 Quality Criteria. On the proposal of the delegation of Australia, it was agreed to add a reference to the seeds of passion fruit as a natural fruit component.
94. 3.4.2 Defects. Several delegations objected to the inclusion of the detailed defects section because it was not considered necessary for a product such as jam and because some of the requirements appeared to be too stringent especially for application over the whole range of products made from fruits with widely differing characteristics. These delegations stressed that they had no practical experience of this type of defect system or of the results which might be obtained from applying it other than in the factory. The Committee agreed to place the whole section in square brackets and to reconsider the need for it in the light of a technical paper which the USA undertook to produce.
95. The delegation of Poland suggested that it would be more appropriate to provide for tolerances for organic and mineral impurities especially for strawberry jam. In its written comments Poland had suggested "a tolerance for organic impurities harmless to human health, e.g. 4 pieces per 500 g and for mineral impurities up to 0.03% by weight for strawberry jam and 0.01% for others". The delegation of Poland was invited to provide a technical paper. Governments were asked to comment on the need for a detailed system of defects and on the idea of a tolerance system for impurities, together with detailed suggestions if appropriate.
96. 4. Food Additives
- 4.1 Acidifying Agents - The delegations of France, Japan, Netherlands, Norway and Poland objected to the inclusion of fumaric acid. The delegation of Norway objected to l-Tartaric acid. The Committee agreed to include limits with alternatives in square brackets.
- 4.2 pH Regulating Agents - Sodium hydroxide was deleted. Limits were included.
- 4.3 Anti-Foaming Agents - Silicones were deleted. Limits were included for dimethylpolysiloxane at a level of 10 mg/kg. The delegations of France and Poland objected to dimethylpolysiloxane.
- 4.4 Thickening Agents - It was agreed that pectin, limited by good manufacturing practice, was the most commonly employed thickening agent, although agar-agar was used in Morocco and Thailand. The section was revised to include only these two substances.

4.5 Colouring Agents - Several delegations expressed objection to some or all of the colours.

97. 4.6 Preservatives. The Committee noted that sulphur dioxide would be present as a residue when the product had been prepared from fruit which had been sulphited. It was noted that the level of 100 mg/kg would not be reached in practice in some cases and governments were asked to provide up-to-date information on current residues with a view to the probable reduction of the tolerance. Several delegations objected to the inclusion of preservatives which in their view were not necessary in a product with 65% soluble solids. After discussion, the Committee agreed to provide exceptionally for the use of the four specified preservatives in non-hermetically sealed containers especially of plastic and possibly in very large containers which would be kept for some time after opening. The Committee asked that governments with knowledge of the use of these preservatives should provide up-to-date details of the extension of shelf-life which would be achieved with products with a 65% soluble solids content and of the actual levels of use of each of the preservatives. Some delegations expressed the view that the proposed levels were too high and could be reduced to 250 mg/kg. The Committee confirmed that it had been their intention to fix a level of 1000 mg/kg (now subject to review) for preservatives used singly or in combination. The section was amended accordingly.
98. 4.7 Natural Flavours. The delegation of France objected to the use of natural fruit essences if the essence of one fruit was used with another fruit or if a fruit essence was used with vegetables. In view of the above, the Committee agreed to change the text to "Natural fruit essence of the named fruit".
- 4.8 Firming Agents. The delegation of U.K. explained that the firming agents used in practice were calcium lactate and calcium metabisulphite and that it was customary to express the amounts of such salts in terms of calcium chloride. The section was amended accordingly and the U.K. undertook to suggest an appropriate limit expressed in terms of total calcium.
99. 6. Weights and Measures. It was agreed to provide for an exception for non-rigid containers as regards minimum fill along the same lines as for tomato concentrates.
100. 7.1.2. The delegation of Canada stated that it considered that sub-section 7.1.2 should be amended by the addition of the following words - "and shall be followed by the words 'with artificial colour', as appropriate".

101. 7.1.5 Labelling of products made from ginger, etc. An additional provision was included for "fig marmalade" or "pineapple marmalade".

102. Return of standard for Jams to Step 3

In view of the changes made to the draft standard, and of the fact that some sections needed further attention, the Committee agreed to return the standard to Step 3 for another round of government comments.

103. General standard for Citrus Marmalade at Step 4

The Committee agreed that the standard for citrus marmalade should be amended as appropriate, in the light of the decisions taken in the standard for jams, and that it should be returned to Step 3 for another round of government comments.

Standards for (i) Canned Carrots; (ii) Cucumber Pickles; (iii) Tropical Fruit Salad and (iv) Canned Mature Peas at Step 2

104. The Committee considered that the above standards, with the exception of the standard for cucumber pickles, were suitable for sending out to governments at Step 3 for comments, subject to editing beforehand by the Committee's rapporteur to bring them into line, where necessary, with the format of the latest standards. The delegation of the USA stated that it would wish to revise the standard for Canned Pickles in collaboration with the Polish delegation as rapporteur and would place the revised version before the next session of the Committee for consideration at Step 2.

Note Concerning the Standard for Canned Mandarin Oranges Advanced to Step 8

105. In connection with paragraph 6 of this Report, the delegation of the USA informed the Committee, at the end of the session, that it had consulted authoritative works on the subject which revealed that Citrus Tankan Hayata was classified as one of the varieties of Citrus reticulata Blanco. Citrus Tankan Hayata was covered, therefore, by the standard and it would not be necessary to consider this matter further at its next session. The Committee agreed.

Statement by the observer from the International Organization of Consumers Unions (IOCU)

106. The observer from the IOCU expressed her appreciation and thanks for having had the opportunity of attending the session. This was the

first occasion on which the IOCU had been represented at a session of this Committee. The observer from the IOCU expressed the keen interest of the IOCU in the work of the Committee, and stressed the need for delegations, both at sessions of the Committee and in their home countries, to give continuing thought as to how best to protect the interests and needs of consumers.

Programme of Work for the Ninth Session of the Committee

107. The Committee agreed to consider draft standards for the following products at its next session at the Step indicated:

- (i) Raisins - Step 7 (for consideration of sampling plans)
- (ii) Jams (Fruit Preserves) and Jellies - Step 4
- (iii) Citrus Marmalade - Step 4
- (iv) Canned Carrots - Step 4
- (v) Canned Tropical Fruit Salad - Step 4
- (vi) Canned Mature Processed Peas - Step 4
- (vii) Cucumber Pickles - Step 2

The Committee also agreed to consider at its next session amendments proposed by the Netherlands to the Step 9 Standard for Canned Green Beans and Wax Beans.

Status of Standards being elaborated by the Committee

108. A. Standards considered at the Eighth Session of the Committee

(i) Standards considered at Step 7 and advanced to Step 8 for consideration by the Commission at its Ninth Session

- (a) Canned Mandarin Oranges
- (b) Canned Pears
- (c) Tomato Concentrates
- (d) Canned Green Peas

(ii) Standard considered at Step 7 and returned to Step 6 for re-consideration (sampling plans) by the Committee at its Ninth Session at Step 7

Raisins

(iii) Standards considered at Step 4 and returned to Step 3 for re-consideration by the Committee at its Ninth Session at Step 4

- (a) Jams (Fruit Preserves) and Jellies
- (b) Citrus Marmalade

(iv) Standards advanced to Step 3 for consideration by the Committee at its Ninth Session at Step 4

- (a) Canned Carrots
- (b) Canned Tropical Fruit Salad
- (c) Canned Mature Processed Peas

(v) Standard held at Step 2 for re-drafting and consideration by the Committee at its Ninth Session at Step 2

Cucumber Pickles

B. Standards, the consideration of which has been postponed or which are held in abeyance

These standards are to be considered as soon as the Committee's workload permits:

- (a) Canned Beans in Tomato Sauce
- (b) Canned Beans, Mature Processed
- (c) Canned Two Fruit Salad
- (d) Canned Fruit Salad (other than Tropical Fruit Salad)
- (e) Dried Figs
- (f) Dried Apricots
- (g) Dates
- (h) Pistachios

C. Possible Future Standards

Walnuts) see par. 35 of Report of Fifth Session of the
Almonds) Committee ALINORM 69/20

D. New Standards proposed at the Eighth Session of the Committee

None

Date and Place of Next Session

109. The Committee noted that the proposal to hold the Ninth Session of the Committee in Washington, D.C., from 15 to 19 May 1972 would be put before the Ninth Session of the Commission.

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

CANNED MANDARIN ORANGES -- STEP 8

Standard No. PFV 71/8-19

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

for adoption as a
Recommended Standard

DRAFT STANDARD
FOR
CANNED MANDARIN ORANGES
Advanced to Step 8

APPENDIX II
PFV 71/8-19
June 1971

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); (b) packed with water or other suitable liquid packing medium; and (c) processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage. Before processing, the fruit shall have been properly washed and peeled and the membrane, fiber strands originating from albedo or core, and seeds (if any) shall have been substantially removed from the segments.

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 according to the size classifications that follow:

- Large -- 20 or less segments per 100 grams 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 are considered as a single unit.

1.3.2 Mixed Sizes

Canned Mandarin 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:

2.1.1 Packing Media

- (a) Water -- in which water or a mixture of water and Mandarin orange juice is the sole liquid packing medium; or
- (b) Syrup -- in which water and/or Mandarin orange juice is combined with one or more of the following sugars -- 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.

2.1.1.1 Cut-out strength of syrup is 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, if such there be.

2.2 Optional Ingredient

Lemon juice (single strength or concentrated) may be added as an acidulant or flavour enhancer.

2.3 Quality Criteria

2.3.1 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.

2.3.2 Flavour

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

2.3.3 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.

2.3.4 Wholeness

- (a) Whole Segment Style consists of: Limits
- (1) Whole Segments - - - - - 80% or more, by count of the units
(practically intact segments which retain their original form but may be split just slightly)
 - (2) Slightly broken segments - - - }
(fairly intact segments which are split or may show slight disintegration); and } 20% maximum, by count of the units
Broken segments - - - - - }
 - (3) Broken segments- - - - - 10% maximum, by count of the units
(portions of segments which are neither "Whole segments" nor "Slightly broken segments" and which retain at least one-half of the apparent original segment size, except that where the original segment size is not apparent the portion shall be large enough to remain on a screen having 12 mm square openings, formed by a wire of 2 mm diameter)

- (b) Broken Segment Style consists of:
- (1) Broken segments- - - - - 85% or more of the drained fruit
[as defined in 2.3.4 (a) (3)];
and/or
 - (2) Canned Mandarin oranges which do not meet the requirements for wholeness in Whole Segment Style.

- (c) Pieces Style consists of:
- (1) Irregular and broken pieces - - - No limit
(which are large enough to remain on a screen having 8 mm. square openings, formed by wire of 2 mm diameter); and/or.
 - (2) Canned Mandarin Oranges which do not meet the requirements for Broken Segment Style.

2.3.5 Defects and allowances

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, based on sample average, shall not be present in amounts greater than the following limitations in all styles:

- (a) Membrane
(aggregate area) - - - - - 7 Maximum limits
cm² (7 sq. cm.) per 100
grams of drained fruit
(based on sample average)
- (b) Fiber strands
(aggregate length) - - - - - 5 cm. per 100 grams of
drained fruit (based on
sample average)
- (c) Developed seeds - - - - - 1 per 100 grams of drained
(that measure more than fruit (based on sample
4.0 mm. in any dimension; average)
but small, undeveloped,
embryonic seeds are not
considered as defects)

2.3.6 Classification of "Defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-sections 2.3.1 through 2.3.5 (except those based on sample average), shall be considered a "defective".

2.3.7 Acceptance

A lot will be considered as meeting the applicable quality requirements of Section 2.3 when:

- (a) The number of "defectives" as specified in subparagraph 2.3.6 does not exceed the acceptance number (c) of the appropriate sampling plan (AQL 6.5) in the Sampling Plans for Prepackaged Foods; and
- (b) the requirements of subparagraph 2.3.5, which are based on sample average, are complied with.

3. FOOD ADDITIVES

The following provisions in respect of food additives and their specifications as contained in Section . . . of the Codex Alimentarius have been endorsed or acted upon by the Codex Committee on Food Additives.

<u>Acidifying agent</u>	<u>Maximum level of use</u>
Citric acid - - - - -	Not limited (endorsed)

Anti-clouding agent

Methyl cellulose- - - - - 10 mg/kg (Endorsement postponed)

(Specifications: 1/

Methoxyl content - - - not less than 27.5%,
not more than 31.5%,
on a dry weight basis.

In addition,
arsenic content shall not exceed 3 mg/kg.

