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JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX ALIMENTARIUS COMMISSION
Tenth Session, Geneva 1974

REPORT OF THE TENTH SESSION

OF THE

CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

WASHINGTON, D.C., USA
21-15 May 1973

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Introduction.

1. The Tenth Session of the Codex Committee on Processed Fruits and Vegetables was held at the State Department building under the chairmanship of the United States, Dr. Floyd F. Hedlund in the chair. Representatives and observers from 24 countries and observers from 6 International organizations attended the session. The List of Participants appears as Appendix I to this report. The participants were welcomed by the Chairman, Dr. Hedlund, and by Dr. Virgil Wodicka, Director, Bureau of Foods, Food and Drug Administration.

Adoption of the Agenda.

2. The Committee unanimously adopted the Provisional Agenda.

Matters Arising From the Report of the Ninth Session of the Commission and from Reports of Codex Meetings Held Since the Ninth Session of the Committee Which Concerned the Report of the Committee.

3. The Committee was informed of the main decisions of the Commission taken at its Ninth Session (November 1972). The Draft Standards for Canned Mushrooms, Canned Asparagus, Canned Green Peas, Processed Tomato Concentrate, Canned Plums, Canned Raspberries, Canned Pears, and Canned Strawberries had all been adopted at Step 8. The Draft Standards for Raisins, Canned Mandarin Oranges, and Canned Fruit Cocktail had been referred back to the Committee for further reconsideration at Step 7. The Commission had also adopted at Step 8 the Proposed Amendment to the Step 9 Standard for Canned Pineapple and had advanced the proposed amendments to the Step 9 Standard for Canned Tomatoes and Canned Peaches to Step 6 of the Procedure. As at previous sessions, the Committee agreed that it would be best to consider the remarks in the Reports of the Eighth Session of the Codex Committee on Food Additives, the Tenth Session of the Codex Committee on Food Hygiene, the Seventh Session of the Codex Committee on Food Labelling, and the Seventh Session of the Codex Committee on Methods of Analysis and Sampling, relating to the standards which were before it for consideration, when it came to discuss the standards individually.

Consideration of the Draft General Standard for Jams (Fruit Preserves) and Jellies) at Step 7.

4. The Committee had before it the above standard for consideration at Step 7 as contained in ALINORM 72/20A, Appendix VIII, and government comments thereon as contained in CX/PFV 73/2-1 and Addendums I and II. Other comments including those from the Federal Republic of Germany were distributed at the session as conference room documents. The revised document is contained in Appendix II to this Report. The following were the main points emerging from the Committee's consideration of the above standard.

Product Definitions.

5. In order to avoid any misunderstanding it was agreed to include in subsections 2.1.1(a) and 2.1.2(a) a reference to definition of fruit ingredient as defined in 2.2.2.1 and 2.2.2.2 respectively. The delegation of The Netherlands proposed that the words "by the application of heat" be deleted as they precluded other possible processes from being used and in view of the rapid advances being made in technology, thought that this provision might be too restrictive. Several delegations concurred with this view and the Committee decided to delete this provision and require only that the products be processed to a suitable consistency. The Committee also agreed that the last sentences of subsections 2.1.1 and 2.1.2 should be clarified to indicate that they referred only up to the time when the product was opened and the word "prevent" was, therefore, substituted for the words "minimize subsequent". The amended text reads as follows: "The product shall be filled into clean containers in a manner which shall prevent contamination and microbiological spoilage". The Committee agreed to delete in paragraph 2.1.2(c) the reference to "tender" in relation to the required consistency as it was thought that the term could not be properly described. The amended clause reads: "in which the prepared mixture is processed to a semi-solid consistency". The delegation of Japan stated that in its country the product which is prepared from whole or pieces of fruit as a fruit ingredient could be designated as preserves and reserved its position on the decision of the Committee to retain the existing nomenclature.

Other Definitions.

6. The Committee agreed to include a provision so as to allow jams to be prepared also from dried fruit. The Committee also agreed to refer to "trimmed rhubarb stems" rather than "stemmed and trimmed rhubarb" and amended the provision accordingly. The Committee decided to slightly amend subsection 2.2.5 to indicate that the temperature used for determining the amount of soluble solids by the refractometric method should be "corrected to 20° C" rather than requiring the determination to be carried out at exactly that temperature.

Optional Ingredients.

7. The delegation of Canada proposed that any essential oils to be used as optional ingredients should be listed and their limits specified. The Committee decided, however, that the labelling provision requiring the declaration of a list of ingredients adequately covered this point. Some delegations queried whether butter, margarine and other edible vegetable or animal oils used as anti-foaming agents should not be listed under food additives. It was pointed out that they were considered to be foods in their own right which were safe, and, therefore, they were ingredients and not food additives as such. Consequently they did not require endorsement by the Food Additives Committee. With regard to subsection 3.1.2(7), some delegations stated that they were not opposed to the deletion of the square brackets providing that the fruit juices or fruit juice concentrates would be declared in the list of ingredients and that fruit juice concentrate was not considered as part of the fruit ingredient. Other delegations considered that fruit juices could be part of the ingredient provided that the same species of fruit was used. The Committee decided to remove the square brackets around subsection 3.1.2(7) as it considered that fruit juice concentrates would only be used in small quantities for colouring purposes and were, therefore, not considered as part of the fruit ingredient. The Committee agreed, however, that because of the problems of tartaric acid in grape jam the use of grape juice or grape juice concentrates from which the tartaric acid had been removed should be provided for as a part of the fruit ingredient.

Fruit Content

8. The Committee considered once more the various provisions of subsection 3.2.1 on fruit content. The delegation of the United Kingdom pointed out that the intention behind section 3.2.1 had been that the minimum percentage requirement related to the fruit from which the ingredient (whether whole fruit with pits and seeds, fruit pulp, puree or juice) was derived, and not that the prepared ingredient itself needed to fulfill the requirement. Although several delegations expressed themselves in favour of a 40% minimum fruit content, other delegations favoured jams with a lower fruit content of 35%. The Committee noted that whether or not a minimum fruit content or a two or even three tier system was agreed upon, the problem was also one of designation. It was agreed that even more information was needed regarding levels of fruit content and how to differentiate between different types of product. The delegation of Switzerland suggested that in the labelling section the exact fruit content could be stated in close proximity to the name of the product as had been done in the case of the Recommended International Standard for Apricot, Peach and Pear Nectars Preserved Exclusively by Physical Means (CAC/RS 44-1971). The Committee agreed that it was not possible

to reach an acceptable solution at the present session and, therefore, decided to set up a small working group to reconsider this issue in its entirety. The terms of reference of the working group are set out in Paragraph 26 to this Report.

Two Fruits.

9. The Committee considered whether to lower the maximum permitted level of 95% for melon or papaya to 85% and raise the minimum level of 5% for pineapple, passion fruit, lemon and ginger to 15%. It was pointed out that melon was a bland fruit which had no flavour. The flavour depended on the second fruit, but a higher level of lemon or ginger would make the product unpalatable. The Committee agreed that the working group should also consider the whole problem of mixtures of fruits. The Committee decided to delete pineapple from the list of fruits as it was not considered to be either a bland or a spicy fruit.

Soluble Solids.

10. The Committee decided that the working group should also consider the problems of soluble solids as they were connected with the fruit content.

Defects and Allowances.

11. The Committee agreed to base the defects criteria on a sample unit of 500 grams and to increase the limits for the listed defects. In addition, the maximum level for mineral impurities in strawberry jam was set at 0.04% since it was pointed out that the raw material for this type of jam is customarily quick frozen strawberries and that the Draft Standard for Quick Frozen Strawberries sets a maximum limit for mineral impurities at 0.1%. On the basis of 40 percent fruit composition, the corresponding jam would logically have a mineral impurity level of 0.04%.

Harmless extraneous plant material	2 pieces
Pits (Stones)	1 piece
Pit Fragments	2 pieces
Damaged	5 pieces
Mineral Impurities	
Strawberry Jam	0.04% by weight
Other	0.01% by weight

Acidifying Agents.

12. The Committee noted the request of the Codex Committee on Food Additives to reconsider the need for L-tartaric and fumaric acids in view of the low ADI recommended by the Joint Expert Committee on Food Additives and, as a consequence, the risk that the intake of these acids might result in exceeding their respective ADIs (ALINORM 72/12, Paragraph 40).

Taking into account the points raised by the Food Additives Committee, the Committee noted that as a rule the per capita consumption of jams and jellies was small and that consequently the quantities of the various food additives ingested would also be rather small. The Committee further noted that these acids had been found to be more efficient than the other acidifying agents listed and that there were times when this was desirable. An additional advantage was that they enable the product to be standardized without building up acidic taste. It was further pointed out that L-tartaric was a natural ingredient of wine. The Committee agreed to limit the use of these acids, singly or in combination, to 0.3%. The observer from IOCU requested the Committee to limit the use of L-tartaric acid and fumaric acid only to those food products in which they were needed.

pH Regulating Agents.

13. The Committee was informed that the Codex Committee on Food Additives had requested them to clarify the need for the Na, K and Ca salts of these acids as well as for Na and K carbonates and hydrogen carbonates. The Committee agreed that these pH regulating agents were necessary for the following reasons:

- to make an adjustment for products with an initial pH below 2.8;
- to permit the use of apple pectin which was not effective at a pH lower than 3;
- to help regulate the setting temperature;
- to aid the control of the gelling; and
- to prevent the separation of the fruit from the gel.

Anti-Foaming Agents.

14. The delegation of Japan requested that Dimethylpolysiloxane be deleted as they could see no technological need for it in the manufacture of jams and their legislation did not permit its use. The Committee decided, however, to retain it in the standard, as they felt that a choice of anti-foaming agents was desirable.

Thickening Agents.

15. The Committee noted that, in the manufacture of jams with a high soluble solids content, agar agar was not used as a thickening agent, and, therefore, deleted the reference to this additive. The Committee further noted that for products with a reduced sugar content, which did not fall under the present standard, the use of agar agar might be desirable.

Colouring Matters.

16. The delegation of Poland stated that their legislation prohibited the use of artificial colouring matters as defined therein. A number of delegations stated that in their countries the use of certain colouring matters in the existing draft standard was not permitted.

Country / Colour	--- Japan	Switzerland	Canada	Argentina	Brazil
Erythrosine *45430					x
Amaranth 16185					x
Fast Green FCF 42053		x	100 mg/kg	x	x
Ponceau 4R 16255			x		x
Azo-rubine (Carmoisine) 14720	x		x	x	x
Tartrazine 19140					x
Wool Green BS (Green 'S') 44090	x	x	x		x
Sunset Yellow FCF 15985	----------NO RESERVATIONS----------				

*1971 Colour Index x = not permitted

The Committee later agreed to provide for the optional use of a large number of colouring matters currently in use in a number of countries, by adding to the existing list such colours as were suggested during the present session, namely:

Blue No. 1	Cochineal
Black PN	Anthocyanins
Indigo Carmine	Orcein
Orange G	Indigotin
Orange RN	Carbo Medicinalis Vegetalis
Red 2G	Chlorophylls
Caramel	Carotenoids
Curcumin	Xanthophylls
Lactoflavin	Beet Red

17. The delegation of Canada proposed that when colouring matters were used there should be a declaration to such effect, in conjunction with, or in close proximity to, the name of the product, e.g., "strawberry jam, with colour added". Some delegations stated their

opposition to the selective declaration of ingredients and could see no reason why colouring matters should be specifically singled out for label declaration. On the other hand some delegations pointed out that the fruit content of the product can sometimes be judged from the colour and, in addition, the colour of the product was sometimes regarded by the consumer as an indicator of quality.

18. Some delegations considered that the declaration of the colours on the label under the list of ingredients was sufficient. In this connection it was pointed out, however, that because of the very small quantities involved, the name of the colour would appear near the end of the list of ingredients. The question was raised whether the addition of fruit juice having a high natural colour would be regarded as an addition of colour. It was generally agreed that this was not the intention.

19. The proposal was made to declare the addition of colours in conjunction with the name of the product only when the resulting colour in the end product deviated from the original colour. It was also proposed not to require selective declaration in the case of the addition of natural colours but only when artificial colours were used. The Committee decided to add a new subsection to the optional labelling requirements to read as follows: "7.1.6 The addition of artificial colour shall be declared in conjunction with the name of the product." The delegations of Switzerland and United Kingdom reserved their position on this decision.

Preservatives.

20. The Committee agreed to leave this subsection unchanged until a decision had been made with regard to the fruit content and the soluble solids content of the product. It was agreed, however, that the square brackets had inadvertently been extended to include sulphur dioxide and that this should be corrected. The Committee decided to retain the limit of 100 mg/kg. The delegation of Japan reserved its position on this decision as it favoured a maximum of 30 mg/kg.

Firming Agents.

21. The Committee agreed to provide for three additional firming agents - Ca-gluconate, Ca-carbonate and Ca-bisulphite. It further decided to lower the limit of use from 500 mg/kg to 200 mg/kg expressed as Ca.

Anti-oxidants.

22. The delegation of Japan wished to reduce the use of colours and requested the addition of an anti-oxidant to prevent discolouration. The Committee agreed to allow L-ascorbic acid and erythorbic acid to be used as anti-oxidants and to provide for these in a separate subsection (4.9) at a level of 500 mg/kg.