Other heavy metals -- not more than 10 mg/kg,
calculated as lead (Pb).

Loss on drying - - - shall not exceed 5%.

Residue (Ash)- - - - shall not exceed 1-1/2%.)

4. CONTAMINANTS

The following provision in respect of contaminants has been temporarily endorsed 2/ by the Codex Committee on Food Additives:

Tin, maximum level - - - - - 250 mg/kg, calculated
as Sn

1/ These specifications will not be part of the standard. The specifications will be brought to the attention of the Codex Committee on Food Additives, which is currently reviewing specifications for various food additives, including methyl cellulose.

2/ Temporarily endorsed subject to reconsideration not later than two years following adoption of the Standard by the Commission at Step 8.

5. HYGIENE

- 5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).
- 5.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 5.3 Microorganisms capable of development under normal^{3/} conditions of storage shall not be present.
- 5.4 The product shall not contain any substances originating from^{3/} microorganisms in amounts which are toxic.

^{3/} The Codex Committee on Food Hygiene at its Eighth Session, held from 14 to 18 June 1971 has recommended that these two provisions should read as follows:

- "5.3 When tested by appropriate methods of sampling and examination, the product
- (a) shall be free from microorganisms capable of development under normal conditions of storage, and
 - (b) shall not contain any substances originating from microorganisms in amounts which may be toxic.

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 when completely filled.

6.1.1.1 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".

6.1.1.2 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.

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° C which the sealed container will hold when completely filled.

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 examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

7. LABELLING

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

7.1 The name of the food

7.1.1 The name of the product shall be "Mandarin Oranges".

7.1.2 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"

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

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

7.5 Country of Origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

7.6 Optional declarations

7.6.1 Size classification of Whole Style

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.

8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods. The methods referred to in 8.1, 8.2, 8.3, and 8.4 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 *

According to the FAO/WHO Codex Alimentarius method (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, CAC/RM 36-1970, Determination of Drained Weight - Method I).

Results are expressed as % mm calculated on the basis of the mass of distilled water at 20° C which the sealed container will hold when completely filled.

8.3 Syrup measurements (Refractometric Method)

According to the AOAC (1970) method (Official Methods of Analysis of the AOAC, 1970, 31.011: (Solids) by Means of Refractometer (4) Official, Final action (and 47.012 and 47.015).

Results are expressed as % m/m of sucrose ("degrees Brix"), with correction for temperature to the equivalent at 20° C.

8.4 Method for Determination of Water Capacity of Containers

8.4.1 Metal containers

8.4.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.4.2 Glass containers

8.4.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

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

CANNED PEARS -- STEP 8

Standard No. PFV 71/8-17

to be submitted to the Ninth Session of the
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for adoption as a

Recommended Standard

DRAFT STANDARD
FOR
CANNED PEARS
Advanced to Step 8

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, which pears are peeled, cored, and stemmed for all styles except for Whole Style they need not be peeled, cored, nor stemmed and for Halves Style they need not be peeled; (b) packed with water or other suitable liquid packing medium and may be packed with seasonings or other flavouring ingredients; and (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 suitable variety of cultivated pears may be used.

1.3 Styles

- (a) Whole -- peeled or unpeeled, with cores removed or left in.
- (b) Halves -- peeled or unpeeled, with stems and cores removed, 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 Packing media

Canned pears may be packed in --

- (a) Water -- in which water is the sole liquid packing medium;
- (b) Water and pear juice -- in which water and pear juice are the sole liquid packing medium;
- (c) Pear juice -- in which pear juice is the sole liquid packing medium;
- (d) Other fruit juice(s) -- in which single-strength fruit juice(s) other than from pears (and compatible as a packing medium in canned pears) is the sole liquid packing medium;
- (e) Any of the four liquid media (in 2.1 (a), (b), (c), (d)) may have one or more of the following sugars added: sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup.

2.2 Classifications of packing media when sugars are added

- (a) When sugars are added to pear juice or other fruit juices, the liquid media are classified on the basis of the cut-out strength as follows:

Lightly sweetened (name of fruit) juice -- Not less than 14° Brix.
 Heavily sweetened (name of fruit) juice -- Not less than 18° Brix.
 Extra heavily sweetened (name of fruit) juice -- Not less than 22° Brix.

- (b) When sugars are added to water or water and pear juice the liquid media are classified on the basis of the cut-out strength as follows:

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 sweetened juice or syrup is 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, if such there be.

2.3 Other permitted ingredients

Spices, spice oils, mint; lemon juice (single strength or concentrated) added as an acidulant or flavour enhancer.

2.4 Quality Criteria

2.4.1 Colour

The colour of the product shall be normal for the varietal type, taking into consideration any added artificial colour; and a slight pink discolouration shall not be regarded as a defect. Canned pears containing other permitted ingredients shall be considered of characteristic colour when there is no abnormal discolouration for the respective ingredient used.

2.4.2 Flavour

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

Canned pears with special flavourings shall have the flavour characteristic of that imparted by the pears and the other substances used.

2.4.3 Texture

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

2.4.4 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; but, if there are less than 20 units, one unit may be disregarded. Where a unit has broken in the container, the broken pieces are reassembled to approximate a single unit of the appropriate style.

2.4.5 Defects and allowances

The product shall be substantially free from defects such as harmless plant 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> |
|---|--|
| <p>(a) <u>Blemished and trimmed pear units</u> -----
 <u>Blemished units</u> with surface discolouration and spots that definitely contrast with the over-all colour and which may penetrate into the flesh, such as bruises, scab, and dark discolouration. <u>Trimmed units</u> that have deep gouges, whether due to physical trimming or other means, and which definitely detract from the appearance; trimmed units are considered defects only in whole, halved, and quartered styles)</p> | <p>(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.</p> |
| <p>(b) <u>Broken</u> -----
 (In <u>Whole</u>, <u>Halves</u>, and <u>Quartered</u> styles only --
 a unit severed in two or more parts shall be considered as one unit when reassembled to the approximate size and shape of an average unit in the container)</p> | <p>20% by count; or 2 units per container when count is less than 10; provided the sample average is no more than 10%.</p> |
| <p>(c) <u>Core material (Average)</u>-----
 (Except in "<u>Whole-Not Cored</u>" Styles)
 (Consisting of the seed cell, whether loose or attached, with or without seeds. For the purposes of calculating the defects allowance, all pieces of a core in the sample shall be aggregated and pieces totaling approximately one-half of a core shall be counted as one unit)</p> | <p>2 units per kg. of total contents.</p> |

Maximum limits

- (d) Peel (Average) ----- 10 cm² (10 sq. cm) aggregate
(Except in "Unpeeled" Styles)
area per kg of total contents.
(Peel that adheres to pear
flesh or is found loose in
the container)

- (e) Harmless plant material ----- 0.2% by weight of total con-
(All styles)
tents.
(Includes leaf or similar
vegetable material and
stems in styles in which
the stem is customarily
removed)

- (f) Seeds (Average) ----- 8 per kg of total contents.
(Except in "Whole-Not Cored"
Styles)
(Any one pear seed or the
equivalent in pieces of one
seed that are not included
in core material.)

2.4.6 Classification of "Defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-sections 2.4.1 through 2.4.5 (except those based on sample average). shall be considered a "defective".

2.4.7 Acceptance

A lot will be considered as meeting the applicable quality requirements of Section 2.4 when:

- (a) the number of "defectives" as specified in subparagraph 2.4.6 does not exceed the acceptance number (c) of the appropriate sampling plan (AQL 6.5) in the Sampling Plans for Prepackaged Foods; and

- (b) the requirements of subparagraph 2.4.5, which are based on sample average, are complied with.

3. FOOD ADDITIVES

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

Acidifying agents Maximum level of use

- Citric Acid
- Malic acid
- l-Tartaric Acid
- Lactic acid

Not limited
(Endorsed)

Colouring matters

Erythrosine ---- (Temporarily endorsed)
(Colour Index (1956) No. 45430)

Amaranth ----- (Endorsed)
(Colour Index (1956) No. 16185)

Fast Green FCF ----- (Endorsed)
(Colour Index (1956) No. 42053)

Wool Green B S ----- (Endorsed)
(Colour Index (1956) No. 44090)

Tartrazine ---- (Subject to endorsement)
(Colour Index (1956) No. 19140)

Ponceau 4 R --- (Subject to endorsement)
(Colour Index (1956) No. 16255)

Azo-Rubine (Carmoisine W-5) --
(Subject to endorsement)
(Colour Index (1956) No. 14720)

200 mg/kg,
singly or in
combination

Natural Flavours and their
identical synthetic equivalents ----- Not limited
(Temporarily Endorsed)

4. CONTAMINANTS

The following provision in respect of contaminants has been temporarily endorsed 1/ by the Codex Committee on Food Additives:

Tin, maximum level - - - - - 250 mg/kg, calculated as Sn

5. HYGIENE

5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).

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

5.3 Microorganisms capable of development under normal^{2/} conditions of storage shall not be present.

5.4 The product shall not contain any substances^{2/} originating from microorganisms in amounts which are toxic.

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 when completely filled.

6.1.1.1 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".

1/ Temporarily endorsed subject to reconsideration not later than two years following adoption of the Standard by the Commission at Step 8.

2/ The Codex Committee on Food Hygiene at its Eighth Session, held from 14 to 18 June 1971 has recommended that these two provisions should read as follows:

"5.3 When tested by appropriate methods of sampling and examination, the product

(a) shall be free from microorganisms capable of development under normal conditions of storage, and

(b) shall not contain any substances originating from microorganisms in amounts which may be toxic."

6.1.1.2 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.

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° C which the sealed container will hold when completely filled.

Whole Style - - - - -	50%
Halves, Quarters, Slices, Pieces- - - - -	53%
Diced - - - - -	60%

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 examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

7. LABELLING

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

7.1 The name of the food

7.1.1 The name of the product shall be "Pears".

7.1.2 The style, as appropriate, shall be declared as a part of the name or in close proximity to the name:

- "Whole" (when peeled and not cored); and additionally "Stemmed" or "Unstemmed", as the case may be.
- "Whole Unpeeled" (when not peeled and not cored); and additionally "Stemmed" or "Unstemmed", as the case may be.
- "Whole - Cored" (when peeled and cored).
- "Whole Unpeeled -Cored" (when not peeled but cored).
- "Halves" (when peeled).
- "Halves Unpeeled" (when not peeled).
- "Quarters" or "Quartered".
- "Slices" or "Sliced".
- "Dice" or "Diced" or "Cubes".
- "Pieces" or "Irregular Pieces".

- 7.1.3 When the packing medium is composed of water or water and pear juice, as defined in 2.1 (a) and (b), the packing medium shall be declared as a part of the name or in close proximity to the name as:

"In Water" or "Packed in Water".

- 7.1.4 When the packing medium is composed solely of pear juice, the packing medium shall be declared as a part of the name or in close proximity to the name as (except as stated in 7.1.8):

"In Pear Juice" or "Packed in Pear Juice".

- 7.1.5 When the packing medium is composed of water or water and pear juice and sugars, as described in 2.2 (b) the packing medium shall be declared as part of the name or in close proximity to the name as:

"Extra Light Syrup";
"Light Syrup";
"Heavy Syrup"; or
"Extra Heavy Syrup".

- 7.1.6 When the packing medium is prepared from a fruit juice other than from pears, as described in 2.1 (d), the packing medium shall immediately precede or follow the name of "Pears" without intervening printed or graphic matter; e.g. "Pears in (name of fruit) juice".

- 7.1.7 When the packing medium is prepared from a fruit juice (including pear juice) and sugars, as described in 2.2 (a), the packing medium shall immediately precede or follow the name of "Pears" without intervening printed or graphic matter; e.g. "Pears in Lightly Sweetened (name of fruit) juice".

- 7.1.8 When the packing medium is prepared from a pear juice other than the declared varietal name of pear, the packing medium shall immediately precede or follow the name of "Pears" without intervening printed or graphic matter and shall distinctly indicate the different varietal source of pear juice; e.g. "Bartlett Pears in Lightly Sweetened (name of variety) Pear Juice".

- 7.1.9 When pears are artificially coloured, the declaration shall be made as part of the name or in close proximity to the name, including the characterizing colour; e.g. "Pears -- Artificially Coloured Green".

- 7.1.10 A declaration, as part of the name or in close proximity to the name, shall be made of any characteristic flavouring; e.g. "With - - X - -", as appropriate.

7.2 List of ingredients

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

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

7.5 Country of Origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

7.6 Optional declarations

- 7.6.1 The name of the product may include the varietal type or designation of "Dessert" type.