Hygiene.

23. The Committee noted that the Codex Committee on Food Hygiene had at its Tenth Session (May 1973) endorsed the hygiene provisions with a slight amendment to subsection 5.3(b), which was revised accordingly.

Methods of Sampling, Analysis and Examination.

24. The Committee briefly discussed a proposal contained in a conference room document prepared by the delegation of Poland for a method of determination of mineral impurities (sand) in jams and which was a slight modification of the method contained in the draft standard for Canned Strawberries (Appendix XIV to ALINORM 72/20A). It was noted that the Polish proposal was almost identical to the method used for quick frozen strawberries except that in the case of this latter standard the method did not provide for the addition of HCl. A number of delegations expressed the view that mineral impurities should be determined by the decantation method without HCl.

25. The Committee agreed that the Polish proposal for a method for the determination of mineral impurities would be annexed to the Standard with a reference to the method used for quick frozen strawberries.

Working Group.

26. The Committee requested the informal working group:

> To examine sections 3.2 and 3.3 in the light of government comments received, and the discussion thereon, during the Tenth Session of the Committee; and
>
> if considered necessary, to make suggestions for amendments of these sections and for any consequential amendments arising from them;
>
> to prepare a report by January 1974 for distribution to governments in good time for consideration by the Committee at its next session.

The Committee agreed that the composition of the working group would be the following: Australia, Netherlands, Switzerland, United Kingdom (Coordinator) and the United States.

The Coordinator agreed to prepare a working paper for consideration by the above-mentioned countries.

Status of the Standard.

27. The Committee agreed to retain the standard at Step 7 of the Procedure and to review the standard on the basis of the findings of the informal working group.

Consideration of the Draft General Standard for Citrus Marmalade at Step 7.

28. The Committee had before it the above standard for consideration at Step 7 as contained in ALINORM 72/20A, Appendix IX, and government comments thereon as contained in CX/PFV 73/2-2 and Addendum I. The following were the main points emerging from the Committee's consideration of the above standard:

Scope.

29. The delegation of Venezuela stated that it could not agree with the term "Marmalade" being restricted only to products manufactured from citrus fruits.

Product Definitions.

30. The Committee agreed to make the same amendments in this section as had been made in the Draft General Standard for Jams (Fruit Preserves) and Jellies, and, therefore, deleted the reference to the application of heat during processing and amended the wording of the last sentence.

Formulation.

31. The delegation of The Netherlands was of the opinion that the standard should provide for two categories of product, one with a fruit content of 17% and the other of 27%, as there was more than one type of marmalade manufactured from citrus fruits in their country. The Committee decided, however, to maintain the existing text even though some delegations considered that the minimum of 20% for citrus marmalade was too low.

Soluble Solids.

32. Taking into account the general trend toward products with lower caloric values, thereby implying a lower sugar content, the delegation of Switzerland suggested to delete the limit of 65% as a minimum soluble solids value. The Committee decided not to make such a change in anticipation of the possible development of reduced calorie products and noted that the values could always be reviewed in the future.

Acidifying Agents.

33. The Committee agreed to provide for the use of L-tartaric acid and fumaric acid and to the same limits as had been specified in the Draft General Standard for Jams (Fruit Preserves) and Jellies.

pH Regulating Agents.

34. The Committee decided that the same arguments as had been stated in Paragraph 13, relating to the need for these additives, were equally applicable for this product.

Colouring Matters.

35. The Committee was informed that "separate specifications for caramel colour had been established on products using the ammonia process and another not processed in that way. Caramel colour produced by the ammonia process had been given a temporary ADI, while the other type had been cleared without limit except by good manufacturing practice" (ALINORM 72/12, Paragraph 41). The Committee agreed to allow for the use of caramel in the manufacture of marmalade at levels limited by good manufacturing practice. The Committee further agreed to permit the addition of Sunset Yellow FCF with a maximum level of 200 mg/kg.

Preservatives

36. The Committee decided that there was no need for the use of sodium benzoate or esters of parahydroxy benzoic acid in this product. It was agreed, however, to allow for the use of sorbic acid or potassium salt to a maximum level of 250 mg/kg. The delegation of Japan requested that the maximum limit of sulphur dioxide be lowered to 30 mg/kg as in their opinion it was only a carry over from the raw material and was not used in the preparation of the product. However, some delegations pointed out that there were marmalades which had a sulphur dioxide content close to a 100 mg/kg. The Committee decided to retain the limit of 100 mg/kg. The delegation of Japan reserved its position on this decision.

Anti-oxidants.

37. The Committee decided to allow for the use of L-ascorbic acid and erythorbic acid in the production of citrus marmalades.

Hygiene.

38. In accordance with the decision of the Codex Committee on Food Hygiene at its Tenth Session (May, 1973) the text of subsection 5.3(b) was slightly modified.

Labelling.

39. It was pointed out that there was an anomaly in the provision dealing with products manufactured from two or more fruits (7.1.2 and 7.1.3). The Committee agreed to correct this by amending subsection 7.1.3 to read as follows: "Except as provided for in 7.1.2 where the product is . . .".

Status of the Standard.

40. The general view of the Committee was that the Draft Standard was suitable for advancement to Step 8. However, recognizing that there were similarities with the Draft General Standard for Jams (Fruit Preserves) and Jellies, which had been retained at Step 7, the Committee considered that it would be appropriate to retain the Draft General Standard for Citrus Marmalade at Step 7. The revised draft standard is contained in Appendix III to this Report.

Consideration of the Proposed Amendment to the Recommended International Standard for Canned Peaches (Ref. No. CAC/RS 14-1969 at Step 7.

41. The Committee considered at Step 7 the above amendment as contained in ALINORM 72/20A, Appendix X. The Committee was informed that at the Ninth Session of the Commission (November, 1972) some delegations had thought that the proposed maximum limit of 700 mg/kg for L-ascorbic acid was somewhat high. The Commission had also noted that the proposed maximum limit had not as yet been before the Codex Committee for Food Additives for endorsement. The Commission, therefore, being unable to agree without dissent that Steps 6, 7, and 8 be omitted, had decided that the proposed amendment to the Step 9 standard for Canned Peaches be advanced to Step 6 of the Procedure. The Committee agreed to lower the maximum level for L-ascorbic acid to 550 mg/kg on the basis of the end product.

42. As regards the proposed labelling amendment to subsection 6.2, List of Ingredients, the Committee agreed, that L-ascorbic acid should be declared in the List of Ingredients as 'L-ascorbic acid added as an anti-oxidant' (ALINORM 72/35, para. 140). The delegation of the United States stated that current U.S. regulations required that if ascorbic acid is added to the product, it should be declared on the label as "ascorbic acid added to preserve colour".

43. The Committee agreed that the amendment should be advanced to Step 8 of the Procedure. The revised proposal is set out in Appendix IV to this Report.

Consideration of the Proposed Amendment to the Recommended International Standard for Canned Tomatoes (Ref. No. CAC/RS 13-1969) at Step 7.

44. The Committee considered at Step 7 the above amendment as contained in ALINORM 72/20A, Appendix XII. The Committee was informed that there was an error in the text in that Calcium glutomate was really intended to be Calcium gluconate. The Committee noted that Italy, in their written comments, had stated that they were in principle against the use of calcium salts in peeled tomatoes. The delegation of France stated that they were opposed to the principle of firming agents in these products. The Committee agreed that the amendment, as set out in Appendix V of this Report, should be advanced to Step 8 of the Procedure.

Reconsideration of the Draft Standard for Raisins at Step 7.

45. The Committee had before it the above draft standard, as contained in ALINORM 72/20A, Appendix VII, which had been returned to it by the Commission at its Ninth Session for reconsideration at Step 7, with particular reference to the section on food additives.

46. The Committee noted that the main objection made by the Commission was that several delegations had felt that the permitted maximum level of 1,500 mg SO_2/kg was too high and, as it had not yet been endorsed by the Codex Committee on Food Additives, had, therefore, requested the Committee to re-examine the level.

47. The delegation of the United States considered that the level of sulphur dioxide in bleached (golden seedless) raisins was of great concern to its country as it was a major producer of this product. In support of maintaining the limit of 1,500 mg SO_2/kg, it stated that industrial experience had indicated that a level of 1,500 mg/kg was essential at the time of packaging in order to preserve the integrity of this product. Furthermore, SO_2 is lost slowly during distribution and storage and if the initial level was too low, the raisins could revert back to their original brown colour.

48. In further support of the maximum level of the 1,500 mg/kg level, the following data concerning the usage of the product was cited:

    a. Golden Seedless Raisins are not customarily eaten "out-of-hand". Rather they are used mostly in the baking trade whereby they are subject to high temperatures in the baking process during which they lose a substantial part of their sulphur dioxide content.

    b. The per capita consumption of raisins of all types in the United States varies between one and two pounds. Production of Golden Seedless Raisins is about 10% of the total, and consequently the yearly per capita consumption would not be expected to exceed 0.2 pounds. Assuming the maximum of 1,500 mg SO_2/kg, the yearly per capita ingestion of Golden Seedless Raisins would represent less than 150 mg of sulphur dioxide or equivalent sulfite form.

    c. The above computations represent the theoretical maximum per capita ingestion of SO_2 from Golden Seedless Raisins. It could be expected that the practice would be substantially less since, as most Golden Seedless Raisins would be utilized in bakery products in which the available SO_2 would be much lower.

49. The delegation of France, supported by the delegation of Poland, expressed the view that the SO_2 level was too high and proposed that it should be reduced to 1,000 mg/kg. Most delegations, however, agreed with the presentation of the United States, and the Committee, therefore, decided to maintain the level of 1,500 mg SO_2/kg. The IOCU observer objected to the reason given for permitting SO_2 on the basis that consumers are more concerned with the total dietary intake rather than the per capita consumption of raisins.

50. The delegation of Poland objected to the provision which allowed for the use of mineral oil in this standard. Several delegations stressed that the oil was of food grade quality and had proven to be the best dressing in present use for ensuring free flowing of raisins. In addition, one delegation pointed out that it had not found a satisfactory substitute. The Committee agreed to retain in the standard the existing provision for the use of food grade mineral oil.

51. The Committee briefly considered what was meant by the term "natural" as used in subsection 8.6.1 under "Optional Declarations". It was pointed out that these raisins were "natural" as the only processing they underwent was stemming and washing. The delegation of France indicated that, in its opinion, the term "natural" not only applied to products to which nothing had been added after harvesting but was moreover used specifically for products produced without the use of pesticides. The Committee made no changes in the labelling provisions of the draft standard.

Status of the Standard.

52. The Committee decided to advance the Draft Standard for Raisins to Step 8 of the Procedure. The revised standard is contained in Appendix VI to this Report.

Reconsideration of the Draft Standard for Canned Mandarin Oranges at Step 7.

53. The Committee had before it for reconsideration at Step 7 the above draft standard as contained in ALINORM 72/20, Appendix II. The Committee noted that the Commission had returned the draft standard to Step 7 because of a number of amendments of a substantial nature which had been proposed by the delegation of Japan. The proposed amendments related mainly to sizing but also affected other sections of the draft standard. The proposed amendments are contained in document CX/PFV 73/4. The following were the main points emerging from the Committee's consideration of the above standard.

Style or Form.

54. The Committee agreed to include in this subsection the appropriate parts of the definitions as contained in subsection 2.3.4(a), relating to the styles for Whole Segments, Broken Segments, and Pieces.

Sizes in Whole Segment Style.

55. The Committee agreed to delete the definition of "reasonably uniform in size" and to provide for uniformity of size (whole segment style) as a separate subsection (2.2.5) under quality criteria. It was further agreed to include an acceptance procedure to determine compliance with single size designations.

Packing Media.

56. The Committee agreed to bring this section into line with the decision taken by the Committee at its previous session regarding the packing media and syrup strengths. In doing so, provisions were made for mandarin orange juice as the sole packing medium, other citrus juices, singly or in combination with each other, or with mandarin juice. The Committee further agreed to include fructose and fructose syrup in the list of permitted sugars.

Wholeness.

57. As mentioned before in paragraph 54, the definitions were moved to the provision on style or form. The tolerances were reviewed and included in a defects table in which provision was made for broken segments and pieces (whole segment style), pieces (broken segment style), membrane (aggregate area), fibre length (aggregate length), and seeds.

Hygiene.

58. It was agreed to bring this section into line with the hygiene provisions in other standards for canned fruits.

Labelling.

59. The Committee noted the particular concern of Japan regarding the need for a declaration of sizes on the label in view of the changes made to the sections dealing with size designations. The Committee, therefore, agreed to provide for a mandatory declaration for mixed sizes in close proximity to the name of the product and to allow for optional declarations of size classifications in whole segment style as either "Large", "Medium", or "Small", or by the number of units in the container.

List of Ingredients.

60. The Committee noted the decision taken at its last session (ALINORM 72/20A, paragraph 18) regarding the declaration of reconstituted juice in the list of ingredients and, therefore, included a similar provision in this section.

Net Contents.