8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods. The methods referred to in 8.1, 8.2, 8.3, and 8.4 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

According to the FAO/WHO Codex Alimentarius method (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, CAC/RM 36-1970, Determination of Drained Weight - Method I).

Results are expressed as % mm calculated on the basis of the mass of distilled water at 20° C which the sealed container will hold when completely filled.

8.3 Syrup measurements (Refractometric Method)

According to the AOAC (1970) method (Official Method of Analysis of the AOAC, 1970 31.011: (Solids) by Means of Refractometer (4) Official, Final action (and 47.012 and 47.015).

Results are expressed as % m/m of sucrose ("degrees Brix"), with correction for temperature to the equivalent at 20° C.

8.4 Method for Determination of Water Capacity of Containers

8.4.1 Metal containers

8.4.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.4.2 Glass containers

8.4.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

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

PROCESSED TOMATO CONCENTRATES -- STEP 8

Standard No. PFV 71/8-16

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

for adoption as a

Recommended Standard

DRAFT STANDARD
FOR
PROCESSED TOMATO CONCENTRATES

Advanced to Step 8

1. SCOPE

This standard for Processed Tomato Concentrates does not include the products commonly known as tomato sauce, chili sauce, and ketchup, or similar products which are highly seasoned products of varying concentrations containing characterizing ingredients, such as pepper, onions, vinegar, sugar, etc., in quantities that materially alter the flavour, aroma, and taste of the tomato component.

2. DESCRIPTION

2.1 Product Definition

- (a) Processed tomato concentrate is the product prepared by concentrating the liquid obtained from substantially sound, mature red tomatoes (Lycopersicum esculentum P. Mill). Such liquid is strained or otherwise prepared to exclude skins, seeds, and other coarse or hard substances in the finished product.
- (b) Salt and other suitable seasoning ingredients may be added.
- (c) The product is preserved by physical means.
- (d) The concentration shall be 8 or more percent natural tomato soluble solids but not dehydrated to a dry powder or flake form.

2.2 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 tomato soluble solids.
- (b) Tomato Paste -- Tomato concentrate that contains 24 percent or more of natural tomato soluble solids.

2.2.1 Acceptance -- For Natural Tomato Soluble Solids

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

- (a) The average of the values from all containers or sub-samples tested meets at least the minimum percentage requirement for the concentration as declared, or as required for the product name or description; and
- (b) No individual test value may be more than 7-1/2% below such minimum declared or required percentage of concentration.

Examples

<u>Declarations or requirements</u>	<u>Average must be less than</u>	<u>No individual test value may be less than</u>
(1) "Minimum Solids 20%" - - - - -	20%	18.5%
(2) "Solids - 26%-28%" - - - - -	26%	24.0%
(3) "Triple Concentrate"; for example, if lawfully at 45.0% minimum- - -	45%	41.6%
(4) "Tomato Puree" - - - - -	8%	7.4%
(5) "Tomato Paste" - - - - -	24%	22.2%
(6) "Concentrated Tomato Puree"; for example, if lawfully at 18% minimum - - - - -	18%	16.6%
(7) "Concentrated Tomato Puree"; if lawfully requires a higher minimum than 18%, for example 21% - -	21%	19.4%

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Permitted Ingredients

3.1.1 Seasoning or Flavourings --

Salt, spices, natural vegetable products (basil leaf, onions, etc.) but not sugars or other sweeteners; lemon juice (single strength or concentrated) used as an acidulant.

3.2 Quality Criteria

3.2.1 Colour

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

3.2.2 Texture

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

3.2.3 Flavour

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

3.2.4 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 noticeably 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 plant materials other than those used as seasonings;
- (e) Mineral impurities ----- 60 mg/kg based on diluted product of 8% solids;
- (f) Other similar and objectionable defects.

3.2.5 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-section 3.2.1 through 3.2.4, shall be considered a "defective".

3.2.6 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 3.2.5 when the number of "defectives", as defined in sub-section 3.2.5, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

4. FOOD ADDITIVES

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

<u>pH regulating agents</u>	<u>Maximum level of use</u>
Sodium hydrogen carbonate -----	to raise the pH to a level not above 4.3
Citric acid Malic acid l-Tartaric acid Lactic acid	} to maintain the pH at a level not above 4.3

5. CONTAMINANTS

The following provision in respect of contaminants has been temporarily endorsed 1/ by the Codex Committee on Food Additives:

Tin (in final, concentrated product) --
Maximum level -- 250 mg/kg, calculated as Sn

1/ Temporarily endorsed subject to reconsideration not later than two years following adoption of the Standard by the Commission at Step 8.

6. HYGIENE

- 6.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).
- 6.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 6.3 Microorganisms capable of development under normal^{2/} conditions of storage shall not be present.
- 6.4 The product shall not contain any substances^{2/} originating from microorganisms in amounts which are toxic.
- 6.5 The diluted product (at approximately 8% natural tomato soluble solids) shall not contain mould filaments in a quantity indicative of unsuitable raw materials 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 tomato soluble solids).

^{2/} The Codex Committee on Food Hygiene at its Eighth Session, held from 14 to 18 June 1971 has recommended that these two provisions should read as follows:

- "5.3 When tested by appropriate methods of sampling and examination, the product
- (a) shall be free from microorganisms capable of development under normal conditions of storage, and
 - (b) shall not contain any substances originating from microorganisms in amounts which may be toxic."

7. WEIGHTS AND MEASURES

7.1 Fill of container

7.1.1 Minimum fill

Containers shall be filled as full as commercially practicable having regard for the concentration of the product. When packed in rigid containers, the product 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 when completely filled.

7.1.1.1 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 7.1.1 shall be considered a "defective".

7.1.1.2 Acceptance

A lot will be considered as meeting the requirement of 7.1.1 when the number of "defectives" does not exceed the acceptable number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

8. LABELLING

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

8.1 The name of the food

- 8.1.1 The name of the product is "Tomato Concentrate" and shall be accompanied by a declaration (as described in 8.6) of the percent of natural tomato soluble solids.
- 8.1.2 The name and declaration of soluble solids may be accompanied or replaced by any name or description customarily and lawfully applied in the country in which the product is sold, provided that:
- (a) The description of "Tomato Puree" and "Tomato Paste" may only be applied to products complying with the requirement for "Tomato Puree" or "Tomato Paste";
 - (b) The description "Concentrated Tomato Puree" may only be applied to products with not less than 18% natural tomato soluble solids.
- 8.1.3 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.

8.2 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2 (c) of the General Standard for the Labelling of Prepackaged Foods.

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

8.5 Country of origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

8.6 Optional Labelling

The percentage solids may be included on the label in either of the following manners:

- (1) The minimum percentage of natural tomato soluble solids:
[Example: "Minimum Solids - 20%"]

or

- (2) A range within 2% of the natural tomato soluble solids:
[Example: "Solids - 20% to 22%"]

9. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods, except 9.2.4 which serves as a guide as stated in 6.5. The methods referred to in 9.1, 9.2.1, 9.2.2, and 9.2.5 have been endorsed, and the method in 9.2.3 is subject to endorsement, by the Codex Committee on Methods of Analysis and Sampling.

9.1 Sampling

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

9.2 Test Procedures

9.2.1 Natural Tomato Soluble Solids

Soluble Solids in Tomato Products (Refractometric Method).
(Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition, 32.008-32.010)

9.2.2 Salt (NaCl)

Potentiometric Titration Method (for the determination of sodium chloride in Vegetable Products, Processed)
(Reference: Journal of the Association of Official Analytical Chemists, Vol. 54, No. 2, March 1971, 32.A01-32.A05)

9.2.3 Mineral Impurities

Determination of Acid-Insoluble Residue (Soil), except using a sample size of 250 grams at 8% soluble solids.
(Reference: Journal of the Association of Official Analytical Chemists, Vol. 54, No. 3, May 1971, 40.A07)

9.2.4 Mould Count

Method for "Tomato Products (Not Dehydrated)".
(Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition, 40.085)

9.2.5 Method for Determination of Water Capacity of Containers

9.2.5.1 Metal containers

Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

9.2.5.2 Glass containers

Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

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

CANNED GREEN PEAS -- STEP 8

Standard No. PFV 71/8-14

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

for adoption as a
Recommended Standard

DRAFT STANDARD
FOR
CANNED GREEN PEAS
Advanced to STEP 8

1. DESCRIPTION

1.1 Product Definition

Canned green peas is the product (a) prepared from fresh or frozen clean, substantially sound, whole, shelled immature (green) seeds of garden pea varieties (cultivars) conforming with the characteristics of the species Pisum sativum L. but excludes the subspecies macrocarpum; (b) packed with water or other suitable liquid medium, sugars, seasoning, and other ingredients, appropriate to the product; and (c) processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

1.2 Varietal types

Canned peas may be of any suitable variety (cultivar) and may be further classified as:

- (a) Wrinkled-seeded;
- (b) Round-seeded or smooth-seeded;
- (c) Other types (crosses or hybrids of the types in (a) and (b)).

1.3 Types of Pack

- (a) "Liquid Pack" when a liquid medium is used; or
- (b) "Vacuum pack" or "Vacuum packed" if the liquid packing medium does not exceed 20 percent of the total net weight of the product and the container is closed under conditions creating a high vacuum in the container.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Basic ingredients

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

2.1.1 Other permitted ingredients

- (a) Salt, sucrose, invert sugar, dextrose, glucose syrup, dried glucose syrup.
- (b) Aromatic herbs and spices; stock or juice of vegetables and aromatic herbs (lettuce, onions, carrots, etc.); garnishes composed of one or more vegetables (lettuce, onions, carrots; pieces of green or red peppers, or mixtures of both) up to a maximum of 15% of the total drained vegetable ingredient; mint essence.
- (c) 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 (total contents).
- (d) Starches -- natural (native), physically or enzymatically modified -- only when butter or other edible animal or vegetable fats or oils are ingredients.

2.2 Quality Criteria

2.2.1 Colour

Except for artificially coloured canned peas, the peas shall have normal colour characteristics for canned peas and typical of the variety used. Canned peas containing other permitted ingredients or additives shall be considered of characteristic colour when there is no abnormal discoloration for the respective substances used.

2.2.2 Packing Medium

Except for peas packed with special sauces, the packing medium shall not be so viscous that the liquid will not separate from the peas at 20° C. It shall not have a colour nor an appearance which is foreign to the product.

2.2.3 Flavour

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

Canned peas with special ingredients shall have the flavour characteristic of that imparted by the peas and the other substances used.

2.2.4 Texture and Maturity

The peas shall be reasonably tender and reasonably uniform in texture and maturity.

The alcohol insoluble solids content shall not exceed 21% in all types.

2.2.5 Defects and allowances

Canned peas may contain a slight amount of sediment and shall be reasonably free from defects within the limits set forth as follows:

Maximum Limits

(based on the weight of drained peas)

- (a) Blemished peas --- 5% m/m
(consisting of peas which are slightly stained or spotted)
- (b) Seriously blemished peas --- 1% m/m
(consisting of peas which are spotted, discoloured, or otherwise blemished (including worm-eaten peas) to the extent that the appearance or eating quality is seriously affected)
- (c) Pea fragments --- 10% m/m
(consisting of portions of peas: separated or individual cotyledons; crushed, partial, or broken cotyledons; and loose skins; but not including entire intact peas with skins detached)
- (d) Yellow peas --- 2% m/m
(entire pea is substantially yellow and is not a so-called "blond" pea which is very pale in colour)
- (e) Extraneous plant material --- 0.5% m/m
(consisting of any vine or leaf or pod material from the pea plant, or other harmless plant material not purposely added as an ingredient)

Total of the foregoing defects
(a), (b), (c), (d), (e) --- 12% m/m

2.2.6 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-sections 2.2.1 through 2.2.5, shall be considered a "defective".

2.2.7 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.2.6 when the number of "defectives", as defined in sub-section 2.2.6, 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, have been endorsed or temporarily endorsed or acted upon, by the Codex Committee on Food Additives, as indicated:

Maximum level of use

- (a) Monosodium Glutamate ----- Not limited
 (used only when butter or other edible animal or vegetable fats or oils are ingredients, as in a "sauce pack") (Temporarily endorsed) 1/
- (b) Mint flavour (mint oil)----- Not limited (Subject to endorsement)
 Natural mint flavour ----- Not limited (endorsement)
- (c) Colouring matters
 - Wool Green BS (Temporarily endorsed)
 - Tartrazine (Temporarily endorsed)
 - Brilliant Blue FCF (Endorsed)
 - Beta-carotene (Endorsed)
 } 100 mg/kg singly or in combination
- (d) Firming agents
 - Calcium chloride (Endorsed)
 - Calcium lactate (Endorsed)
 - Calcium gluconate (Endorsed)
 } 350 mg/kg Ca in the final product

1/ To be reconsidered not later than two years following adoption of the standard by the Commission at Step 8.