61. The delegation of Japan proposed that this section be amended to require that both the net contents and the drained weight be declared on the label. The Committee decided, however, to maintain the existing text and the delegation of Japan reserved its position on this point. The observer from IOCU requested that the product be labelled with its drained weight.

Status of the Standard.

62. The Committee decided to advance the Draft Standard for Canned Mandarin Oranges to Step 8 of the Procedure. The revised draft standard is contained in Appendix VII to this Report.

Consideration of Proposed Draft Standard for Canned Carrots at Step 4.

63. The Committee had before it the above draft standard as contained in document ALINORM 72/20, Appendix X, and government comments thereon as contained in CX/PFV 73/7 and Addendum I. The following were the main points emerging from the Committee's consideration of the above standard.

Product Definition.

64. The Committee agreed that the word "skin" might more appropriately be called "peel". It further agreed not to limit the packing media to water or brine but to state, as in the Standard for Canned Green Peas, that the product could be "packed with water or other suitable liquid medium, sugars, seasoning, and other ingredients, appropriate to the product."

Styles.

65. The Committee discussed various proposals with regard to the required diameter and length of whole style carrots. Some delegations were in favour of lowering the maximum diameter to 40 mm or even 35 mm. The Committee decided not to make any changes in the diameter but to increase the ratio in the maximum variation of the diameter between the largest and the smallest carrot from 2:1 to 3:1.

66. It was agreed to add "Lengthwise" after "Sliced" so that the style would be "Sliced Lengthwise or Finger Cut". It was pointed out that the carrots were tapered and that there was no provision as to how the diameter should be measured. The Committee examined this problem and agreed that it should really refer to the width of the carrot and not the diameter or the ratio. The section was, therefore, amended to read as follows: "consists of carrots which have been cut longitudinally into four or more pieces of approximately equal size, not less than 20 mm long and greater than 5 mm in width, measured at the maximum width".

67. It was agreed to add the description "Sliced" as a synonym to the style "Ring Cut". The style would, therefore, be "Sliced or Ring Cut".

The delegation of France pointed out that in French the style "Julienne" had a different meaning in that it meant a mixture of peas and other vegetables and that, therefore, in the French text the word "lanière" should be used instead of "Julienne".

68. The delegation of the United States proposed that two additional styles be included namely "Double Dice" and "Chunks or Pieces". The Committee agreed to include these additional styles. The observer from the IOCU objected to the inclusion of the style "Chunks or Pieces" on the basis that it could consist of two different cuts of carrots.

69. The delegation of The Netherlands stated that in its view it would be necessary to provide for still another style, which it termed "Baby Carrots", for pieces of long carrots with a length equal to or over 40 mm and a diameter smaller than or equal to 23 mm. The Committee felt that this name was misleading, and the delegation of The Netherlands, therefore, agreed that it would make a new proposal for a designation for this style to the next session of the Committee. It further proposed to introduce two new subsections called "Designation in Accordance with Size" and "Types of Pack". The Committee agreed with the principle of dealing with designations in accordance with size and decided to reconsider the matter at its next session. It further agreed to include the proposed provision for "Types of Pack" as in the Standard for Canned Green Peas.

Essential Composition and Quality Factor.

70. It was agreed to delete the subsection on "Optional Ingredients" and to insert provisions for "Basic Ingredients" and "Other Permitted Ingredients" as in the Standard for Canned Green Peas, and, in addition, to allow the use of fructose and fructose syrup.

Quality Criteria.

71. The Committee agreed to re-insert provisions for colour, flavour and texture which had inadvertently been omitted from the draft standard.

Defects and Allowances.

72. The Committee noted that The Netherlands had proposed in their written comments that this section should be completely revised and had suggested a new version which divided the defects by Styles with maximum limits in the form of percentages m/m. Several delegations considered that they would need more time to examine this proposal

in view of its rather detailed nature. They noted that for some styles the defects had even been divided into categories of major and minor. It was further noted that the proposal lacked a basic sample unit. In discussing the principle of this proposal, it was, however, agreed that for the larger sized carrots the sampling unit should be based on count whereas for smaller sizes the sampling unit should be on the basis of the drained weight. The Committee noted that the Federal Republic of Germany had, in their written comments, also made substantive amendments to this section and, therefore, decided not to alter the present text but to defer a thorough discussion on this point until its next session and thus allow governments adequate time to consider all the proposed amendments.

The delegation of Poland proposed, and the Committee agreed, to specify that the extraneous plant material should be harmless.

Contaminants.

73. The delegation of the United Kingdom informed the Committee that, in accordance with a request which had been made at the Eighth Session of the Committee (ALINORM 72/20, Paragraph 14), it had been collecting data on the contamination of processed fruit and vegetable products with tin and other heavy metals. The delegation of the United Kingdom expressed the hope that the other delegations would make available to it further information required for the study, in order that a paper would be ready in time for the next meeting of the Committee.

The delegation of Poland stated that, in its view, the maximum level for tin should be reduced to 150 mg/kg.

Food Additives.

74. The Committee agreed that because of the change it had made in the scope it would be necessary to provide for a section on food additives. This section would be similar to the one in canned green peas except for the deletion of the provision for colouring matters and the insertion of a provision for the use of pectin as a thickening agent (maximum level of use: not limited). (See paragraph 126 ALINORM 72/35).

The delegation of Switzerland reserved its position with regard to the use of modified starches. The delegation of the United Kingdom reserved its position with regard to the use of firming agents.

Hygiene.

75. It was agreed to bring this section into line with the recent hygiene decisions taken by the Codex Committee on Food Hygiene.

Weights and Measures.

76. The Committee agreed to exclude vacuum pack carrots from the requirement for minimum fill.

As regards the requirement for minimum drained weight, this subsection was revised to differentiate between containers, not on the basis of their diameter, but on the basis of their water capacity, i.e., less than 500 grams and those with 500 grams or more. The delegation of The Netherlands proposed, however, to deal with this item at the next session because of the inclusion into the present standard of several new styles that might require more special provisions regarding drained weight values.

The delegation of The Netherlands also raised the question why some countries had a consistently low figure and inquired whether there was any technological justification for this. It was pointed out that in some countries the high speed filling of containers might be a relevant factor.

Labelling.

77. It was agreed to revise the labelling section, taking into consideration the various new styles which had been introduced. The observer from the IOCU requested that the drained weight of this product be declared particularly because of the variety of styles proposed.

Methods of Sampling, Analysis and Examination.

78. To provide for the analysis of calcium originating from the use of firming agents, it was agreed to include a reference to the method for the determination of calcium, as used for canned green peas.

Status of the Standard.

79. The Committee, in the light of the numerous amendments which had been made, decided to return the Proposed Draft Standard for Canned Carrots to Step 3 of the Procedure, for a further round of government comments. The revised standard is contained in Appendix VIII to this report.

Consideration of the Proposed Draft Standard for Canned Tropical Fruit Salad at Step 4.

80. The Committee had before it the above standard as contained in ALINORM 72/20, Appendix IX, for consideration at Step 4, and government comments thereon as contained in CX/PFV/73/7-2. The following were the main points emerging from the Committee's consideration of the above standard.

Basic Fruits.

81. The Rapporteur (Australia) pointed out that the proposed draft was based on the product in international trade and the three basic fruits were pineapple, papaya, and bananas.

82. The Committee discussed in great detail a number of proposals for additions to the list of basic fruits and optional fruits. Several delegations expressed the view that limiting the basic fruits to pineapple, papaya and banana was too restrictive. The delegation of India stated that they did not use bananas in this product and requested that mangos be allowed as one of the basic fruits. Other proposals were made for the inclusion of citrus fruits, guava, and melon.

83. The Committee noted the observations of the Commission at its last session (ALINORM 72/35, paragraphs 138-140) with regard to the Draft Standard for Canned Fruit Cocktail and that it had been decided "that the Secretariat should request information from member governments as to their practices in relation to the production of canned mixed fruits. This information should show what mixtures of fruits are canned and what designations the various mixtures are given. The information should also include figures on home consumption, imports and exports of the various mixtures." It was thought that in order to solve the problem with regard to the choice of basic fruits it might be useful to propose expanding the request for information to include canned tropical fruit salad. However, this procedure was not adopted.

84. In the light of the above discussion, the Committee decided to include mango as an alternative to papaya in the basic fruits. The provision that the product be prepared from three basic fruits was retained so that the product would contain pineapple, banana and papaya and/or mango.

Optional Fruits.

85. The Committee noted that there were numerous proposals for additional optional fruits and expressed their concern on the inclusion of many of these fruits whose texture and acceptability to the product was not known. After a long discussion, it was agreed to include 3 of the original fruits proposed for inclusion in the basic fruit list; Citrus Fruits, Guava, and Melon, as well as Cashew (Anacardium occidentale) Jackfruit and Rambutan, and delete loquat. It was also agreed to delete mango as it was now permitted as a basic fruit. The Committee agreed to refer to oranges including Mandarin oranges.

86. A suggestion was made that the use of apples, peaches, and pears should also be permitted. Even though the Committee found it difficult to define tropical fruits, it was agreed that these three fruits were not considered to be in this category. It was, however, agreed to retain (maraschino) cherries although these were not a tropical fruit.

Proportion of Fruits.

87. It was agreed that papaya and mango, used singly or in combination, should be present based on the individual drained fruit weight in relation to the drained weight of all the fruit in a quantity of at least 25% and not exceeding 50%.

88. With regard to the optional fruits, the Committee decided the following:

Fruit	Minimum	Maximum
Cashew	2%	5%
Guava	5%	15%
Jackfruit	5%	20%
Melon	5%	20%
Rambutan	5%	20%

Packing Media.

89. The Committee agreed that this section should be brought into line with the decisions taken on other canned fruit standards as regards the syrup strengths and other optional packing media. The Committee further agreed to allow the use of fructose and fructose syrup in the manufacture of canned tropical fruit salad.

Other Ingredients.

90. The Committee agreed to delete the word "citrus" and refer only to juices.

Quality Criteria - Texture.

91. In order to avoid any ambiguity, the reference to variability in the texture of the fruit appropriate for the respective fruit was deleted so that the provision reads as follows: "The texture of the fruit ingredients should be appropriate for the respective fruit."

Defects and Allowances.

92. The Committee agreed that it would be better to specify defects in relation to weight, rather than by count, although it was uncertain what effect this would have for the additional approved fruits and agreed to allow for two blemished fruit pieces per 100 grams of product.

Contaminants.

93. In order to align the standard with those of similar canned fruit products, a section on contaminants was inserted specifying the maximum limit for tin of 250 mg/kg.

Food Additives.

94. The Committee's attention was drawn to the Report of the Codex Committee on Food Additives (ALINORM 72/12, paragraph 42) where that Committee had agreed that the provision for natural flavours would cover natural fruit essence. The delegation of Poland reserved its position with regard to the use of colouring matter.

Anti-Oxidants.

95. The Committee agreed to allow for the use of ascorbic as well as erythorbic acids up to a total of 700 mg/kg.

Acidifying Agents.

96. It was also agreed to provide for the use of citric acid in quantities governed by good manufacturing practice.

Firming Agents.

97. The possible use of calcium chloride, lactate and gluconate was allowed for up to a maximum of 350 mg Ca/kg.

Hygiene.

98. It was agreed to bring this section in line with the hygiene provisions in other standards for canned fruits.

Name of the Fruit and List of Ingredients.

99. The Committee agreed that these subsections should be updated in the light of earlier decisions taken on this product.

Status of the Standard.

100. In view of the substantial changes made, and in particular, to allow governments to consider the new list of basic and optional fruits, the Committee agreed to return the standard to Step 3 of the Procedure. The proposed draft standard as revised is contained in Appendix IX to this Report.

Consideration of the Proposed Draft Standard for Canned Mature Processed Peas at Step 4.

101. The Committee had before it the above standard as contained in ALINORM 72/20, Appendix XI, for consideration at Step 4 and government comments thereon, as contained in CX/PFV 73/7-(3) and Addendum I. The following were the main points emerging from the Committee's consideration of the above standard.

Product Definition.

102. The delegation of The Netherlands proposed that the word "substantially" be deleted. The delegation of the United Kingdom pointed out that if this were deleted it ruled out the possibility of allowing tolerances. The Committee agreed to maintain the existing text. The Committee decided to delete the words "prior to canning" as it was thought that this provision precluded a process in which peas may be sealed in the can in a dry state with sufficient water to reconstitute properly during the heat process. The words "or other suitable liquid medium" were deleted as there was no specific mention of ingredients of such nature in the standard. To avoid having to add at least one optional ingredient subsection 1.1(b) was amended to read: "packed with water, to which may be added nutritive sweeteners,...".

Essential Composition and Quality Factors.

103. The Committee discussed the methods of replacing the present text with provisions similar to those it had agreed to for Canned Green Peas. It was decided, however, that the differences between the two products were such that the text as it stood could best be retained.

Basic Ingredients.

104. This provision was reworded to bring it into line with the amendment made in subsection 1.1(b).

Other Permitted Ingredients.

105. The Committee agreed to permit the addition of fructose and fructose syrup and amended the provision to include "invert sugar syrup."

Colour.

106. The delegation of Argentina, supported by several delegations, queried the need for permitting any added artificial colour when it was stated earlier in the same section that the drained peas should have the normal colour characteristic of the product. The Committee agreed not to amend the provision.

Flavour.

107. The Committee agreed that the reference to "special" ingredients referred to the possible use of herbs and spices. On the suggestion of the observer from the IOCU, the word "special" was deleted and replaced with "other permitted".

Defects and Allowances.

108. The delegation of The Netherlands was of the opinion that the maximum limit of 20% m/m for total defects was too high and proposed that it should be lowered to 15% m/m. Bearing in mind that the limit for Canned Green Peas was 12% m/m, the Committee agreed to amend the text as proposed.

Firming Agents.

109. The delegation of Poland expressed the view that in their opinion it was not necessary to use firming agents for these products. However, it was pointed out that for some types of peas there was a need for their use. The Committee agreed to specify the edible calcium salts permitted for use as firming agents. These were as follows: calcium chloride, calcium lactate and calcium gluconate to a maximum level of use in the final product of 350 mg Ca/kg (as in Canned Green Peas).

Colouring Matters and Flavours.

110. The Committee agreed to include Brilliant Blue FCF and to increase the total maximum level of use in the final product for all the colouring matters to 200 mg/kg. The delegations of Argentina and Poland reserved their positions with regard to the addition of colours in this product. The delegation of Switzerland stated they were completely opposed to the use of colouring matters in canned vegetables. As regards flavours, the Committee decided to delete the reference to other synthetic flavours.

Contaminants.

111. The delegation of Poland stated that in its view the maximum level for tin should be set at 150 mg/kg.

Hygiene.

112. The Committee agreed to bring this section into line with the recent decisions of the Codex Committee on Food Hygiene.

Minimum Dry Solids Content.

113. The delegation of Japan queried whether it was not possible to judge the degree of fill by establishing a minimum drained weight requirement rather than one for a minimum dry solids content. The delegation of the United Kingdom stated that, according to their experience with this product, they had found that the drained weight method was not as effective as the dry solids method. However, they did concur that the method as outlined in the draft standard required further expansion and, therefore, agreed to provide a revised method in their next round of comments on the draft standard. The delegation of Japan stated that they preferred the minimum drained weight method.

Name of the Food.

114. The delegation of Argentina, supported by several delegations, stated that in its opinion it would be difficult for the consumer to identify these peas without stating that they had undergone a process of drying in some manner and, therefore, proposed that the product covered by the standard should be labelled "Reconstituted Dried Peas". The delegation of the USA proposed as additional optional names "Cooked Dried Peas" and "Soaked Dried Peas". The delegation of the United Kingdom stated that they could accept other optional names for those countries who required them provided that they could continue to call the product "Processed Peas" or "Mature Peas". The Committee agreed to include these optional names in the draft standard with a qualifying phrase similar to that in the Canned Green Peas Standard. The revised text would be included as subsection 7.1.1 to read as follows: "Name of the product shall be 'Processed Peas' or 'Mature Peas' or 'Reconstituted Dried Peas' or 'Cooked Dried Peas' or 'Soaked Dried Peas' or the equivalent description used in the country in which the product is intended to be sold."

Declaration of Colours.

115. The delegation of Argentina proposed that a new additional clause be provided requiring the mandatory declaration of the addition of artificial colour in conjunction with the name of the product. The Committee noted that this proposal once more raised the issue of how to deal with the labelling of specific ingredients.

116. Some delegations were of the opinion that the matter should be referred to the Codex Committee on Food Labelling. The delegation of Canada stated that, in its view, the Processed Fruits and Vegetables Committee should make decisions regarding the labelling of fruit and vegetable products and then submit such decisions to the Codex Committee of Food Labelling for endorsement. Furthermore Section 3.2(a)1 of the Recommended International General Standard for the Labelling of Prepackaged Foods was brought to the attention of the Committee.

117. The United Kingdom delegation, supported by the delegation of The Netherlands, considered that the provision for a complete list of ingredients provided adequate information for the consumer. The proposal for an additional declaration of colour (or any other component) in close proximity to the name, raised issues of principle of general application which would be more appropriate for consideration by the Commission or by one of its General Subject Committees. The Committee nevertheless decided to insert the following provision in the labelling section in square brackets and to request governments to comment specifically on the matter:

> "7.1.5 The addition of artificial colour shall be declared in conjunction with the name of the product."

Status of the Standard.

118. The Committee agreed to advance the Draft Standard for Canned Mature Processed Peas to Step 5 of the Procedure. The revised standard is contained in Appendix X of this Report.

Consideration of Proposed Amendments of The Netherlands to the Recommended International Standard for Canned Green Beans and Canned Wax Beans.

119. The Committee had before it the above proposed amendments as contained in ALINORM 72/20A, Appendix XIII.

120. Taking into account world wide application of the standard, the delegation of Poland, supported by the delegations of Australia and Canada, considered that the proposed amendments were extremely complex and detailed.

121. The delegation of the USA referred to a point system relating to the defect tables which were being introduced into certain quick frozen food standards and suggested that as this system would also be introduced into the proposed Draft Standard for Canned Carrots, it would be advisable to await the new version of this standard before proposing any amendments to the section on Defects and Allowances in a Step 9 Standard.

122. The delegation of The Netherlands explained that the intention of their proposed amendments had been to improve the present standard which had been one of the first standards elaborated by the Committee and which it felt was not stringent enough, and also to bring it into line with the more recently adopted Step 9 Standards. It further noted that the point system had certain merits and agreed, therefore, to await the new version of the Proposed Draft Standard for Canned Carrots and to withdraw their proposed amendments for the moment. The Committee agreed to draw the attention of the Commission to the existing Guide to the Procedure for the Revision and Amendment of Recommended Codex Standards (Procedural Manual, 2nd Ed., page 35) and request that they examine this procedure with a view to its simplification.

Proposed Draft Standard for Canned Cucumbers at Step 2.

123. The Committee had before it the above standard as contained in PFV 69/2-30. The Committee agreed not to enter into a detailed discussion on this Proposed Draft Standard but to request the rapporteur, (Poland), in liaison with the USA, to bring the document into line with the current standards.

124. It was noted that the products covered by the standard would have a low pH, whether arrived at by a natural fermentation or by an acidulant added during processing. The Committee agreed that the process described in this proposed draft standard could best be described by pickling and decided to amend the title to read "Pickled Cucumbers (Cucumber Pickles)". The Committee also noted that small pickled cucumbers are commonly referred to as gherkins (cornichons) and were also intended to be covered by this standard.

125. The Committee decided to advance the Proposed Draft Standard for Pickled Cucumbers (Cucumber Pickles) to Step 3 of the Procedure. The revised standard is contained in Appendix XI to this Report.

Future Work.

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

1.	Canned Fruit Cocktail	Step 7
2.	Jams (Fruit Preserves) and Jellies*	Step 7
3.	Citrus Marmalade	Step 7
4.	Canned Carrots	Step 4
5.	Canned Tropical Fruit Salad	Step 4
6.	Pickled Cucumbers (Cucumber Pickles)	Step 4

* in conjunction with the Report of the informal working group

The delegation of the United Kingdom proposed that a standard for Canned Beans in Tomato Sauce should be elaborated and offered to prepare a draft together with a justification based on the work priorities criteria as outlined in the Procedural Manual. The Committee agreed with this proposal and noted that it would be before it at its next session.

Date and Place of Next Session.

127. The Committee noted that the Eleventh Session of the Committee would be held in Washington, D. C. in 1974. It was informed that the next session of the Codex Committee on Food Hygiene was tentatively scheduled for March 1974, and that in all probability this would be too early to hold a meeting in consecutive weeks of the two Committees as desired by a number of overseas delegations.

Status of Standards

128. Standard	Document No.		Status (Step)
Canned Tomatoes	Document	CAC/RS 13-1969	
Canned Peaches	"	CAC/RS 14-1969	
Canned Grapefruit	"	CAC/RS 15-1969	
Canned Green and Wax Beans	"	CAC/RS 16-1969	
Canned Applesauce	"	CAC/RS 17-1969	
Canned Sweet Corn	"	CAC/RS 18-1969	
Canned Pineapple	"	CAC/RS 42-1970	
Canned Mushrooms	"	CAC/RS 55-1972	9
Canned Asparagus	"	CAC/RS 56-1972	
Processed Tomato Concentrates	"	CAC/RS 57-1972	
Canned Green Peas	"	CAC/RS 58-1972	
Canned Plums	"	CAC/RS 59-1972	
Canned Raspberries	"	CAC/RS 60-1972	
Canned Pears	"	CAC/RS 61-1972	
Canned Strawberries	"	CAC/RS 62-1972	
Canned Mandarin Oranges	ALINORM	74/20, App. VII	
Raisins	"	74/20, App. VI	
Table Olives	"	74/21, Joint Codex/ECE	8
Canned Peaches - Amendment	"	74/20, App. IV	
Canned Tomatoes - Amendment	"	74/20, App. V	
Canned Pineapple - Amendment	"	72/20A, App. XI	
Canned Fruit Cocktail	"	71/20, App. VI	
	"	72/35, paras 138-141	7
Jams (Fruit Preserves & Jellies)	"	74/20, App. II	7
Citrus Marmalade	"	74/20, App. III	7
Canned Mature Processed Peas	"	74/20, App. X	5
Canned Carrots	"	74/20, App. VIII	3
Canned Tropical Fruit Salad	"	74/20, App. IX	3
Pickled Cucumbers (Cucumber Pickles)	"	74/20, App. XI	3
Canned Beans in Tomato Sauce	"	74/20, para 126	
Dried Figs	"	69/20, paras 33 & 35	
	"	70/20, para 38(c)	
Dried Apricots	"	69/20, paras 32 & 35	
	"	70/20, para 38(c)	
Dates	"	69/20, paras 32 & 35	For future consideration at Step 2
	"	70/20, para 38(c)	
Pistachios	"	69/20, paras 32-33 & 35	
	"	70/20, para 38(c)	
Dried Currants	"	68/20, para 69	
Canned Fruit Salad (other than tropical)	"	70/20, para 38(c)	
Canned Two Fruits Salad	"	70/20, para 38(c)	

APPENDIX I
May 1973

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LISTE DES PARTICIPANTS
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* * *

DRAFT GENERAL STANDARD FOR JAMS (FRUIT PRESERVES) AND JELLIES

Retained at STEP 7

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 (as defined in 2.2.2.1) 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 to a suitable consistency.

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

2.1.2 "Jelly" is the product:

(a) that is prepared from a suitable fruit ingredient (as defined in 2.2.2.2) 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 approved ingredients and additives; and

(c) in which the prepared mixture is processed to a semi-solid consistency.

The product shall be filled into clean containers in a manner which shall prevent 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, dried, concentrated, or otherwise processed or preserved;

(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, trimmed rhubarb stems, 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;

(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 corrected to 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 as defined in 2.2.2.

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

3.1.2 Optional ingredients

1) Citrus juice.

2) Herbs, Spices, and Vinegar.

3) Essential oils.

4) Spirituous liquors.

5) Butter, margarine, other edible vegetable or animal oils (used as anti-foaming agents).

6) Honey.

7) Fruit juice or fruit juice concentrates in the case of jams. **These may constitute a part of the required fruit content only in the case of grape juice and grape juice concentrate used in grape jam.**

3.2 Formulation

3.2.1 Fruit content

The product shall contain not less than 40 parts, by weight, of fruit ingredient, exclusive of any added sugar or other optional ingredients used in the preparation of the fruit ingredient, for each 100 parts, by weight, of **finished product** provided that different minimum figures:

(a) May be applied:

(1) in countries having more than one standard; and

(2) for tropical or exotic fruits.

(b) shall be applied to the following fruits:

Ginger	5%
Passionfruit Jelly	7%
Cashew Apple Jam or Jelly	20%
Quince Jelly	35%
Gooseberry Jam	35%
Black Currant	25%
Pineapple	23%
Rosehip	33%
Sour Cherry Jam and Jelly	35%
Raspberry Jam and Jelly	35%
Red Currant Jam and Jelly	35%

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.

[ ] Subject to review.

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, passionfruit, lemon, papaya, or ginger is one of the two fruits. When melon or papaya 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.

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 passionfruit, are a natural fruit component and are not considered defects unless the product is presented as "Seedless".

3.4.2 Defects and tolerances -- Jams (Preserves)
Based on a sample unit of 500 grams the product shall have not more than the following:

	Tolerance
(a) Harmless Extraneous Plant Material (consisting of plant material common to the specific fruit and includes leaves, full caps, stems over 10 mm in length and sepal bracts aggregating an area of 5 mm^2 or larger)	2 pieces
(b) Pit (Stone) (whole pit or stone in fruits such as cherries that are normally pitted; or a piece of pit of approximately one-half pit)	1 piece
(c) Pit Fragments (a piece of pit less than the equivalent of one-half pit and which weighs at least 5 milligrams)	2 pieces
(d) Damaged (a piece of fruit that is blemished, discoloured, or bruised by pathological or other means to the extent that it is materially affected)	5 pieces
(e) Mineral Impurities	
Strawberry Jam	0.04% by weight
Other	0.01% by weight

3.4.3 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in subsection 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 subsection 3.4.3 when the number of "defectives", as defined in subsection 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

4.1 Acidifying Agents	Maximum Level of Use
Citric acid - - - Endorsed Malic acid - - - Endorsed Lactic acid - - - Endorsed L-tartaric acid (Subject to Fumaric acid endorsement)	In sufficient amount to maintain the pH at a level of 2.8 - 3.5. L-tartaric acid and Fumaric acid, singly or in combination, 0.3% m/m.