3. FOOD ADDITIVES -- continuation

(e) Modified starches, Vegetable gums, Alginates, Propylene glycol alginate -- to be used only when butter or other edible animal or vegetable fats or oils are used as ingredients -- as follows:

Maximum level of use -- 10 g/kg, singly or in combination

Modified Starches -- (Endorsed)

Acid-treated starches
Alkali-treated starches)
Bleached starches
Distarch, phosphate
(sodium trimetaphos-
phate treated)
Distarch phosphate,
phosphated
Monostarch phosphate

Modified Starches -- (Not endorsed)

Starch sodium
succinate
Distarch phosphate
(phosphorus oxychloride treated)
Distarch phosphate,
acetylated
Distarch phosphate,
hydroxypropyl
Distarch glycerol,
acetylated
Distarch glycerol

Modified Starches -- (Temporarily endorsed)

Starch acetate
Starch, hydroxypropyl
Distarch, adipate,
acetylated
Distarch glycerol,
hydroxypropyl
Oxidized starches

Vegetable gums ----- (Temporarily endorsed)

Arabic gum
Carrageenan
Furcellaran
Guar gum

Vegetable gums -- (Not endorsed)

Gum tragacanth
Carob bean (Locust bean) gum

Alginates ----- (Temporarily endorsed)

(Ca, K, Na, NH₄)

Propylene glycol

alginate ----- (Temporarily endorsed)

4. CONTAMINANTS

The following provision in respect of contaminants has been temporarily endorsed ^{2/} by the Codex Committee of Food Additives:

Tin, maximum level - - - - - 250 mg/kg, calculated as Sn

5. HYGIENE

5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).

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

5.3 Microorganisms capable of development under ^{3/}normal conditions of storage shall not be present.

5.4 The product shall not contain any substances ^{3/}originating from microorganisms in amounts which are toxic.

^{2/} Temporarily endorsed subject to reconsideration not later than two years following adoption of the Standard by the Commission at Step 8.

^{3/} The Codex Committee on Food Hygiene at its Eighth Session, held from 14 to 18 June 1971 has recommended that these two provisions should read as follows:

"5.3 When tested by appropriate methods of sampling and examination, the product

(a) shall be free from microorganisms capable of development under normal conditions of storage, and

(b) shall not contain any substances originating from microorganisms in amounts which may be toxic."

The Codex Committee on Food Hygiene at its Eighth Session also recommended that in this standard there should be an additional provision as follows:

"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 peas; and, except for "vacuum pack" peas, 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 when completely filled.

6.1.1.1 Classification of "Defective"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 5.1.1 shall be considered a "defective".

6.1.1.2 Acceptance

A lot will be considered as meeting the requirements of 5.1.1 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.

6.1.2 Proper fill by Minimum Drained Weight (See alternative criteria in 6.1.3)

6.1.2.1 The drained weight of the product shall be not less than 60% m/m of distilled water at 20° C which the sealed container will hold when completely filled.

6.1.2.2 Acceptance

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

6.1.3 Proper fill in lieu of Drained Weight Requirement (See alternative criteria in 6.1.2)

6.1.3.1 Canned peas shall be considered to be of proper fill, irrespective of compliance with the requirements of sub-section 6.1.2, if they conform to the method prescribed in 8.7.

6.1.3.2 Acceptance

A container that fails to meet the criteria of 6.1.3, when the method prescribed in 8.7 is applied, shall be considered a "defective"; and a lot will be considered as meeting the requirements of 6.1.3 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

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

7.1 The name of the food

- 7.1.1 The name of the product shall be "Peas", "Green Peas", "Garden Peas", "Green Garden Peas", "Early Peas", "Sweet Peas", "Petit Pois", or the equivalent description used in the country in which the product is intended to be sold.
- 7.1.2 As part of the name or in close proximity to the name, any special sauce and/or seasoning or flavouring which characterizes the product shall be declared, e. g. "With X" or "In X" when appropriate. If the declaration is "With (or "In") Butter Sauce", the fat used shall only be butter.
- 7.1.3 The name of the product may include the type of peas: "round seeded", "smooth seeded", or "wrinkled seeded", as appropriate.

7.2 List of ingredients

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

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

7.5 Country of origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling.

7.6 Other declarations

7.6.1 Type of pack

If canned peas are "vacuum pack", this fact shall be stated on the label so as to be easily discernible

7.6.2 Size representation

The size name may be stated on the label in accordance with national legislation.

8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods, and 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

According to the FAO/WHO Codex Alimentarius method (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, CAC/RM 36-1970, Determination of Drained Weight - Method I.)

Results are expressed as % m/m calculated on the basis of the mass of distilled water at 20° C which the sealed container will hold when completely filled.

8.3 Determination of Alcohol Insoluble Solids*

8.3.1 Materials*

8.3.1.1 Specifications for circular sieves*

8.3.2 Procedure*

8.3.3 Calculation and Expression of Results*

8.3.4 Literature References*

* Text as given for Determination of Alcohol Insoluble Solids --
APPENDIX IV of ALINORM 69/23

8.4 Determination of calcium

7.6 Other declarations

According to the FAO/WHO Codex Alimentarius method (FAO/WHO) 7.6.1
Codex Alimentarius Methods of Analysis for Processed Fruits
and Vegetables, CAC/RM 38-1970, Determination of Calcium
in Canned Vegetables. If there is any discrepancy on the label so as to be easily discernible.

Results are expressed as % m/m calcium. 7.6.2 Size representation

8.5 Method, for, Determination of Water Capacity of Containers

8.5.1 Metal containers

8 METHODS OF ANALYSIS AND SAMPLING

8.5.1.1 Procedure

The methods of analysis and sampling described or referred to

- (1) Select a container which is undamaged in all respects, hereafter referred to as "undamaged" in all respects endorsed by the Codex Committee on Methods of Analysis and Sampling.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.

- (3) Fill the container with distilled water at 20°C to a 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.

- (4) Subtract the weight found in (2) from the weight of drained weight

The difference shall be considered to be the weight of water required to fill the container. (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

8.5.2 Glass containers

Results are expressed as % m/m calculated on the basis of the mass of distilled water at 20°C which the sealed container contains when completely filled.

- (1) Select a container which is undamaged in all respects.

- (2) Wash, dry, and weigh the empty container.

- (3) Fill the container with distilled water at 20°C to the level of the top thereof, and weigh the container thus filled.

- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.3.4 Literature References

* Text as given for Determination of Alcohol Insoluble Solids -- APPENDIX IV of ALLIUM 69/23

8.6 Method for Distinguishing Type of Peas **

8.6.1 Reagents and materials

8.6.1.1 Compound microscope - 100 to 250 magnifications
- Phase contrast

8.6.1.2 Microscope slide and cover glass

8.6.1.3 Spatula

8.6.1.4 Ethanol - 95% (v/v)

8.6.1.5 Glycerin

8.6.2 Procedure

8.6.2.1 Preparing mount

8.6.2.1.1 Remove a small portion of the endosperm and place on glass slide;

8.6.2.1.2 Using a spatula grind the material with 95% (v/v) ethanol;

8.6.2.1.3 Add a drop of glycerin, place cover glass on material and examine under microscope.

8.6.2.2 Identification

Starch granules of the wrinkled-seeded types (garden peas, sweet) show up as clear cut, well defined, generally spherical particles.

Starch granules of the smooth-seeded types (round, early, Continental) show up as an amorphous mass with no well defined geometric shape.

8.7 Method for Determination of Proper Fill in Lieu of Drained Weight
(For Canned Peas Only)

8.7.1 Pour the contents of one container into any empty container of the same kind and size and return the contents completely to its original container.

8.7.2 Level off the peas thus returned, irrespective of the quantity of liquid, 15 seconds after the contents are so returned.

8.7.3 A container with lid attached by double seam shall be considered to be completely filled when it is filled with peas (disregarding the liquid) to the level 5 mm vertical distance below the top of the double seam.

8.7.4 A glass container shall be considered to be completely filled when it is filled with peas (disregarding the liquid) to the level 13 mm vertical distance below the top of the container.

** Text as given for Method for Distinguishing Type of Peas --
APPENDIX IV of ALINORM 69/23.

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

Standard No. PFV 71/6-12

RAISINS

Returned to STEP 6

DRAFT STANDARD
FOR
RAISINS

APPENDIX VI
PFV 71/6-12
June 1971

Returned to Step 6

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 or raisins:

- (1) are properly cleaned, whether washed or unwashed;
- (2) are stemmed except for the form of cluster raisins;
- (3) are cap-stemmed except for Malaga Muscatel type;
- (4) may be dipped (unbleached) in an alkaline lye and oil solution as an aid to drying;
- (5) may be bleached by subjecting to bleach treatment by chemical means and are further processed by drying;
- (6) may have seeds removed mechanically in seed-bearing types;
- (7) are reduced in moisture to a level that will assure preservation of the product; and
- (8) may be coated with one or more of the ingredients or sugars specified in 3.1 of this standard.

2.2 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.

2.3 Styles (or Forms)

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

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

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

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 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 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).

3.2.2 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 --

	<u>Maximum</u>
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.

3.2.3 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 - Raisins with external or internal sugar crystals which are readily apparent and seriously affect the appearance of the raisin. Raisins that are sugar-coated or to which sugar is added intentionally are not considered "sugared raisins".
- (f) Seeds (in seeded forms) - Substantially whole, fully developed seeds which have not been successfully removed during processing of seeded forms.

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 3.2.3 may not exceed the limitations specified in paragraph 3.2.4.

DEFECTS	SEEDLESS TYPES	SEED-BEARING TYPES
	----- Maximum -----	
Pieces of stem (in stemmed forms)	2 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 or have been endorsed by the Codex Committee on Food Additives.

Maximum level of use

Sulphur Dioxide ----- 1,500 mg/kg (Subject to endorsement)
(applies to Bleached Raisins only)

Mineral Oil (Food grade) ----- 5 g/kg (Endorsed)
(See attachment 1 of this Appendix for specifications) 1/

Sorbitol ----- 5 g/kg (Subject to endorsement)

5. CONTAMINANTS

The relevant tolerances contained in the Recommended International Tolerances for Pesticide Residues (CAC/RS 35-1970) and in ALINORM 71/24, Appendix II, shall apply.

1/ The Joint FAO/WHO Expert Committee on Food Additives at its 14th Session held in June 1970, elaborated specifications for food grade mineral oil, having taken into account the specifications contained in the Attachment I of this Appendix.

6. HYGIENE

- 6.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Dried Fruits recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 3-1969).
- 6.2 To the extent possible in good manufacturing practice the product shall be free from stones and other objectionable matter.
- 6.3 Microorganisms capable of development under normal ^{2/} conditions of storage shall not be present.
- 6.4 The product shall not contain any substances ^{2/} originating from microorganisms in amounts which are toxic.

7. WEIGHTS AND MEASURES

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

^{2/} The Codex Committee on Food Hygiene at its Eighth Session, held from 14 to 18 June 1971 has recommended that these two provisions should read as follows:

- "6.3 When tested by appropriate methods of sampling and examination, the product
- (a) shall be free from microorganisms capable of development under normal conditions of storage, and
 - (b) shall not contain any substances originating from microorganisms in amounts which may be toxic."

8. LABELLING

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

8.1 The name of the food (See also optional labelling in 8.6)

- 8.1.1 The name of the product is "Raisins"; or it is "Sultanas" in those countries where the name Sultana is used to describe certain types of Raisins.
- 8.1.2 If the raisins are bleached, part of the name shall include a meaningful term as customarily understood and used in the country of sale, such as: "Bleached", "Golden", or "Golden Bleached".
- 8.1.3 If raisins are of the Seed-bearing type, the name of the food shall show, as appropriate:
 - (a) "Seeded" or "With Seeds Removed".
 - (b) "Non-Seeded", "Unseeded", "With Seeds", or similar description indicating that the raisins are naturally not seedless, except in cluster form and Malaga Muscatel type.
- 8.1.4 If raisins are in cluster form, the name of the food shall show "Clusters", or a similar appropriate description.
- 8.1.5 If raisins intentionally do not have capstems removed, the name of the food shall show "Unstemmed", or a similar appropriate description, except in cluster form and Malaga Muscatel type.
- 8.1.6 Where a characteristic coating, or similar treatment, has been used, appropriate terms shall be included as part of the name of the food or in close proximity to the name; e.g. "Sugar Coated", "Coated with X ".