4.2	pH Regulating Agents	
	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	Anti-Foaming Agents	
	Mono-and Diglycerides of fatty acids of edible oils	Not more than is necessary to inhibit foaming (Endorsed)
	Dimethylpolysiloxane----------	10 mg/kg - (Temporarily Endorsed)
4.4	Thickening Agents	
	Pectin----------	(Not limited (Endorsed)
4.5	Colouring Matters	
	Erythrosine 45430-----(Temp. endorsed)	200 mg/kg (singly or in combination)
	Amaranth 16185--------(Temp. endorsed)	
	Fast Green FCF 42053--(Temp. endorsed)	
	Ponceau 4R 16255------(Temp. endorsed)	
	Azo-rubine (Carmoisine) 14720--(Not endorsed)	
	Tartrazine 19140------(Temp. endorsed)	
	Wool Green BS (Green 'S') 44090---(Temp. endorsed)	
	Sunset Yellow FCF 15985(Temp. endorsed)	
	Blue No. 1 (Brilliant Blue FCF) 42090	
	Black PN 28440	
	Indigo Carmine (Indigotin) 73015	
	Orange G 16230	
	Orange RN 15970	
	Red 2G 18050	
	Caramel	
	Curcumin 75300	
	Lactoflavin	
	Cochineal 75470	
	Orcein	
	Carbo Medicinalis Vegetalis	
	Chlorophylls 75810	
	Carotenoids	
	(a) alpa 75130, beta-40800 and gamma-	
	(b) bixin, norbixin (Annatto) 75120	
	(c) Capsanthein or Capsorbin	
	(d) Lycopene 75125	
	(e) beta-apo-8'-carotenol 40820	
	(f) ethyl ester of beta-apo-8' carotenoic acid 40825	
	Xanthophylls	
	(a) Flavoxanthein (d) riboxanthein	
	(b) Lutein (e) violoxanthein	
	(c) kryptoxanthein (f) rhodoxanthein	
	(g) canthaxanthein	
	Beet red or betanin	
	Anthocyanins	

4.6	Preservatives	
	Sodium Benzoate Sorbic Acid or Potassium Salt Esters of parahydroxy benzoic acid	1000 mg/kg (singly or in combination) (Subject to endorsement)
	Sulphur Dioxide **(as a carryover from raw material)**----------	**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 bisulfite Calcium carbonate Calcium chloride Calcium lactate Calcium gluconate	200 mg/kg expressed as Ca (singly or in combination) **(Subject to endorsement)**
4.9	Antioxidant	
	L-ascorbic acid ----------	500 mg/kg
	Erythorbic acid ----------	500 mg/kg

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 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 represent a hazard to health.

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.

7.1.6 The addition of artificial colour shall be declared in conjunction with the name of the product (e.g. X with colour added).

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 SAMPLING, ANALYSIS AND EXAMINATION

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

Methods of AOAC-1970; 32.014 through 32.016.

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.

8.5 Determination of Mineral Impurities

8.5.1 Apparatus

(1) Blender or mascerator (Atomix, Turmix, Waring, or equivalent).

(2) Beakers - 2,000 ml capacity.

(3) Funnels.

(4) Filter paper, Whatman No. 1 or equivalent.

(5) Porcelain or platinum crucibles.

(6) Muffle furnace (600°C).

(7) Dessicator with active dessicant.

(8) Analytical balance.

8.5.2 Reagents

(1) NaCl solution /15%/.

(2) HCl

8.5.3 Preparation of Test Sample

(a) Containers of 500 g or less

Use the entire contents. Determine the weight of contents by subtracting the weight of the empty container from the weight of full container. For this purpose:

Weigh the container with the contents. Transfer the contents to a 2 l beaker, taking care to include any sand or particles by rinsing with ca 500 ml of hot water. Weigh the emptied dried container. Determine the weight of contents by subtracting the weight of the empty container from the weight of full container. Use the entire contents for the analytical sample.

[illegible] than 500 g

(b) Containers larger than 500 g

Use the sub of ca 500 g for the analytical sample. For this purpose:

Empty the container onto a tray. Divide into parts along the vertical axis. Remove ca 500 gram sub for the analytical sample taking care to include all layers of the contents. Transfer the sample to a 2 l previously weighed beaker. Weigh. Determine the weight of the sample from the difference of weights.

8.5.4 Procedure

1) Add ca 500 ml of hot water to the sample in the 2 l beaker and homogenize the contents thoroughly.

2) Nearly fill the beaker with hot water and mix contents by swirling, using a stirring rod if needed.

3) Let stand about 10 minutes and decant supernatant material and water into a second 2 l beaker.

4) Refill the first beaker with water, repeat the mixing and swirling operation and again let set 10 minutes.

5) Fill the second beaker with water, mix and swirl, and let stand 10 minutes.

6) At the end of the 10 minute period decant beaker No. 2 into beaker No. 3. Likewise decant beaker No. 1 in beaker No. 2.

7) Repeat the sequence carefully decanting supernatant from beaker No. 3 into sink, until all fruit tissue is removed from the sample.

8) Finally collect the residue from all the beakers in beaker No. 3.

9) Remove any seeds or fruit tissue that settles out by treating the residue in beaker No. 3 with hot 15% NaCl solution.

10) Remove NaCl by washing with hot water. Removal can be verified by testing the washings with $AgNo_3$.

11) Finally transfer residue remaining in Step 10 to funnel fitted with ashless filter paper. Use small portion of water to assure transfer of all residue. Discard filtrate.

12) Transfer filter paper to a weighed crucible. Dry in air oven or over bunsen burner. Ignite in muffle furnace for about 1 hour at 600° C.

13) Cool, add 5 ml HCl and heat to boiling. Again cool, add 10 ml H_2O and heat to boiling.

14) Filter, and wash free of acid.

15) Ignite the filter by an initial drying and incineration in muffle furnace at 600° C.

16) Cool in dessicator, and weigh.

17) The weight of acid insoluble residue is determined by subtracting the weight of the empty crucible from the weight of the crucible plus incinerated residue.

18) Express the residue or mineral impurities on the basis of ___ mg per kilogram.

If the test sample is 500 grams, multiply the value obtained in Step 17 by two (2).

If the test sample is less than 500 grams, use the following formula:

$$X = \frac{1000}{W} (R)$$

in which

X = mineral impurities
W = Weight of test sample (grams)
R = Residue remaining after incineration (milligrams)

* * *

DRAFT GENERAL STANDARD FOR CITRUS MARMALADE

Retained at Step 7

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 and with or without the removal of some or all of the 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 to a suitable consistency.

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

2.1.2 "Jelly Marmalade" is the product 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, invert sugar syrup, fructose, fructose syrup, glucose syrup, dried glucose syrup.

3.1.2 Optional ingredients

1) Citrus juice.

2) Essential oils.

3) Spirituous liquors.

4) Butter, margarine, other edible vegetable or animal oils (as anti-foaming agents).

5) 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 flavor normal for the type of citrus fruit used taking into consideration flavour imparted by optional ingredients. The product shall be practically free from extranious plant material, seeds, or seed particles, and shall be reasonable 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	---Endorsed	In sufficient amount to maintain the pH at a level of 2.8 - 3.5
Malic acid	---Endorsed	
L-tartaric acid	--Subject to Endorsement)	
Fumaric acid	---Subject to Endorsement)	L-tartaric Acid and Fumaric Acid, singly or in combination, 0.3% m/m.
Lactic acid	---Endorsed	

4. FOOD ADDITIVES -- continuation

4.2 pH Regulating Agents

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 Anti-Foaming Agents

Mono and Diglycerides of fatty acids of edible oils	Not more than is necessary to inhibit foaming (Endorsed)
Dimethylpolysiloxane - - - - - - - - - - -	10 mg/kg (Temporarily endorsed)

4.4 Thickening Agent

Pectin - - - - - - - - - - - - - - - - - - -	Not limited (Endorsed)

4.5 Colouring Matters

Caramel- - - - - - - - - - - - - - - - - -	Limited by Good Manufacturing Practice (Endorsed)
Sunset Yellow FCF - - - - - - - - - - - -	200 mg/kg (Temporarily endorsed)
In Lime Marmalade only	
Tartrazine	100 mg/kg
Wool Green BS(Green 'S')	(Singly or in combination) (Temporarily endorsed)

4.6 Preservatives

Sorbic Acid or Potassium Salt - - - - -	250 mg/kg (singly or in combination) (Subject to endorsement)
Sulphur Dioxide - - - - - - - - - - - - -	100 mg/kg (Endorsed)

4.7 Natural flavours

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

4.8 Antioxidants

L-ascorbic acid) Erythorbic acid)	500 mg/kg (singly or in combination) (to be endorsed)

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 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 micro-organisms in amounts which may represent a hazard to health

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 Standards 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.

7.1.3 Except as provided in 7.1.2, 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 and 31.011)

8.3 Determination of calcium in jams

Methods of AOAC-1970 - 32.014 through 32.016.

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) Substract 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.

* * *

DRAFT AMENDMENT TO THE RECOMMENDED
INTERNATIONAL STANDARD FOR CANNED PEACHES
CAC/RS 14-1969

Advanced to STEP 8

3. FOOD ADDITIVES

Antioxidant	Maximum level in end product
L-ascorbic acid	550 mg/kg

6. **LABELLING**

6.2 List of ingredients

6.2.1 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 as an anti-oxidant".

DRAFT AMENDMENT TO THE RECOMMENDED
INTERNATIONAL STANDARD FOR CANNED TOMATOES
CAC/RS 13-1969

Advanced to STEP 8

3. FOOD ADDITIVES

3.2 Firming Agents		**Maximum Level in End Product**
Calcium chloride Calcium sulphate Calcium citrate	Singly or in combination	(0.080% total calcium **(as Ca)** (content in the styles "diced", ("sliced", and "wedges";
Mono-calcium phosphate Calcium lactate Calcium gluconate		(0.045% total calcium **(as Ca)** (content in the styles "whole",, ("whole and pieces" and "pieces".

DRAFT STANDARD FOR RAISINS Advanced to STEP 8

1. SCOPE

This standard applies to dried grapes of varieties conforming to the characteristics of Vitis vinifera L. which have been suitably treated or processed and which are offered for direct consumption as raisins or Sultanas. It also covers raisins packed in bulk containers which are intended for repacking into consumer size containers. 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 the sound dried grapes of the varieties conforming to the characteristics of Vitis vinifera L. (but excluding currant types) processed in an appropriate manner into a form of marketable raisin with or without coating with suitable optional ingredients.

The dried grapes or raisins:

(1) shall be properly cleaned, whether washed or unwashed;

(2) shall be stemmed except for the form of cluster raisins;

(3) shall be 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) shall be 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, 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.

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 -- Maximum

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

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

(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) Immature or 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
Immature or undeveloped	6% by weight	4% 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 (applies to Bleached Raisins only)	1,500 mg/kg (Subject to endorsement)
Mineral Oil (Food grade) (See attachment 1 of this Appendix for specifications) 1/	5 g/kg (Endorsed)
Sorbitol	5 g/kg (Subject to endorsement)

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.

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.

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 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 micro-organisms in amounts which may represent a hazard to health.

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.

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 ("Systeme 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

Electrical Conductance Method - Annex I

Oven Drying Method - "Moisture in Dried Fruits"

Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition, 22.012

9.2.2 Mineral Impurities (Sand test)

Annex II

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

Annex III

9.2.5 Sorbitol

Annex IV - "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 of 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, $E \frac{0.1\%}{1\ cm.}$ shall not be greater than 0.04 where $E = \log_{10} (1o/1)$ and 1o and 1 are the intensities of the incident radiation and of the transmitted radiation respectively; and

(c) shall comply with the tests for acidity or alkalinity, carbonisable substances, solid paraffins and sulphur compounds given in the monograph for Liquid Paraffin in the British Pharmacopocia 1963.

Specifications 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 percent 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, $E \frac{0.1\%}{1\ cm}$ shall not be greater than 1.0 where $E = \log_{10} (1o/1)$ and 1o and 1 are the intensities of the incident radiation and of the transmitted radiation respectively; and

(d) shall comply with the tests for acidity or alkalinity and sulphur compounds given in the monograph for Liquid Paraffin in the British Pharmacopocia 1963.

Specifications 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 percent, 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, $E \frac{0.1\%}{1\,cm}$ shall not be greater than 0.04 where $E = \log_{10} (10/1)$ and I_o and 1 are the intensities of the incident 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 $E \frac{0.1\%}{1\,cm}$ shall not be greater than 1.0 where $E = \log_{10} (10/1)$ and I_o and 1 are the intensities of the incident radiation and of the transmitted radiation respectively.

1/MOISTURE DETERMINATION BY ELECTRICAL CONDUCTANCE METHOD (Draft Standard PFV 71/6-12)

Equipment

Dried Fruit Moisture Tester complete with all raisin charts and electrode tester.