8.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2 (c) of the General Standard for the Labelling of Prepackaged Foods.

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

8.5 Country of origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling.

8.6 Optional declarations

- 8.6.1 Raisins may be described as "Natural" when they have not been subjected to dipping in an alkaline lye and oil solution as an aid to drying nor subjected to bleach treatment.
- 8.6.2 Raisins may be described as "Seedless" when they are of that type.
- 8.6.3 The product name may include the variety or varietal type group of raisins.

9. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods. The method referred to in 9.2.1 has been endorsed by the Codex Committee on Methods of Analysis and Sampling. The methods in 9.2.2, 9.2.3, 9.2.4, and 9.2.5 are subject to further consideration and/or endorsement by the Codex Committee on Methods of Analysis and Sampling.

9.1 Sampling

[SAMPLING PLANS TO BE DEVELOPED]

9.2 Test Procedures

9.2.1 Moisture

"Moisture in Dried Fruits"
(Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition, 22.012 and 22.003 (c))

[Alternative method for consideration --
"Determination of Moisture in Dried Prunes"
Reference: Journal of the Association of Official Analytical Chemists, Vol. 52, No. 4, July, 1969, p. 858]

9.2.2 Mineral Impurities (Sand test)

[Suitable method for raisins to be developed, taking into consideration the following method:

"Determination of Acid-Insoluble Residue (Soil)"
(Reference: Journal of the Association of Official Analytical Chemists, Vol. 54, No. 3, May 1971, 40.A07]

9.2.3 Sulphur Dioxide

"Colorimetric Method -- applicable to dried fruit"
(Reference: Official Methods of Analysis of the Association
of Official Analytical Chemists, 11th Edition,
20.093)

9.2.4 Mineral Oil

"Unsaponifiable Residue"
(Reference: Official Methods of Analysis of the Association
of Official Analytical Chemists, 11th Edition,
28.063)

9.2.5 Sorbitol

"GLC of Sorbitol in Bakery Products, Wines, and Vinegars"
(Reference: Journal of the Association of Official Analytical
Chemists, Vol. 51, No. 6, November 1968,
p. 1272-1274)

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 a solution in iso-octane containing 1 gram per litre, that is to say, $E_{\frac{0.1\%}{1\text{cm}}}$ shall not be greater than 0.04 where $E = \log_{10} \frac{I_0}{I}$ and I_0 and I 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 compounds 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 hydrocarbons;
- (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, $E_{\frac{0.1\%}{1\text{cm}}}$ shall not be greater than 1.0 where $E = \log_{10} \frac{I_0}{I}$ and I_0 and I 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 hydrocarbons;
- (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 Paraffin in the British Pharmacopoeia 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 70°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 food, 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 centimetre layer of a solution in iso-octane containing 1 gram per litre, that is to say, $E_{\frac{0.1\%}{1\text{cm}}}$ shall not be greater than 0.04 where $E = \log_{10} \frac{I_0}{I}$ and I_0 and I are the intensities of the incident radiation and of the transmitted radiation respectively; or
- (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 litre, that is to say, $E_{\frac{0.1\%}{1\text{cm}}}$ shall not be greater than 1.0 where $E = \log_{10} \frac{I_0}{I}$ and I_0 and I are the intensities of the incident radiation and of the transmitted radiation respectively.

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

Proposed Draft Standard

GENERAL STANDARD FOR

JAMS (FRUIT PRESERVES) AND JELLIES

Standard No. PFV 71/3-26

Returned to Step 3

GENERAL STANDARD FOR
JAMS (FRUIT PRESERVES) AND JELLIES

Returned to Step 3

1. SCOPE

This standard covers general provisions as are applicable to a class of fruit spreads commonly known as jams and jellies. The distinguishing characteristics of this class of products is that a substantial amount of fruit ingredient is required in formulation and the end product has a relatively high soluble solids value. The terms "preserves" and "jam" are frequently used interchangeably. "Jellies" are differentiated from jams in that the fruit ingredient consists of the juice that has been extracted from whole fruits and clarified by filtration or other means. The proposed standard includes products prepared not only from single fruits but also those prepared from two or more fruits.

This standard does not cover products prepared with non-carbohydrate sweeteners and which are clearly intended or labelled as intended for diabetic or dietetic use; nor does this standard apply to those products prepared from citrus fruit, commonly referred to as marmalade, which products are covered by the "Codex Standard for Citrus Marmalade". Likewise, this standard does not cover products clearly intended and marked as for manufacturing use.

2. DESCRIPTION

2.1 Product definitions

2.1.1 "Jams" or "Preserves" or "Conserves" is the product:

- (a) that is prepared from a suitable fruit ingredient which may be whole or pieces of fruit, fruit pulp, or fruit puree; and additionally with or without fruit juice or concentrated fruit juice as optional ingredient(s); and
- (b) with which prepared fruit ingredient is mixed a carbohydrate sweetener, with or without water, and may contain added pectin, edible acids, and minor amounts of other approved ingredients and additives; and
- (c) in which the prepared mixture is processed by the application of heat to a suitable consistency.

The product shall be filled into clean containers in a manner which shall minimize subsequent contamination and microbiological spoilage.

2.1.2 "Jelly" is the product:

- (a) that is prepared from a suitable fruit ingredient that is practically free from suspended fruit particles; and
- (b) with which prepared fruit ingredient is mixed a carbohydrate sweetener, may be adjusted with water, may contain added pectins and edible acids and may include minor amounts of other ingredients and additives; and
- (c) in which the prepared mixture is processed by the application of heat to a tender, semi-solid consistency.

The product shall be filled into clean containers in a manner which shall minimize subsequent contamination and microbiological spoilage.

2.2 Other definitions

2.2.1 "Fruit" means all of the recognized fruits and those vegetables recognized as suitable in making jams, including but not limited to chestnuts, ginger, melon, rhubarb, tomato.

2.2.2 "Fruit ingredient" means:

2.2.2.1 In the case of jams, preserves, or conserves --

- (a) prepared from fruit which is fresh, frozen, canned, concentrated, or otherwise processed or preserved other than by drying;
- (b) prepared from substantially sound, wholesome, clean fruit of suitable ripeness, not deprived of any of its main constituents, except that it is trimmed, sorted, and otherwise treated to remove objectionable bruises, stems, toppings, tailings, cores, pits (stones), and may or may not be peeled. In the case of ginger, rhubarb, and melon it means respectively peeled ginger root, stemmed and trimmed rhubarb, and melons with seeds, stem, and rind removed;
- (c) the prepared fruit shall contain all natural soluble solids (extractives) except those lost during preparation under good manufacturing practice.

2.2.2.2 In the case of jelly --

- (a) the juice or aqueous extract obtained from fruit which is fresh, frozen, canned, concentrated, or otherwise processed or preserved other than by drying;
- (b) prepared from such fruit which is clean, substantially sound, and wholesome and which is trimmed, sorted, or otherwise treated to remove objectionable material;
- (c) such juice is further prepared by removal of all, or practically all, of the insoluble solids and may be concentrated by the removal of water.

- 2.2.3 "Fruit Pulp" means the edible portions of the fruit, mashed, or cut into pieces, but not reduced to a puree.
- 2.2.4 "Fruit Puree" means fruit ingredient finely divided by sieving, screening, or other mechanical means.
- 2.2.5 "Soluble Solids" means percent by weight of soluble solids as determined by the Refractometric method at 20° C using the International Sucrose Scale but making no correction for insoluble solids or acids.

3. ESSENTIAL COMPOSITION AND QUALITY CRITERIA

3.1 Composition

3.1.1 Basic ingredients

- 1) Fruit ingredient.
- 2) One or more of the carbohydrate sweetener(s) or sugars defined by the Codex Committee for Sugars, including sucrose, dextrose, invert sugar, glucose syrup, dried glucose syrup.

3.1.2 Optional ingredients

- 1) Vinegar.
- 2) Citrus juice.
- 3) Herbs and Spices.
- 4) Essential oils.
- 5) Spirituous liquors.
- 6) Butter, margarine, other edible vegetable or animal oils (used as anti-foaming agents).
- 7) Honey.
- 8) Fruit juice or fruit juice concentrates in the case of jams.

3.2 Formulation

3.2.1 Fruit Content

The product shall contain not less than 40 parts^{1/}, by weight, of prepared fruit ingredient for each 100 parts, by weight, of finished product.

When concentrated or diluted fruit ingredient is used, the formulation is based upon the equivalent of single strength fruits as determined by the relationship between the soluble solids of the concentrate and the soluble solids of the natural (single-strength) fruit.

3.2.2 Mixtures of Fruits

3.2.2.1 Two fruits

When a jam or jelly contains a mixture of two fruits the first-named fruit shall contribute not less than 50 percent, nor more than 75 percent, of the total fruit content except when melon, pineapple, passionfruit, lemon, or ginger is one of the two fruits. When melon is a constituent it may be present up to a level of 95 percent and where pineapple, passionfruit, lemon, and ginger are present they shall be present at a level of not less than 5 percent with the major ingredient being permitted at a level greater than 75 percent.

3.2.2.2 Three fruits

When a jam or jelly contains a mixture of three fruits, the first-named fruit shall contribute not less than 33-1/3 percent, nor more than 75 percent, of the total fruit content.

3.2.2.3 Four or more fruits

When a jam or jelly contains a mixture of four or more fruits, the first-named fruit shall contribute not less than 25 percent, nor more than 75 percent, of the total fruit content.

3.3 Soluble Solids (Finished Product)

The soluble solids value of the finished product may not be less than 65 percent.

^{1/} Subject to review

3.4 Quality Criteria

3.4.1 General Requirements

The end product shall be viscous or semi-solid, have a colour and flavour normal for the type or kind of fruit ingredient taking into consideration any flavour imparted by optional ingredients, and shall be reasonably free from defective materials normally associated with the fruits. In the case of jellies, the product shall be at least reasonably clear or transparent and shall contain no apparent defects.

Seeds, in the case of berries and passion fruit, are a natural fruit component and are not considered defects unless the product is presented as "Seedless".

3.4.2 Defects and allowances -- Jams (Preserves)

Limitations

- (a) Harmless Extraneous Plant Material - - - - - 1 piece per
(consisting of plant material common 500 grams
to the specific fruit and includes
leaves, full caps, stems over 10 mm
in length and sepal bracts aggregating
an area of 5 mm² or larger)
- (b) Pit (Stone)- - - - - 1 piece per
(whole pit or stone in fruits such as 1000 grams
cherries that are normally pitted;
or a piece of pit of approximately
one-half pit)
- (c) Pit Fragments - - - - - 1 piece per
(a piece of pit less than the equivalent 500 grams
of one-half pit and which weighs at least
5 milligrams)
- (d) Damaged - - - - - 1 piece per
(a piece of fruit that is blemished, 100 grams
discoloured, or bruised by pathological or
other means to the extent that it is
materially affected)

3.4.3 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-section 3.4.1 and 3.4.2 shall be considered a "defective".

3.4.4 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 3.4.3 when the number of "defectives", as defined in sub-section 3.4.3, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

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 or have been endorsed or temporarily endorsed or acted upon by the Codex Committee on Food Additives, as indicated:

	<u>Maximum Level of Use</u>
4.1 <u>Acidifying Agents</u>	
Citric acid	In sufficient amount to maintain the pH at a level of 2.8 - 3.5 - - - (or) - - - Total acidity of 0.5% (5,000 p.p.m.) (Subject to further consideration and/or endorsement)
Malic acid	
l-Tartaric acid	
Fumaric acid	
Lactic acid	
4.2 <u>pH Regulating Agents</u>	
Sodium, Potassium, and Calcium salts of any of the acids listed in 4.1	Not limited (Endorsement postponed)
Sodium and Potassium Carbonates and Bicarbonates	Not limited (Endorsement postponed)
4.3 <u>Anti-Foaming Agents</u>	
Mono- and Diglycerides of fatty acids of edible oils	Not more than is necessary to inhibit foaming (Endorsed)
Dimethylpolysiloxane -----	10 mg/kg (Subject to endorsement)
4.4 <u>Thickening Agents</u>	
Agar -----	Not limited (Endorsement postponed)
Pectin -----	Not limited (Endorsed)

4.5 Colouring matters

Erythrosine -----	(Temporarily endorsed)	}	200 mg/kg (singly or in combination)
Amaranth -----	(Temporarily endorsed)		
Fast Green FCF -----	(Temporarily endorsed)		
Ponceau 4 R -----	(Temporarily endorsed)		
Azo-rubine (Carmoisine) -----	(Not endorsed)		
Tartrazine -----	(Temporarily endorsed)		
Wool Green BS (Green 'S')-----	(Temporarily endorsed)		
Sunset Yellow FCF -----	(Temporarily endorsed)		

4.6 Preservatives

Sodium Benzoate	(for use in non-)	}	1000 mg/kg (singly or in combination) (Subject to endorsement)
Sorbic Acid or Potassium Salt	(hermetically)		
	(sealed)		
Esters of parahydroxy benzoic acid	(containers)		
	()		
Sulphur Dioxide -----			100 mg/kg (Endorsed)

4.7 Natural flavours

Natural fruit essences of the named fruit(s) in the product -----	Not limited (Endorsed)
Natural Mint Flavour -----	Not limited (Endorsed)
Natural Cinnamon Flavour -----	Not limited (Endorsed)

4.8 Firming agents

Calcium Chloride	}	[2000 mg/kg, expressed as Ca (singly or in combination) (Subject to endorsement)]
Calcium lactate		
Calcium metabisulfite		

5. HYGIENE

- 5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).
- 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 substances originating from microorganisms in amounts which are toxic.

6. WEIGHTS AND MEASURES

6.1 Fill of container

The container shall be well filled with the product. When packed in rigid containers, the product 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 when completely filled.

6.1.1 Classification of "defective"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 6.1 shall be considered a "defective".

6.1.2 Acceptance

A lot will be considered as meeting the requirement of 6.1 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

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

7.1 The name of the food

- 7.1.1 The name of the product shall be "Jam", "Preserves", "Conserves", or "Jelly", as appropriate.
- 7.1.2 The name of the product shall be preceded or followed by the name of the fruit, or fruits, used in order of proportion by weight.
- 7.1.3 The name of the product may include the name of the variety of fruit (e.g. Victoria Plum Jam) or type descriptions (e.g. Yellow Plum Jam).
- 7.1.4 The name of the product or fruit may include an adjective description of character (e.g. Seedless Blackberry Jam).
- 7.1.5 Jam made from ginger, or pineapple, or figs, with or without the addition of citrus fruit, may be designated "Ginger Marmalade", "Pineapple Marmalade", or "Fig Marmalade" if such product is customarily so described in the country in which it is sold.

7.2 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2 (c) of the General Standard for the Labelling of Prepackaged Foods.

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

7.5 Country of origin

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

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

7.6 Optional labelling (See 7.1.3, 7.1.4, 7.1.5)

8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to in 8.1, 8.2, and 8.4 are international referee methods and are subject to endorsement 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 Soluble Solids

Soluble solids shall be determined by the Refractometric method, disregarding any adjustment for insoluble solids and acids, in accordance with the AOAC Method.

(Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition, 22.019)

8.3 Determination of calcium in jams

[to be developed]

8.4 Method for Determination of Water Capacity of Containers

8.4.1 Metal containers

8.4.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.4.2 Glass containers

8.4.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

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

Standard No. PFV 71/3-33

GENERAL STANDARD
FOR
CITRUS MARMALADE -- STEP 3

Returned to STEP 3

PROPOSED DRAFT STANDARD

APPENDIX VIII
PFV 71/3-33
June 1971

GENERAL STANDARD
FOR
CITRUS MARMALADE
Returned to Step 3

1. SCOPE

This standard covers general and specific provisions for the product prepared from citrus fruit and commonly referred to as "Marmalade".

Marmalades made from ginger, pineapple, or figs (with or without the addition of citrus fruit) which are customarily described as marmalades of such fruit(s) but which conform to the requirements for jams, are covered by the Codex General Standard for Jams (Fruit Preserves) and Jellies.

It does not apply to products prepared from fruits other than citrus nor does it apply to those products prepared from non-carbohydrate sweeteners and designated as "diabetic" or "dietetic". Nor does it apply to the product intended or clearly marked for manufacturing use only.

2. DESCRIPTION

2.1 Product definitions

- 2.1.1 "Marmalade" is the product obtained by processing prepared citrus fruit in the form of whole fruit, fruit pulp, or fruit puree, with or without citrus juice, with or without the extraction of peel.

The prepared fruit ingredient is mixed with a suitable carbohydrate sweetener and may include the addition of water, pectin, edible acids, and other minor ingredients.

The prepared mixture is processed by the application of heat to a suitable consistency.

The product shall be filled into clean containers in a manner which shall minimize subsequent contamination and microbiological spoilage.

- 2.1.2 "Jelly Marmalade" is marmalade as described in sub-section 2.1.1 from which all of the insoluble solids, or all of the insoluble solids except for a small proportion of thinly cut peel, has been removed.

2.2 Other definitions

- 2.2.1 "Prepared fruit" or "prepared fruit ingredient" means substantially sound, clean citrus fruit, including pulps, concentrated juices, extractives, and preserved peels from which stems, calyces, and seeds have been removed. The fruit and juice shall contain all natural soluble solids (extractives) except for those lost during preparation under good manufacturing practices. The fruit ingredient may be prepared from fruit which is fresh, processed, or preserved other than by drying.

3. ESSENTIAL COMPOSITION AND QUALITY CRITERIA

3.1 Composition

3.1.1 Basic ingredients

- 1) Prepared fruit ingredient.
- 2) One or more of the carbohydrate sweetener(s) or sugars defined by the Codex Committee for Sugars, including sucrose, dextrose, invert sugar, glucose syrup, dried glucose syrup.

3.1.2 Other ingredients

- 1) Vinegar.
- 2) Citrus juice.
- 3) Essential oils.
- 4) Spirituous liquors.
- 5) Butter, margarine, other edible vegetable or animal oils (as anti-foaming agents).
- 6) Honey.

3.2 Formulation

The product shall contain not less than 20 parts, by weight, of prepared fruit for each 100 parts, by weight, of finished marmalade. Peel in excess of amounts normally associated with the fruits is not considered a part of the fruit ingredient for purposes of compliance with minimum fruit content.

When concentrated or diluted fruit ingredient is used, the formulation is based upon the equivalent of single strength fruits as determined by the relationship between the soluble solids of the concentrate and the soluble solids of the natural (single strength) fruit.

3.3 Soluble Solids (Finished Product)

The soluble solids value of the finished product may not be less than 65 percent.

3.4 Quality Criteria

3.4.1 General

The end product shall be viscous or semi-solid, have a colour and flavour normal for the type of citrus fruit used taking into consideration flavour imparted by optional ingredients. The product shall be practically free from extraneous plant material, seeds, or seed particles, and shall be reasonably free from other defects normally associated with the fruit.

3.4.2 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-section 3.4.1 shall be considered a "defective".

3.4.3 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 3.4.2 when the number of "defectives", as defined in sub-section 3.4.2, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

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 or have been endorsed or temporarily endorsed or acted upon by the Codex Committee on Food Additives, as indicated.

4.1 Acidifying Agents

Maximum Level of Use

Citric acid)	Not limited
Malic acid)	(Endorsement postponed)
l-Tartaric acid)	
Fumaric acid)	
Lactic acid)	

singly or in
combination

4. FOOD ADDITIVES -- continuation

4.2 pH Regulating Agents

Sodium, Potassium, and Calcium) Not limited
salts of any of the acids listed) (Endorsement postponed)
in 4.1)

Sodium and Potassium Carbonates) Not limited
and Bicarbonates) (Endorsement postponed)

4.3 Anti-Foaming Agents

Mono- and Diglycerides of fatty) Not more than is necessary
acids of edible oils) to inhibit foaming
(Endorsed)

Dimethylpolysiloxane - - - - - 10 mg/kg
(Subject to endorsement)

4.4 Thickening Agent

Pectin - - - - - Not limited
(Endorsed)

4.5 Colouring Matters

Caramel- - - - - Not limited
(Not endorsed -- to be reconsidered)

In Lime Marmalade only

Tartrazine 100 mg/kg
Wool Green BS (Green 'S') (Singly or in combination)
(Temporarily endorsed)

4.6 Preservatives

Sodium Benzoate (for use in non-) 1000 mg/kg
Sorbic Acid or (hermetically) (singly or in
Potassium Salt (sealed) combination)
Esters of parahydroxy (containers) (Subject to endorsement)
benzoic acid

Sulphur Dioxide - - - - - 100 mg/kg
(Endorsed)

4.7 Natural flavours

Natural fruit essences - - - - - Not limited (Endorsed)

4.8 Firming agents

Calcium Chloride
Calcium lactate
Calcium metabisulfite

2000 mg/kg, expressed as Ca
(Singly or in combination)
(Subject to endorsement)

5. HYGIENE

- 5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).
- 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 substances originating from microorganisms in amounts which are toxic.

6. WEIGHTS AND MEASURES

6.1 Fill of container

The container shall be well filled with the product. When packed in rigid containers the product 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 when completely filled.

6.1.1 Classification of "defective"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 6.1 shall be considered a "defective".

6.1.2 Acceptance

A lot will be considered as meeting the requirements of 6.1 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

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

7.1 The name of the food

- 7.1.1 The name of the product shall be "Marmalade".
- 7.1.2 Where the product is not made exclusively from oranges, the designation shall include the citrus fruits from which the product was prepared, save however that this shall not be necessary where the proportion of citrus fruit other than orange does not exceed 10% by weight of the fruit content.

7. LABELLING -- continuation

- 7.1.3 Where the product is prepared from two or more citrus fruits, the designation shall include each citrus fruit present, with the fruits listed in the order of predominance.
- 7.1.4 The name of the product may contain the name of the variety of citrus fruit (e.g. "Valencia Orange Marmalade").
- 7.1.5 The product may be designated according to the amount and type of peel present, depending upon the practice in the country in which it is sold.

7.2 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2 (c) of the General Standard for the Labelling of Prepackaged Foods.

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

7.5 Country of origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling.

8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to in 8.1, 8.2, and 8.4 are international referee methods and are subject to endorsement 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 Soluble solids

Soluble solids shall be determined by the Refractometric method, disregarding any adjustment for insoluble solids and acids, in accordance with AOAC Method.

(Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition, 22.019)

8.3 Determination of calcium in jams

[to be developed]

8.4 Method for determination of water capacity of containers

8.4.1 Metal containers

8.4.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.4.2 Glass containers

8.4.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

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

Proposed Draft Standard

CANNED TROPICAL FRUIT SALAD -- Step 3

Standard No. PFV 71/3-23

Proposed Draft Standard
For
CANNED TROPICAL FRUIT SALAD
Advanced to Step 3

APPENDIX IX
PFV 71/3-23
June 1971

1. DESCRIPTION

1.1 Product Definition

1.1.1 Canned Tropical Fruit Salad is the product (a) prepared from three basic fruits to which may be added one or more optional fruits (as further defined in this standard) and is prepared from fresh, frozen or canned fruits; (b) packed with water or other suitable liquid packing medium, and may be packed with nutritive sweeteners and seasonings or flavourings appropriate to the product; and (c) processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

1.1.2 The fruits shall be of the following kinds and styles:

(a) Basic Fruits

Pineapple ----- (Ananas comosus) tidbits, pieces, dice or cubes, chips or crisp cut prepared from peeled and properly cored pineapple.

Papaw (Papaya) -- (Carica papaya) slices, dice or sections prepared from fruit which has been peeled and from which the seeds have been removed.

Banana ----- (Cultivated edible species of Musa) slices or dice prepared from peeled fruit.

(b) Optional Fruits:

- Litchi ----- (Litchi chinensis) whole or broken segments prepared from peeled and pitted fruit.
- Mango ----- (Mangifera indica) peeled, deseeded, and cut into strips or pieces, reasonably free from fibres.
- Longan ----- (Euphoria Longana) whole or broken segments prepared from peeled and pitted fruit.
- Loquat ----- (Eriobatrya japonica) whole or quarters prepared from peeled and deseeded fruit.
- Mandarin Oranges (Citrus nobilis var. deliciosa) whole segments prepared from peeled, deseeded fruit.
- Grapes ----- (Cultivated Edible species of Vitis) whole grapes of any seedless variety.
- Maraschino (Prepared from fruit conforming
- Cherries ----- with the characteristics of Prunus avium) whole or halves (and pitted).
- Passionfruit ---- (Cultivated edible species of Passiflora) pulp with or without seeds.