Universal #71 or #72 grinder (16 tooth head) -- either hand or mechanically driven grinder.

Thermometer -- 0° to 120° F.

ELECTRICAL CIRCUIT DIAGRAM FOR DRIED FRUIT MOISTURE TESTER

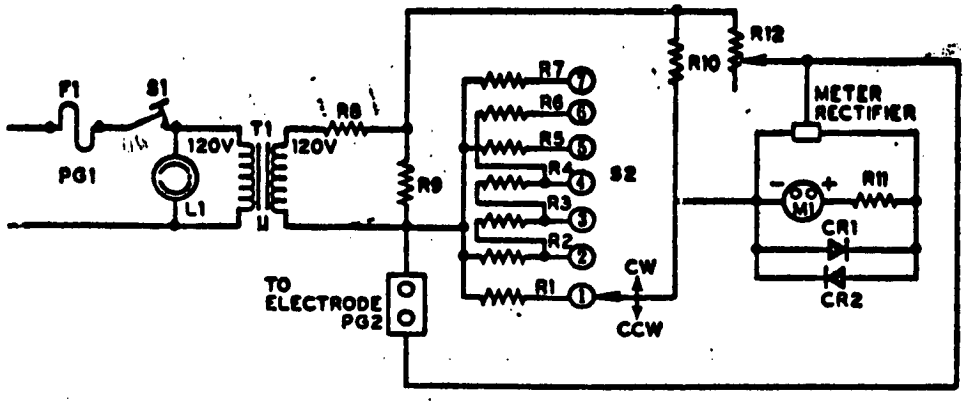
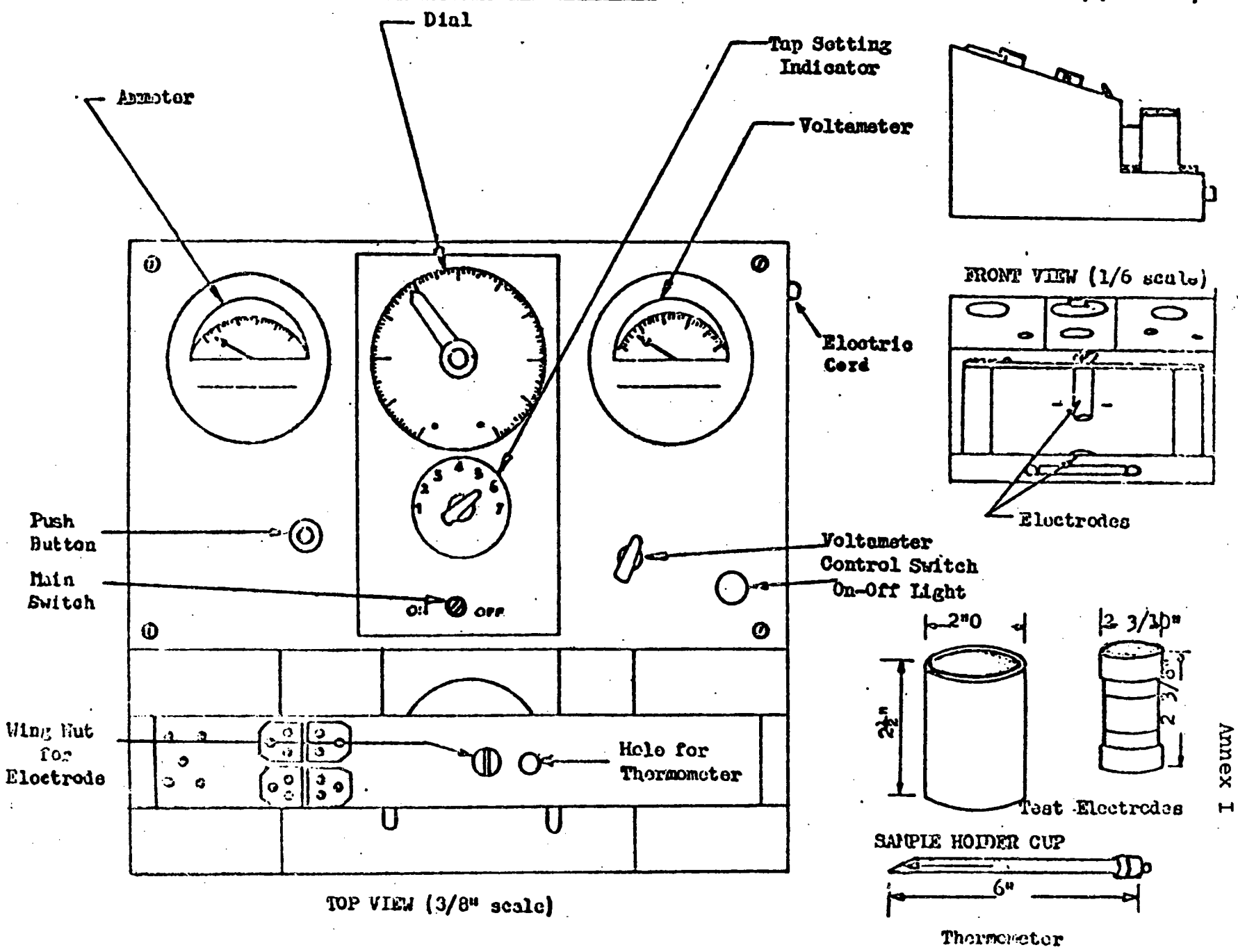


FIG. 2—Electrical circuit diagram for dried fruit moisture tester.

Explanation:

Item	Item	Value	Tolerance, %	Power Rating, w
F1—Fuse 3AG 2A 125 v	R1	10K	1	1
S1—Push-button switch	R2	200K	1	½
L1—Neon light	R3	1K	1	1
T1—Isolating transformer 1-1, 120 v, 50 ma	R4	100K	1	½
PG1—Plug, 120 v	R5	40K	1	½
PG2—Plug to electrode	R6	20K	1	½
M1—Microammeter rectifier, type 0-100 ma meter rectifier	R7, R10	3K	1	1
CR1—Rectifier F4 (5M2483)	R8	2.5K	—	10
CR2—Rectifier F4 (5M2483)	R9	5K	—	10
S2—2 Wafer 7-point tap switch	R11	1.5K	10	½
	R12	10K	±5	(wire-wound)

DRIED FRUIT MOISTURE TESTER



Procedure

1) Grind a representative sample three times through a Universal #71 food chopper, using the cutter which has 16 teeth. Then knead by hand until the sample is thoroughly mixed.

2) Pack the ground sample into the bakelite cylinder (containing wax paper liner) making certain that it is packed tightly around the bottom electrode. Fill the cylinder level full.

3) Lower the tap electrode and press it into the sample until the tap electrode level is stopped by the post. Insert the thermometer in the hole to a depth about half way down in the cup.

4) Plug the machine into a 110 Volt AC outlet and turn on main switch. Adjust the voltmeter control switch (the right-hand knob under the voltmeter) until the voltmeter reads 10 volts or less.

5) Select the proper tap setting by referring to the table appropriate for the type of fruit being tested, as -

   Table 22:B1 for natural or low moisture fruit - under 15% use cap setting 6

   Table 22:B2 for processed or high moisture fruit - over 15% use tap setting 3

6) Then make a preliminary setting of Dial. If the sample seems moist, turn the Dial to about 80. If the sample seems dry, turn the Dial to about 40. This is to prevent "bumping" the ammeter.

7) Carefully depress the push-button switch and watch the micro-ammeter. If the Dial setting is near the correct range, the ammeter will read on the scale. If the ammeter pointer goes completely to 100, release the push-button immediately. Make a new setting of the Dial and try again. The operator will soon learn to judge by the feel of the fruit about where to set the Dial.

8) When the ammeter reads on scale, keep the push-button down and turn the Dial so the ammeter pointer moves toward zero (the left). When the zero point is reached, the needle will start back up if the Dial is moved in the same direction. Adjust the Dial as near this zero or turning point as possible.

9) Then, and not until then, turn the voltmeter control switch completely to the right. With the push-button down, make the fine adjustment of the Dial to the ammeter zero or turning point. When this turning point is reached, read the Dial. Then read the thermometer.

10) Refer to the appropriate table for Raisins and based upon the Dial readings and temperature determine the moisture content as in Step 11.

11) Find the correct temperature column on the table and follow down this column until a number nearest to the Dial reading is reached. Moisture percentage will be found in the column to the extreme left.

Example

Dial reading - 76
Temperature - 74°F.
Tap setting - 3
Table - 22:B2

Locate the column headed by 74°F. and follow down to the conductance reading closest to a Dial reading of 76. Note that a reading of 75.2 corresponds to a moisture content of 18.5% whereas a reading of 78.4 corresponds to a moisture content of 19.0%. By interpolation a reading of 76 would correspond to a moisture content of 18.6%

Checking Moisture Machine

The machine must be checked daily to verify proper calibration and operation as follows:

1) Place the "test electrode" in the machine in place of the sample of ground fruit.

2) Operate the machine in the same manner as indicated above for the fruit sample.

3) Check the readings for each tap with the readings on the test electrode.

4) If the machine does not read properly it is in need of adjustment or repair.

Table 22:R1. Conductance-temperature correlation for natural or low moisture raisins; switch setting, tap 6

% Moisture	Conductance readings at temperature (°F):																								
	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102
9.0																9.0	15.0	21.0	25.0	29.0	33.0	36.0	39.0	42.0
9.5													4.0	11.0	17.5	22.5	27.0	32.5	37.0	40.5	44.0	47.0	49.0	51.5
10.0									1.0	7.0	13.5	17.5	23.0	28.5	34.0	38.0	41.5	45.5	49.0	52.0	54.5	57.0	59.0	61.5
10.5							7.5	13.0	18.0	24.0	29.5	35.0	40.0	44.5	49.0	51.5	54.0	57.0	60.0	62.0	64.0	66.0	68.0	70.0
11.0					8.5	16.0	22.5	28.0	34.0	39.0	44.0	48.5	53.0	56.0	59.0	61.5	64.0	66.0	68.5	70.5	72.5	73.8	75.3	76.8
11.5			9.0	18.0	26.0	31.0	36.0	42.0	47.5	51.5	55.5	58.7	62.5	64.7	67.5	69.5	71.0	73.0	75.0	76.5	78.3	79.6	81.0	82.5
12.0			23.5	30.5	37.5	42.5	47.0	52.0	56.5	60.0	63.3	66.5	69.0	71.0	73.0	74.5	76.0	78.0	79.7	81.0	82.0	83.8	85.2	86.5
12.5	16.5	27.0	34.5	40.0	46.0	50.5	55.0	59.0	63.0	65.8	68.6	71.0	73.3	75.0	76.6	78.0	79.7	81.3	82.6	84.0	85.4	86.7	88.0	89.3
13.0	30.5	37.2	42.5	48.0	52.3	56.5	60.5	64.3	67.7	70.0	72.5	74.8	76.7	78.3	79.7	81.2	82.6	83.8	85.2	86.5	87.8	89.2	90.5	91.3
13.5	40.0	45.0	49.7	54.0	58.0	61.5	65.0	68.5	71.3	73.4	75.4	77.5	79.4	80.7	82.0	83.5	85.0	86.2	87.3	88.5	89.8	91.0	92.2	93.0
14.0	48.3	52.5	56.5	60.0	63.0	66.0	69.2	72.0	74.5	76.4	78.0	80.0	81.7	83.0	84.4	85.6	87.0	88.0	89.3	90.3	91.5	92.6	93.8	94.6
14.5	55.3	59.0	62.3	65.0	67.6	70.4	72.7	75.0	77.0	78.7	80.4	82.0	83.7	85.0	86.2	87.3	88.7	89.7	90.8	91.8	93.0	94.0	95.0	95.8
15.0	61.6	64.5	67.7	70.8	72.4	74.3	76.0	78.0	79.7	81.1	82.6	84.0	85.6	86.7	87.9	89.1	90.3	91.4	92.5	93.5	94.5	95.5	96.4	97.0

Table 22:B2. Conductance-temperature correlation for processed raisins; switch setting, tap 3