2. Essential Composition and Quality Factors

2.1 Proportion of Fruits (basic ingredients)

Fruits shall be in the following proportions, based on the individual drained fruit weights in relation to the drained weights of all the fruits:

	<u>Minimum</u>	<u>Maximum</u>
<u>Basic Fruits</u>		
Pineapple	45%	65%
Papaw (Papaya)	25%	50%
Banana	5%	15%

	<u>Minimum</u>	<u>Maximum</u>
<u>Optional Fruits</u>		
Litchi	5%	20%
Longan	5%	20%
Mango	5%	20%
Loquat	3%	15%
Grape	3%	15%
Mandarin Oranges	3%	15%
Maraschino Cherries		1%
Passionfruit	trace	2%

2.1.1 A lot will be considered as meeting the requirements for Proportions of Fruits when:

- (1) The average of the individual fruit proportions from all containers in the sample is within the range required for the individual fruits; and
- (2) The number of individual containers which are not within the range for any one or more fruits do not exceed the acceptance number (c) of the appropriate sampling plan (AQL - 6.5) in the Sampling Plans for Prepackaged Foods.

2.2 Packing Media

Canned Tropical Fruit Salad may be packed in any one of the following:

- (a) Water ----- in which water, or any mixture of water and fruit juice(s) from any of the specified fruits, is the sole liquid packing medium.
- (b) Fruit Juice ----- fresh, canned, or reconstituted fruit juices from any of the specified fruits which may be strained or filtered.
- (c) Syrup ----- in which water and/or juice from any of the specified fruits is combined with one or more of the following sugars -- sucrose,

invert sugar, dextrose, dried
glucose syrup and 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/^{is}to be determined on sample average, but no container shall have a brix value lower than that of the minimum of the next category below, should one be prescribed.

2.3 Other Ingredients

Nutritive sweeteners, flavourings other than artificial flavourings, citrus juices and natural fruit essences.

2.4 Sizes and Shapes of Fruit

All permitted varieties of fruit other than pineapple tidbits, cubes or diced are excluded from uniformity of size requirements. In the case of pineapple the following shall apply:

2.4.1 Tidbits of pineapple ---

not more than 15% of the drained pineapple portion may consist of tidbits, each of which shall weigh less than three fourths of the average weight of the untrimmed tidbits.

2.4.2 Cubes or Diced pineapple ---

(a) not more than 10% of the drained pineapple portion may consist of units of such size that they will pass through a screen that has square openings of 8 mm.

(b) not more than 15% of the drained pineapple portion may consist of units of such size which weigh more than 3 grammes each.

2.5 Quality Criteria

2.5.1 Colour --- Canned Tropical Fruit Salad shall have normal colour resulting from the combination of ingredients of normal colour.

2.5.2 Flavour --- Canned Tropical Fruit Salad shall have a normal flavour and odour characteristic for the particular blend of fruit.

2.5.3 Texture --- The texture of the fruit ingredients may be variable as is appropriate for the respective fruit.

2.5.4 Defects and Allowances

Canned Tropical Fruit Salad shall be substantially free from defects within the following prescribed limits:-

<u>Defect</u>	<u>Maximum Limits</u> (Based on weight of drained fruit)
(a) <u>Blemished fruit pieces</u> ----- (consisting of pieces of fruit with dark surface areas, spots penetrating the fruit, and other abnormalities).	30% by count
(b) <u>Peel</u> --- (based on averages)--- (considered a defect only when occurring on, or from those fruits which are peeled).	6.5 sq. cm. per 450 gms. of total contents.
(c) <u>Seeds, Seed Material & Extraneous Vegetable Matter</u> -----	2 gms. per 500 gms. of total contents.

2.5.5 Classification of "Defectives"

A container shall be considered a "defective" that fails to meet one or more of:

- (1) the applicable requirements in 2.4; and
- (2) the applicable quality requirements in 2.5.1 through 2.5.4.

2.5.6 Acceptance

A lot will be considered as meeting the applicable quality and other requirements referred to in 2.5.5 when:

- (a) for those requirements which are not based on average -- the number of "defectives", as defined in sub-section 2.5.5, does not exceed

the acceptance number (c) of the appropriate sampling plan (AQL - 6.5) in the Sampling Plans for Prepackaged Foods, and

(b) the requirements which are based on sample averages are complied with.

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>Additives</u>	<u>Maximum Level of use</u>
<u>Colouring matter</u>	
Erythrosine ----- (To colour cherries only when artificially coloured cherries are used).	No limit
<u>Natural Flavours</u>	
Natural fruit essence -----	No limit
Natural flavours and their ----- identical synthetic equivalents	No limit
<u>Anti-oxidant</u>	
Ascorbic acid -----	150 mg/kg

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4. Hygiene

4.1 It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products, recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2 - 1969).

- 4.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 4.3 Microorganisms capable of development under normal conditions of storage shall not be present.
- 4.4 The product shall not contain any substances originating from microorganisms in amounts which are toxic.

5. Weights and Measures

5.1 Fill of Container

5.1.1 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 when completely filled.

5.1.1.1 Classification of "Defective"

A container that fails to meet the requirement for minimum fill of 5.1.1 shall be considered a defective.

5.1.1.2 Acceptance

A lot will be considered as meeting the requirements of 5.1.1 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.

5.1.2 Minimum Drained Weight

5.1.2.1 The drained weight of the product shall not be less than 50% of the weight of distilled water at 20°C which the sealed container will hold when completely filled.

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

6. Labelling

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

6.1 The name of the food

6.1.1 The name of the product shall be "Tropical Fruit Salad".

6.1.2 The following reference to packing medium, as applicable, shall be included as part of the name or in close proximity to the name "Water", "Fruit Juice", "Extra Light Syrup", "Light Syrup", "Heavy Syrup" or "Extra Heavy Syrup".

6.1.3 A declaration of any flavouring, seasonings or natural fruit essence which characterises the product shall be included as part of the name or in close proximity to the name.

6.2 List of ingredients

6.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2 (c) of the General Standard for the Labelling of Pre-packaged Foods, except that water and fruit juice need not be declared; and except as provided in 6.2.2.

6.2.2 When cherries are artificially coloured and/or artificially flavoured, the following declarations are permitted in the list of ingredients or elsewhere in lieu of naming the additive:

"Cherries artificially coloured red";

or

"Cherries artificially coloured red and artificially flavoured".

6.2.3 If ascorbic acid is added to preserve colour; its presence shall be declared in the list of ingredients or elsewhere on the label in this manner ---

"Ascorbic acid added to preserve colour".

6.3 Net Contents

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

6.4 Name and address

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

6.5 Country of origin

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

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

7. METHODS OF ANALYSIS AND SAMPLING

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

7.1 Sampling

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

7.1.1 Size of Sample Unit *

7.1.1.1 For ascertaining proportions of fruits and fill of container (including drained weight) the entire container shall be the sample unit.

7.1.1.2 For ascertaining compliance with percentage requirements for Sizes and Shapes of fruits and Defects, the sample unit shall be:

- (1) the entire container when it holds 1 litre or less; or
- (2) 500 g of drained fruit (of a representative mixture) when the container holds more than 1 litre.

7.2 Ascertaining Proportions of Fruit **

7.2.1 Procedure

- 7.2.1.1 Determine drained weight and keep liquid and fruit separate;
- 7.2.1.2 Separate individual fruit ingredients, removing those fruits present in lesser amounts (such as cherries, grapes);
- 7.2.1.3 Weigh the individual fruit ingredients to the nearest gram;
- 7.2.1.4 Record each fruit's weight and add all of these weights.

7.2.2 Calculation and Expressions of Results

Calculate the percentage of fruit proportions:

(a)
$$\frac{\text{each fruit's weight}}{\text{sum of all fruit weights}} \times 100 = \% \text{ of the fruit weight}$$

7.3 Determination of Drained Weight

According to the FAO/WHO Codex Alimentarius method (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, CAC/RM 36-1970, Determination of Drained Weight - Method I.

Results are expressed as % m/m calculated on the basis of the mass of distilled water at 20° C which the sealed container will hold when completely filled.

* Text as given for "Size of Sample Unit -- Method II" in Appendix IV of ALINORM 69/23, except that paragraphs 3, 3.1, and 3.2 have hereby been purposely omitted for this Draft Standard.

** Text as given for "Ascertaining Proportions of Fruit" in Appendix IV of ALINORM 69/23.

(a) Do not use the original drained weight of the product before separation of the fruits.

7.4 Syrup Measurements (Refractometric Method)

According to the AOAC (1970) method (Official Methods of Analysis of the AOAC (1970) 31.011: (Solids) by means of Refractometer (4) Official, Final action (and 47.012 and 47.015).

Results are expressed as % m/m of sucrose ("degrees Brix"), with correction for temperature to the equivalent at 20° C.

7.5 Method for Determination of Water Capacity of Containers

7.5.1 Metal containers

7.5.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20°C. to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

7.5.2 Glass containers

7.5.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20°C. to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

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

Proposed Draft Standard

CANNED CARROTS -- STEP 3

Standard No. PFV 71/3-21

PROPOSED DRAFT STANDARD
FOR
CANNED CARROTS
Advanced to STEP 3

APPENDIX X
PFV 71/3-21
June 1971

1. DESCRIPTION

1.1 Product description

Canned carrots is the product (a) prepared from clean, sound, roots of carrot varieties (cultivars) conforming with the characteristics of the species Daucus carota L. from which the leaves, green tops, and skin have been removed; (b) packed with water or brine (sweetened or unsweetened); and (c) processed by heat in an appropriate manner before or after being sealed in a container so as to prevent spoilage.

1.2 Varietal types

Any suitable variety (cultivar) of carrot may be used.

1.3 Styles

- (a) Whole: consist of carrots which, after processing, retain their approximate original conformation. The diameter of the carrots, measured at right angles to the longitudinal axis shall not exceed 50 mm and the variation between the largest and smallest carrot shall not exceed 2:1 (based on diameter).
- (b) Sliced or Finger Cut: consist of carrots which have been cut longitudinally into four or more pieces of approximately equal size. The maximum length of the cut sectors at right angles to the longitudinal axis shall not exceed 30 mm and within unit samples, the variation between the largest and the smallest sectors shall not exceed 2:1.
- (c) Ring Cut: consist of carrots which have been cut at right angles to the longitudinal axis, into rings having a maximum thickness of 10 mm and a maximum diameter of 50 mm.
- (d) Diced: consist of carrots cut into cubes with edges not exceeding 12.5 mm in length.
- (e) Julienne, French Style, or Shoestring: consist of carrots cut longitudinally into strips. The cross section shall not exceed 5 mm (measured at the longest side of the cross section).

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Optional ingredients

- (a) Salt
- (b) Sucrose, invert sugar, dextrose, glucose syrup, dried glucose syrup.

2.2. Quality criteria

2.2.1 Defects and allowances

Canned carrots shall be reasonably free from defects and not more than 3 unit defects as defined below may be present in a sample unit of 300 grammes (10 ozs.):

	<u>Unit Defect</u>
(a) <u>Severe blemishes</u> ----- (consist of discoloured marks or insect damage of black, dark brown or of similar intense colour)	Each 14 sq. mm (4 mm diameter circle)
(b) <u>Blemishes</u> ----- (consist of discoloured marks or insect damage readily noticeable but of slight colour intensity)	Each 28 sq. mm (6 mm diameter circle)
(c) <u>Cracks</u> ----- (consist of clean cracks, not discoloured)	Each 50 sq. mm (8 mm diameter circle)
(d) <u>Green tops</u> ----- (consist of carrots where, at the crown end, green colour extends into the cortex)	Each 50 sq. mm (8 mm diameter circle)
(e) <u>Extraneous plant material</u> ----- (vegetable material which does not consist of carrot root)	1 gram
(f) <u>Unpeeled units</u> -----	200 sq. mm (16 mm diameter circle)

2.2.2 Classification of "defectives"

A sample unit that exceeds the total number of unit defects referred to in sub-section 2.2.1 shall be considered a "defective".

2.2.3 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.2.2, when the number of "defectives", as defined in sub-section 2.2.2, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plans for Prepackaged Foods.

3. CONTAMINANTS

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

Tin, maximum level -----250 mg/kg, calculated
as Sn.

4. HYGIENE

- 4.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).
- 4.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 4.3 Microorganisms capable of development under normal conditions of storage shall not be present.
- 4.4 The product shall not contain any substances originating from microorganisms in amounts which are toxic.

5. WEIGHTS AND MEASURES

5.1 Fill of container

5.1.1 Minimum fill

The container shall be well filled with carrots 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 when completely filled.