% Moisture	Conductance readings at temperature (°F):																													
	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102
13.0											0.0	6.7	12.8	18.0	22.2	26.8	31.4	35.4	39.5	43.7	48.0	52.2	55.8	59.0
13.5										2.5	9.0	15.4	21.0	25.2	29.4	34.0	38.3	42.7	46.5	50.5	54.3	58.0	61.5	64.8
14.0									5.7	11.7	17.0	23.0	27.5	32.4	36.6	40.8	44.2	48.3	52.6	56.2	59.6	62.8	66.3	69.2
14.5							1.0	7.5	14.0	19.0	24.3	29.4	34.2	39.0	42.8	46.7	50.9	54.4	57.5	60.8	64.2	67.2	70.3	73.0
15.0						2.5	9.3	15.5	21.7	27.0	31.6	36.3	40.9	45.5	49.2	53.0	56.8	59.7	62.7	65.4	68:2	70.9	73.6	76.1
15.5						4.0	11.0	17.7	23.1	29.7	34.0	38.2	42.7	47.3	51.6	55.2	58.5	62.1	64.9	67.2	69.7	72.0	74.2	76.6	78.7
16.0						13.5	20.0	25.3	31.0	36.0	41.0	45.5	50.0	54.0	58.0	61.6	64.5	67.4	69.6	72.0	73.7	75.5	77.3	79.3	81.0
16.5			13.0	20.5	26.5	32.0	36.6	42.0	46.5	50.7	54.8	58.5	62.0	65.5	68.8	71.0	73.0	75.2	77.0	78.4	79.7	81.3	82.8	84.3
17.0	13.5	22.0	28.4	34.0	39.0	43.5	47.2	51.7	55.7	59.4	62.6	66.0	68.8	71.5	74.1	76.0	77.8	79.4	80.9	82.0	83.2	84.2	85.5	86.7
17.5	31.0	36.0	41.0	45.0	49.0	52.5	56.0	59.5	63.0	66.0	69.0	71.6	74.0	76.2	78.4	80.0	81.5	82.6	83.9	84.8	85.8	86.8	87.8	88.7
18.0	43.0	47.0	50.0	53.5	57.0	59.7	62.7	64.8	69.0	71.5	73.8	76.0	78.0	79.8	81.6	82.7	84.0	85.0	86.0	86.8	87.7	88.5	89.5	90.2
18.5	50.5	53.3	56.0	59.4	62.5	65.0	67.7	70.4	73.0	75.2	77.3	79.2	81.0	82.4	83.8	84.8	85.8	86.7	87.7	88.4	89.0	89.9	90.7	91.3
19.0	56.0	58.5	61.2	64.0	66.8	69.2	71.6	74.0	76.4	78.4	80.2	81.7	83.3	84.5	85.7	86.7	87.6	88.5	89.3	89.8	90.4	91.0	91.7	92.3
19.5	60.7	63.0	65.5	68.3	70.5	72.7	74.7	77.2	79.2	80.8	82.5	83.9	85.2	86.2	87.2	88.0	88.8	89.5	90.3	90.9	91.4	91.9	92.5	93.0
20.0	65.0	67.5	69.6	71.8	74.0	76.0	77.9	79.8	81.7	83.1	84.6	85.7	87.0	87.8	88.7	89.5	90.1	90.7	91.4	91.8	92.3	92.8	93.4	93.9
20.5	69.2	71.3	73.3	75.2	77.2	78.6	80.6	82.4	83.9	85.3	86.4	87.4	88.4	89.3	90.0	90.6	91.2	91.8	92.5	92.9	93.3	93.8	94.3	94.7

MINERAL IMPURITIES (SAND)[1/] IN RAISINS

Principle of Method

Because of harvesting and drying methods, raisins are exposed to potential contamination by sand or particles of soil. The objective of the "sand test" is to separate sand and similar inorganic material from the raisin material through a combination of screens, agitation, and water spray. After the sand has been separated from the raisin tissue, it is collected on a fine mesh screen, transferred to a crucible, incinerated to eliminate any organic matter and then weighed. A large test sample is used in order to provide a representative cross section of the product and also provide sufficient "mineral impurities" or sand.

Equipment

Beakers - Pyrex - 2,000 ml.
Beakers - 800 ml.
Hot Plate or Stove
Muffle - 550° to 600° C.
Crucibles for incineration of residue
Screens - 8 inch (20 cm.) diameter - 8 mesh; pore openings 2.38 mm.
Screens - 8 inch (20 cm.) diameter - 24-25 mesh; pore openings 0.70 mm.
Screens - 8 inch (20 cm.) diameter - 250-270 mesh; pore openings 50 microns

NOTE: The fine 250-270 mesh screen may be reduced to 3 or 4 inch diameter (7.5 to 10.0 cm.) with a tapered adapter or funnel to collect washings from the 8 inch, 24-25 mesh screen

Reagents - Na Cl solution (15%)

Test Procedure

(1) Weigh 200 grams of raisins into a 2,000 ml. beaker; add 1,000 ml. of water;

(2) Add 5 drops of household detergent, bring to boil and simmer for about 20 minutes;

1/Adapted from "Determination of Acid-Insoluble Residue (Soil) Journal of the A.O.A.C., Vol. 54, No. 3, May 1971, 40.A07.

(3) Wash through nested screens with the 8 mesh on top, the 25 mesh in the middle and the 270 mesh on the bottom. Using about one-third of the raisins at a time, use a combination of water spray and vigorous rubbing to break down the tissue and release sand or other earthy material.

(4) Remove the 8 mesh screen and thoroughly wash the residue on the 25 mesh screen.

(5) Collect all material that passes through the 25 mesh screen on the 270 mesh sieve.

(6) Carefully transfer the material remaining on the 270 mesh screen to an 800 ml. beaker using a small stream of water.

(7) Let stand for about 5 minutes permitting the heavier material to settle to the bottom of the beaker and the lighter raisin tissue to float.

(8) Decant most of the water and the floating raisin material, retaining the heavier sand on the beaker.

(9) At this point most of the organic material should be eliminated. If there appears to be any appreciable amount in the beaker add about 400 ml. of hot 15% Na Cl solution, let stand for 5 minutes and again decant the water and the lighter material. Remove Na Cl by washing with hot water. Removal can be verified by testing the washings with Ag NO_3.

(10) Filter the residue remaining in the beaker through a fast ashless filter and transfer to a tared crucible.

(11) Dry and ignite in muffle at 550° - 600° C. for about 2 hours.

(12) Cool and weigh residue, reporting results on the basis of "_____ mg/100 g."

MINERAL OIL IN RAISINS[1/]
(Draft Standard PFV 71/6-12)

In paragraph 55 of the Report of the Eighth Session of the Codex Committee on Processed Fruits and Vegetables (ALINORM 72/20) the observer for the AOAC drew attention to a method that might be suitable for mineral oil in dried fruits. The referenced method appears in paragraph 9.2.4 of the draft standard and references the AOAC, 11th Edition, 28.063.

Further investigation of the problem indicates a more appropriate and sensitive method for mineral oil in raisins. The details of this new method are outlined herein.

Apparatus

Beakers - 1000 ml; 800 ml; 30-50 ml.

Separatory Funnels - 800 ml.

Steam Bath

Filter Paper, rapid flow

Chromatographic Tube, 250 ml. dispensing buret; or 30 x 450 mm. Chromatographic tube fitted with stopcock

Reagents

6N HCl (1+1)

Alumina (Al_2O_3) Brockman Activity I, basic, 80-200 mesh pH9 - 11 in 10% aqueous slurry. (Fisher Scientific Co. No. A 540, A-941 J.T. Baker No. (0539)).

Chloroform, Analytical Grade

Petroleum Ether, Analytical Grade, B. P. 30° - 60°C.

Na_2SO_4 (anhydrous)

1/ Adapted from the 11th Edition, Association of Official Analytical Chemists, Chapter 14.109-14.112, Mineral Oil in Bakery Products.

Principle of the Method

Raisins contain a certain amount of natural oil which will be extracted along with mineral oil in a normal solvent extraction procedure. The first step, therefore, is to remove any oil, whether vegetable or mineral, from the product using a suitable solvent such as chloroform. After evaporation of the chloroform, the residue containing the oil is then passed through an alumina column to separate the unsaponifiable mineral oil from vegetable oil based upon the solubility differential between the two oils. The vegetable oil remains attached to the alkaline alumina column whereas the non-polar mineral oil is carried through by petroleum ether. Evaporation of the petroleum ether leaves a residue of unsaponifiable oil which is considered mineral oil after verification of purity using refractive index value and the Irtran plate spectrum.

Sample Preparation

1) Weigh 200 grams of raisins into a 1 liter beaker;

2) Add with stirring 50 ml. 6N HCl; let stand 1 hour with occasional stirring;

3) Add 200 ml. chloroform to the raisin mass, stir and decant chloroform and aqueous extract into 800 ml. beaker, retaining the raisins in the 1000 ml. beaker;

4) Repeat Step 3 extractions two more times using 200 ml. portions of chloroform for each extraction;

5) Transfer the combined extractions to a separatory funnel, allow to stand sufficiently long to separate chloroform and water layers. Draw off the heavier chloroform layer into an 800 ml. beaker;

6) Add about 100 grams of anhydrous Na_2SO_4 to the chloroform extract and decant through a rapid filter into another 800 ml. beaker;

7) Wash the Na_2SO_4 with a 50 ml. portion of chloroform and decant through filter into beaker, combining the chloroform extracts;

8) Evaporate to near dryness on a steam bath under a gentle stream of air;

9) Transfer residue quantitatively to a 50 ml. beaker using small portions of chloroform, again evaporate, this time to dryness;

10) Dry residue 2 to 3 hours at 100° C. Cool.

Preparation of Alumina Column

1) Pack constricted tube of the column with a small wad of glass wool.

2) Add through a powder funnel, 175 g of alumina, tapping tube to ensure uniform packing. Level the surface and cover surface with disc cut from rapid filter paper slightly smaller in diameter than inside of tube.

3) Pre-wash column with about 200 ml. petroleum ether. Just before last of the petroleum ether settles into alumina, stop flow.

Determination

1) Take up the dried residue in 5 - 10 ml. petroleum ether.

2) Pour carefully onto alumina column, open stopcock, and collect eluate at rate "less than" 5 ml/min.

3) Close stopcock when ether-oil mixture has settled to just above surface of alumina. Rinse sample beaker with two 5 ml. portions petroleum ether, rinsing sides of column with each rinse.

4) Open stopcock and let ether settle almost to surface of alumina. Fill column with petroleum ether.

5) Continue adding petroleum ether to column until total of 400 ml. collects.

6) Evaporate petroleum ether to small volume on steam bath, using gentle stream of dry air to aid solvent removal. Stirring rod placed in flask will help prevent superheating and possible boiling over.

7) Transfer quantitatively to small weighed beaker, using small portion of petroleum ether.

8) Evaporate to dryness on warm surface using gentle stream of air. Dry in convection oven for 1 hour at 100° C.

9) Calculate the percent by weight of this unsaponifiable oil in relation to the original weight of raisins (200 grams). Calculation:
$\frac{\text{Wt. Residue}}{200}$ (100) = percent by weight mineral oil

Identification and Purity of Mineral Oil

1) Transfer approximately 2 drops residue oil to face of NaCl or Irtran plate. Cover with another plate and prepare IR spectrum.

   Prepare similar curve, using USP mineral oil. If volume of residue oil is too small to transfer to plate directly, transfer with aid of CS_2. Evaporate solvent completely before covering plate with second plate. Peaks occur at 3.4, 6.82, and 7.25 nm.

2) Obtain refractive index on another drop or two of residue oil and compare with refractive index of USP mineral oil read at temperature.

Sorbitol in Raisins and Other Foods

Method

Reagents

(a) Methanol - Absolute, distilled in glass.

(b) Lead acetate, saturated solution - Prepare saturated solution by dissolving 16 grams neutral lead acetate in 100 ml water.

(c) Silica gel (drierite), anhydrous, indicating, 8 mesh - W.A. Hammond Drierite Co., Xenia, Ohio, or equivalent.

(d) Celite, fast flow.

(e) L-D-Glucoheptose, internal standard. K and K Laboratory, Plainview, N.Y.

(f) TMS Reagent, Tri-sil obtained from Pierce Chemical Co., Rockford, Ill., or prepare reagent as follows: Place few grains of drierite in dry bottle fitted with septum stopper. Add from hypodermic syringe in order 9 parts dry pyridine, 3 parts hexamethyldisilizene (HMDS), and 1 part trimethylchlorosilane (TMS). Reagent must be maintained in anhydrous condition. Make pyridine water-free by storing over drierite or 13x molecular sieves.

Apparatus

(a) Syringes - 1, 2 and 10 ml; 10 microliter

(b) Gas Chromatograph - Perkin Elmer 900 or any instrument with flame ionization detector suitable for the following operating parameters, shown in table 1.

Table 1. Operating Parameters for GLC

Column, glass	6' x 0.16 in ID
Packing	4% SE 30 on 60/80 mesh silanized Diatoport S
Carrier Gas	Helium, 50 ml/min.
Column temperature	Programmed from 160° to 280°C at 4/min with 5 min initial delay
Detector temperature	300°C
Injector temperature	220°C

Preparation of Internal Standards

Weigh out 25 mg glucoheptose. Transfer to 25 ml Vol. flask with 10 ml H_2O. Dissolve and make to vol. with MeOH. If the quantity of sorbitol added to raisins is greater than 0.5%, more concentrated solutions of internal standard should be prepared.

At 25 mg glucoheptose in 25 ml (mg/ml) the peak area response was the same as for 25 mg sorbitol in 25 ml (1 mg/ml) and a ratio of 1 to 1 was used in calculating the mg sorbitol content of the sample.

Sample Preparation

Weigh 100 g raisins into a 250 ml beaker. Extract sorbitol from raisins with 6 portions of 80 ml MeOH swirling 1/2 minute. Care should be taken to prevent excess bruising of raisins. Transfer combined extract solutions to a 500 ml Vol. flask using a funnel. Add 2 ml satd. lead acetate solution to the 500 ml flask and make to vol. with MeOH. Mix and let stand for 1 hour or more. Organic acids are precipitated. Transfer 1 ml of supernatant, and 1 ml standard containing 1 mg glucoheptose to 4 ml vial. Add in 0.1g Celite. Dry in vacuum oven at 45°C and not more than 20 inch of Hg.