5.1.1.1 Classification of "defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of 5.1.1 shall be considered a "defective".

5.1.1.2 Acceptance

A lot will be considered as meeting the requirement of 5.1.1 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.

5.2.1 Minimum drained weight

5.2.1.1 The drained weight of the product shall be not less than 55% for cans below 8 mm (3-7/16") diameter, and not less than 58% for cans of 8 mm diameter and above, of the weight of distilled water at 20 degrees C which the sealed container will hold when completely filled.

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

6. LABELLING

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

6.1 The name of the food

6.1.1 The name of the product shall be "Carrots".

6.1.2 The style, as appropriate, shall be declared as a part of the name or in close proximity to the name: "Whole", "Sliced", "Finger Cut", "Ring Cut", "Diced", "Julienne", "French Style", "Shoestring".

6.1.3 The name of the product may include the variety or type of the carrots used.

6.2 List of ingredients

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

6.3 Net contents

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

6.4 Name and address

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

6.5 Country of Origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

6.6 Optional declarations (See 6.1.3)

7. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods. The methods referred to in 7.1, 7.2, and 7.3 have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

7.1 Sampling

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

7.2 Determination of Drained Weight

According to the FAO/WHO Codex Alimentarius method (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, CAC/RM 36-1970, Determination of Drained Weight - Method I).

Results are expressed as % m/m calculated on the basis of the mass of distilled water at 20° C which the sealed container will hold when completely filled.

7.3 Method for Determination of Water Capacity of Containers

7.3.1 Metal containers

7.3.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

7.3.2 Glass containers

7.3.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION
Committee on Processed Fruits and Vegetables
Proposed Draft Standard
CANNED MATURE PROCESSED PEAS -- STEP 3
Standard No. PFV 71/3-25

PROPOSED DRAFT STANDARD
FOR
CANNED MATURE PROCESSED PEAS
Advanced to Step 3

APPENDIX XI
PFV 71/3-25
June 1971

1. DESCRIPTION

1.1 Product definition

Canned processed peas or canned mature peas are the product (a) prepared from clean, substantially sound, whole, threshed, dried mature seeds of green pea varieties (cultivars) conforming with the characteristics of the species Pisum sativum L. which have been soaked prior to canning, but excludes the sub-species macrocarpum; (b) packed with water or other suitable liquid medium, nutritive sweeteners, seasoning and 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 types

Any suitable variety (cultivar) of pea may be used.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Basic ingredients

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

2.1.1 Other permitted ingredients

Salt, sucrose, invert sugar, dextrose, glucose syrup, dried glucose syrup, aromatic herbs and spices, essence.

2.2 Quality criteria

2.2.1 Colour

The drained peas shall have normal colour characteristic of canned processed peas, taking into consideration any added artificial colour. Processed peas containing other permitted ingredients or additives shall be considered of characteristic colour when there is no abnormal discolouration for the respective substances used.

2.2.2 Packing medium

The packing medium shall not be so viscous that the liquid will not separate from the peas at 20° C. It shall not have a colour nor an appearance which is foreign to the product.

2.2.3 Flavour

Processed peas shall have a normal flavour and odour free from flavours or odours foreign to the product.

Processed peas with special ingredients shall have the flavour characteristic of that imparted by the peas and the other substances used.

2.2.4 Texture

The peas shall be reasonably tender and reasonably uniform in texture.

2.2.5 Defects and allowances

Processed peas shall be reasonably free from defects and within the limits set forth herein for common defects as defined.

	<u>Maximum Limits</u> (based on weight of drained peas)
(a) <u>Blemished peas</u> - - - - - (peas which are slightly stained or spotted)	10% m/m
(b) <u>Seriously blemished peas</u> - - - - - (peas which are spotted, discoloured, or otherwise blemished to an extent that the appearance or eating quality is seriously affected; these shall include worm eaten peas)	2% m/m
(c) <u>Pea fragments</u> - - - - - (portions of peas: separated or individual cotyledons; crushed, partial, or broken cotyledons; and loose skins)	10% m/m
(d) <u>Extraneous plant material</u> - - - - - (any vine or leaf or pod material from the pea plant, or other vegetable material such as poppyheads or thistle)	0.5% m/m
<u>Total</u> of the foregoing defects (a), (b), (c), (d)- - - - -	20% m/m

2.2.6 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-sections 2.2.1 through 2.2.5, shall be considered a "defective".

2.2.7 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.2.6 when the number of "defectives", as defined in sub-section 2.2.6, 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

3.1 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

- (a) Firming Agents
Edible calcium salts, calculated as calcium chloride anhydrous 250 mg/kg
- (b) Colouring Matter
Green S - Colours Index (1956) - 44090
Tartrazine - Colours Index (1956) - 19140 } 100 mg/kg
(singly or in combination)
- (c) Flavours
Natural flavours and their identical synthetic equivalents
Other synthetic flavour } Not limited

4. CONTAMINANTS

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

Tin, maximum level - - - - - 250 mg/kg, calculated as Sn.

5. HYGIENE

- 5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 2-1969).
- 5.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 5.3 Microorganisms capable of development under normal conditions of storage shall not be present.
- 5.4 The product shall not contain any substances originating from microorganisms in amounts which are toxic.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The container shall be well filled with peas 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 when completely filled.

6.1.1.1 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".

6.1.1.2 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.

6.1.2 Minimum dry solids content

- 6.1.2.1 The total dry solids content of the product shall be not less than 19.5% of the weight of distilled water at 20 degrees C which the sealed container will hold when completely filled.

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

7. LABELLING

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

7.1 The name of the food

- 7.1.1 The name of the product shall be "Processed Peas" or "Mature Peas".
- 7.1.2 A declaration, as part of the name or in close proximity to the name, shall be made of characteristic flavourings or seasoning, e.g. "with X", when appropriate.
- 7.1.3 The name of the product may include the varietal type of the pea.
- 7.1.4 No reference shall be made to the pea being "fresh", "garden" or "green" nor shall any other word be used indicating either directly or by ambiguity, omission or inference that the peas are other than peas which have been dried or soaked prior to canning.

7.2 List of ingredients

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

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

7.5 Country of origin

- (a) The country of origin of the product shall be declared if its omission would mislead or deceive the consumer.
- (b) When the product undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purpose of labelling.

7.6 Optional declarations (See 7.1.3)

8. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods. The methods referred to in 8.1 and 8.3 have been endorsed, and the method in 8.2 is subject to endorsement, 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 Methods of analysis

8.2.1 Dry solids content

The dry solids content shall be determined by drying 5 to 10 grammes of a finely macerated sample of the entire contents of the can in a steam oven for 16 to 18 hours at 98° C, or for an equivalent drying condition to give the same result. For a sample of more than one can the dry solids content may be sampled individually for each can and the results averaged.

8.3 Method for Determination of Water Capacity of Containers

8.3.1 Metal containers

8.3.1.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container after cutting out the lid without removing or altering the height of the double seam.
- (3) Fill the container with distilled water at 20° C to 4.76 mm vertical distance below the top level of the container, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

8.3.2 Glass containers

8.3.2.1 Procedure

- (1) Select a container which is undamaged in all respects.
- (2) Wash, dry, and weigh the empty container.
- (3) Fill the container with distilled water at 20° C to the level of the top thereof, and weigh the container thus filled.
- (4) Subtract the weight found in (2) from the weight found in (3). The difference shall be considered to be the weight of water required to fill the container.

SUGGESTED SIZE CLASSES
OF
CANNED GREEN PEAS

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FROM: APPENDIX V, ALINORM 71/20 -- Canned Green Peas, Step 6,
Draft Standard No. PFV 70/6-14

1.3 Size Classes

If size grading is applied, canned peas shall conform to the applicable specifications for the size name:

- (a) Wrinkle-seeded; other types except Round-seeded
 Small ----- up to, and including, 8.75 mm (11/32 inch)
 Medium ---- over 8.75 mm and up to, and including, 9.5 mm (12/32 inch)
 Large ----- over 9.5 mm
- (b) Round-seeded or Smooth-seeded
 Very small - up to, and including, 7.5 mm (19/64 inch)
 Small ----- up to, and including, 8.2 mm (21/64 inch)
 Medium ---- over 8.2 mm and up to, and including, 9.5 mm (12/32 inch)
 Large ----- over 9.5 mm

1.3.1 Tolerances for size classes

If size graded, not more than 15% by count or m/m belonging to the adjacent larger size group and not more than 5% by count or m/m of the second larger size group are permitted.

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FROM: RECOMMENDED INTERNATIONAL STANDARD FOR QUICK FROZEN PEAS
(Ref. CAC/RS 41-1970)

2.3.2 Sizing

2.3.2.1 Quick Frozen Peas of either type may be presented sized or unsized.

2.3.2.2 If peas are size graded they shall conform to one of the two following systems of specifications for the size names:

Specifications A for Sizing

Specifications B for Sizing

<u>Size designation</u>	<u>Round hole sieve size in mm</u>	<u>Size designation</u>	<u>Round hole sieve size in mm</u>
Small	up to 8.75	Extra small	up to 7.5
Medium	up to 10.2	Very small	up to 8.2
Large	over 10.2	Small	up to 8.75
		Medium	up to 10.2
		Large	over 10.2

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SUGGESTED SIZE CLASSES OF CANNED GREEN PEAS -- continuation

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EXCERPTS FROM: COMMENTS SUBMITTED BY THE DELEGATE FROM DENMARK, June 4, 1971

Denmark is one of the probably many countries, where peas processors manufacture canned as well as frozen peas in the same plant using the same sizing equipment for both types of processed peas.

Denmark wants to stress the economically highly impractical situation if the two international Codex-standards for peas employ two different systems of sizing, which can briefly be illustrated as follows:

* * * Size classes quoted from: Quick Frozen Peas, RS 41-1970
Canned Green Peas, PFV 70/6-14 * * *

It has been stated (Report of the PFV Committee, 1970 Session, page 14, para 12(c)) that a deviating sizing system for canned peas would be justified because customers have become accustomed to an established system, which differs from that used for frozen peas. It seems rather doubtful whether consumers actually would prefer two systems to one single system standardizing size classes for one commodity which is offered in two forms, canned and frozen.

Denmark therefore maintains that one common sizing system would be preferable in the international Codex-standard system, and as already the standard of quick frozen peas has been agreed, we suggest that this separation also can be used for canned green peas.

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PROPOSAL BY THE DUTCH DELEGATION FOR A UNIFORM SIZE GRADING OF BOTH CANNED PEAS AND QUICK FROZEN PEAS, June 3, 1971

The Size Grading mentioned below is meant to combine the existing different size grading systems for canned peas and quick frozen peas into one logical system useful for both types of processed peas.

The proposal clearly is practicable for canned peas and also comprises the basic elements of the size grading already accepted in the standard for quick frozen peas (at step 9).

Small up to 8.75 mm
with the following possibility of subdivision
Extra small up to 7.5 mm
Very small . . . over 7.5 mm up to, and including, 8.2 mm
Small up to 8.75 mm

Medium. over 8.75 mm up to, and including . . .10.2 mm
with the following possibility of subdivision:
Medium small }
or Medium I } over 8.75 mm up to, and including. . . 9.3 mm
Medium II } over 9.3 mm up to, and including . . . 10.2 mm

Large over 10.2 mm

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SUGGESTED SIZE CLASSES OF CANNED GREEN PEAS -- continuation
===== UNITED KINGDOM suggestion -- June 11, 1971

Canned peas shall conform to either one of these provisions:

- (1) If size grading is applied, canned peas shall conform to the applicable specifications for the size name:

<u>Size designation</u>	<u>Round hole sieve size in mm</u>
Small - - - - -	up to 8.75
Medium - - - - -	up to 10.2
Large - - - - -	over 10.2

(or)

- (2) If size designations other than those in (1) are declared, such a declaration shall be accompanied by an accurate pictorial representation and/or a statement of exact measurement.

===== U.S.A. suggestion -- June 11, 1971

Canned peas shall conform to either one of these provisions:

- (1) If size grading is applied, canned peas shall conform to the applicable specifications for the size name:

<u>Size designation</u>	<u>Round hole sieve size in mm</u>
Very small -- up to, and including,	7.5 mm (19/64 inch)
Small----- up to, and including,	8.2 mm (21/64 inch)
Medium ----- over 8.2 mm and up to, and including,	9.5 mm (12/32 inch)
Large ----- over	9.5 mm

- (2) If size designations other than those in (1) are declared, such a declaration shall be accompanied by an accurate pictorial representation and/or a statement of exact measurement.

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(End of Appendix XII)