Add to the dry vial a few granules of drierite and 2.5 ml TMS reagent using hypodermic syringe. Close teflon lined screw-cap vial and shake thoroughly to mix residue with solution. Let stand 1/2 hour at 45°C to permit complete reaction.

Allow solids to settle out and keep the vial at reaction temperature during GLC analysis. Inject 1-2 microliters of solution into gas chromatograph (sample (sample size depends upon conditions and sensitivity needed to keep sorbitol and internal standards peaks on scale).

In addition to sorbitol and internal standard peaks there will also be present in the chromatogram A and B-D glucose and sometimes sucrose peaks.

Calculations

As = Peak area of sample.
Ai = Peak area of internal standard.
i = Mg internal std added to 4 ml vial.
G = Grams of raisin sample.

$$\frac{As}{Ai} \times i \times \frac{500}{G} \times 100 = \text{mg sorbitol per 100 g sample.}$$

DRAFT STANDARD FOR CANNED MANDARIN ORANGES

Advanced to Step 8

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 Segment Style. . . consists of fruit segments which are practically intact and also retain their original form but may be split just slightly.

(b) Broken Segment Style. . . consists of portions of segments which retain at least one half of the original apparent size, or which are large enough to remain on a screen having 12 mm square openings, formed by a wire of 2 mm diameter.

(c) Pieces Style. . . consists of portions of segments that are large enough to remain on a screen having 8 mm square openings formed by wire of 2 mm diameter.

1.3 Sizes in Whole Segment Style

Designation in accordance with size

Canned Mandarin oranges in whole segment style may be designated according to size in the following manner:

Uniform single size

"Large" --- 20 or less whole segments per 100 grammmes of drained fruit
"Medium" -- 21 to 35 whole segments per 100 grammes of drained fruit
"Small" --- 36 or more whole segments per 100 grammes of drained fruit
Single sizes shall also meet the uniformity requirement of 2.2.5

Mixed sizes

A mixture of two or more single sizes.

1.3.1 Compliance with single size designation

(a) When the product is declared, presented or offered as conforming to the uniform size designation in subsection 1.3 - Other than "Mixed sizes" - the sample unit shall conform to the size classification specified for each single size.

In the determination of compliance with size classifications, broken segments are disregarded.

(b) Any sample unit or container that does not meet the count and uniformity requirements of the foregoing sub-paragraph (a) will be considered a "defective" for size classification.

(c) A lot will be considered as meeting the criteria for a uniform size designation when the number of defectives as specified in sub-paragraph (b) does not exceed the acceptance number (c) of the appropriate sampling plan (AQL 6.5) in the Sampling Plans for Processed Fruits and Vegetables.

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 is the sole packing medium;

(b) Citrus juice - in which Mandarin orange juice, or any other citrus juice, is the sole packing medium;

(c) Mixed citrus juices - in which two or more citrus juices, which may include Mandarin orange juice are combined to form the packing medium;

(d) Water and citrus juice(s) - in which water and Mandarin orange juice, or water and any other citrus juice (singly or in combination) are combined to form the packing medium;

(e) With sugar(s) - any of the foregoing packing media (a) through (d) may have one or more of the following sugars added: sucrose, invert sugar syrup, dextrose, fructose, fructose syrup, dried glucose syrup, glucose syrup , invert sugar.

2.1.2 Classifications of packing media when sugars are added

(a) When sugars are added to Mandarin orange juice or other citrus juices, the liquid media shall be not less than 14° Brix and they 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.

(b) When sugars are added to water or water and Mandarin orange juice or water and other citrus juices the liquid media shall be classified on the basis of the cut-out strength as follows:

Basic syrup strengths

Light syrup - - - - - - - - - - Not less than 14° Brix.
Heavy syrup - - - - - - - - - - Not less than 18° Brix.

Optional packing media

When not prohibited in the country of sale, the following packing media may be used:

Slightly sweetened water)
Water slightly sweetened) - - - - Not less than 10° Brix but less than 14° Brix
Extra light syrup)

Extra heavy syrup) - - - - - More than 22° Brix.

2.1.3 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.

2.2 Quality criteria

2.2.1 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 except when it contains juice.

2.2.2 Flavour

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

2.2.3 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.

2.2.4 Defects and allowances

Canned Mandarin oranges shall be substantially free from defects within the limits set forth as follows:

DEFECT	MAXIMUM LIMIT in the drained fruit
(a) Broken segments and pieces (as defined in 1.2) (Whole segment style)	7% m/m
(b) Pieces (as defined in 1.2) (Broken segment style)	15% m/m
(c) Membrane (Aggregate area)	7 cm^2/100 g (based on sample average)
(d) Fiber strands (Aggregate length)	5 cm/100 g (based on sample average)
(e) Seeds (That measure more than 4.0 mm in any dimension.)	1/100 g (based on sample average)

2.2.5 Uniformity of size (Whole segment style - single sizes)

In the 95 percent, by count, of units (excluding broken segments) that are most uniform in size, the weight of the largest unit shall be no more than twice the weight of the smallest unit.

2.2.6 Classification of "defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in subsections 2.2.1 through 2.2.5 (except those based on sample averages), shall be considered a "defective".

2.2.7 Acceptance

A lot will be considered as meeting the applicable quality requirements of Section 2.2 when:

(a) The number of "defectives" as specified in subparagraph 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; and

(b) the requirements of subparagraph 2.2.5, 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.

Acidifying agent	Maximum level in End Product
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 to contaminants has been temporarily endorsed 2/ 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.

- -

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.

5.3 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 represent a hazard to health.

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 (a) 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"

(b) In the case of mixed sizes, such size designation shall be declared in close proximity to the style designation, e.g. "mixed sized whole segments".

7.1.3 When the packing medium is composed of water or water and one or more citrus juices in which water predominates, the packing medium shall be declared as part of the name or in close proximity thereto as:

"In water" or "Packed in water".

7.1.4 When the packing medium is composed solely of Mandarin orange juice, or any other single citrus juice, the packing medium shall be declared as part of the name or in close proximity thereto as:

"In Mandarin orange juice" or "In (name of citrus) juice".

7.1.5 When the packing medium is composed of two or more citrus juices, which may include Mandarin orange juice, it shall be declared as part of the name or in close proximity thereto:

"In (name of citrus) juice"
or
"In citrus juices"
or
"In mixed citrus juices".

7.1.6 When sugars are added to Mandarin orange juice or other citrus juices, the packing medium shall be declared as may be appropriate:

"Lightly sweetened (name of citrus) juice"
or
"Heavily sweetened (name of citrus) juice(s)"
or
"Lightly sweetened citrus juices"
or
"Heavily sweetened mixed citrus juice(s)".

7.1.7 When sugars are added to water, or water and a single citrus juice (including Mandarin orange juice) or water and two or more fruit juices, the packing medium shall be declared as may be appropriate:

"Light syrup"or "Heavy syrup"
or
"Water slightly sweetened"
or
"Slightly sweetened water"
or
"Extra light syrup"
or
"Extra heavy syrup".

7.1.8 When the packing medium contains water and Mandarin orange juice or water and one or more citrus juice(s), in which the fruit juice comprises 50% or more by volume of the packing medium, the packing medium shall be designated to indicate the preponderance of such fruit juice, as for example:

"Mandarin orange juice and water"
or
"(name of citrus) juice(s) and water"

7.2 List of ingredients

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

7.2.2 In the case of fruit juices made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as follows "(name of fruit) juice made from concentrate" or "reconstituted (name of fruit) juice" or "(name of fruit) juice made from concentrated (name of fruit) juice."

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.

7.6.2 Size classification of Whole Style in uniform sizes

If the pack complies with the appropriate requirements of subsection 1.3, a size classification for Whole Segment style in uniform sizes may be stated on the label as:

(a) "Large", "Medium", or "Small" as appropriate; and/or
(b) The number of units present in the container shown by a range of count, e.g. "(number) to (number) whole segments".

8. METHODS OF SAMPLING, ANALYSIS AND EXAMINATION

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 Fruitsaand 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 Capcity 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 fround 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.

* * *

PROPOSED DRAFT STANDARD FOR CANNED CARROTS

Returned to STEP 3

1. DESCRIPTION

1.1 Product definition

Canned carrots are 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 peel have been removed; (b) packed with water or other suitable liquid medium, sugars, seasonings, 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

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 3:1 (based on diameter).

(b) Sliced Lengthwise or Finger Cut: consist of carrots which have been cut longitudinally into four or more pieces of approximately equal size. Not less than 20 mm long and greater than 5 mm in width measured at the maximum width.

(c) Sliced or 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.

(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).

(f) Double Dice: sections of carrots cut into uniformly shaped units having a cross section that is square and which the longest dimension is approximately twice that of the shortest dimension. The shortest dimension not exceeding 12.5 mm.

(g) Chunks or Pieces: whole carrots cut crosswise into sections having a thickness greater than 10 mm or whole carrots which are halved and then cut crosswise into sections or sections of carrots that may be irregular in shape and size and which are larger than ring cut or double dice.

1.4 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

Carrots 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 syrup, dextrose, glucose syrup, dried glucose syrup, fructose, and fructose syrup.

(b) Aromatic herbs and spices; stock or juice of vegetables and aromatic herbs (lettuce, onions, etc.); garnishes composed of one or more vegetables (lettuce, onions; 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 vegetable fats or oils are ingredients.

2.2 Quality Criteria

2.2.1 Colour

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

2.2.2 Flavour

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

2.2.3 Texture

The carrot units shall be reasonably free from units that are excessively (fibrous or tough).

2.2.4 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 oz.):

		Unit Defect
(a)	Severe blemishes (consist of discouloured marks or insect damage of black, dark brown or of similar intense colour)	Each 14 mm^2 (4 mm diameter circle)
(b)	Blemishes (consist of discoloured marks or insect damage readily noticeable but of slight colour intensity)	Each 28 mm^2 (6 mm diameter circle)
(c)	Cracks (consist of clean cracks, not discoloured)	Each 50 mm^2 (8 mm diameter circle)
(d)	Green tops (consist of carrots where, at the crown end, green colour extends into the cortex)	Each 50 mm^2 (8 mm diameter circle)
(e)	Harmless extraneous plant material (vegetable material which does not consist of carrot root)	1 gram
(f)	Unpeeled units	200 mm^2 (16 mm diameter circle)

2.2.5 Classification of "defectives"

A sample unit that exceeds the total number of units defects referred to in sub-section 2.2.4 shall be considered a "defective".

2.2.6 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.2 when the number of "defectives", as defined in sub-section 2.2.5, 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 Codex Committee on Food Additives:

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

4. FOOD ADDITIVES

	Maximum level of use
(a) Monsodium Glutamate (used only when butter or other edible animal or vegetable fats or oils are ingredients, as in a "sauce pack")	Not limited (Temporarily endorsed) 1/
(b) Mint flavour (mint oil)	Not limited (subject to endorsement)
Natural mint flavour	Not limited

(c) Firming agent

Calcium chloride	(Endorsed)	350 mg/kg Ca in the final product
Calcium lactate	(Endorsed)	
Calcium gluconate	(Endorsed)	

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

4. FOOD ADDITIVES -- continuation

(d) 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 trimetaphosphate 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
Distrach, 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
Pectin----------(Not limited)

Alginates ----------(Temporarily endorsed)

(Ca, K, Na, NH_4)

Propylene glycol **alginate----------(Temporarily endorsed)**

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 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 mirco-organisms in amounts which may represent a hazard to health.

5.4 The product shall have received a processing treatment sufficient to destroy all spores of Clostridium Botulinum.

6. WEIGHTS AND MEASURES

6.1 Fill of container

6.1.1 Minimum fill

The container shall be well filled with carrots and, except for "vacuum pack" carrots, 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.

6.2.1 Minimum drained weight

6.2.1.1 The drained weight of the product shall be not less than 55% for containers having a water capacity of **less than 500 grams,** and not less than 58% for containers having a water capacity **of 500 grams or more.**

6.2.1.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drainage weight of all containers examined is not less than the minimum required, provided that there is no reasonable 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 "Carrots".

7.1.2 The style, as appropriate, shall be declared as part of the name or in close proximity to the name: "Whole", "Sliced Lengthwise", "Finger Cut", "Ring Cut", "Diced", "Julienne", "French Style", "Shoestring", "Double Dice", "Chunks", "Pieces", "Sliced".

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

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 ("Systeme 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 SAMPLING, ANALYSIS AND EXAMINATION

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.

8.1 Sampling

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

8.2 Determination of Drained Weight

According to the FAOWHO 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 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.

8.4 Determination of calcium

According to the FAO/WHO Codex Alimentarius method (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, CAC/RM 38-1970, Determination of Calcium in Canned Vegetables).

Results are expressed as % m/m calcium.

* * *

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

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 or Mango (Papaya) ---- (Carica papaya) or (Mangifera Indica) 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.

Cashew ---------- (Anacardium occidentale) as flesh.

Guava ---------- (Psdium Guajava)

Longan ---------- (Euphoria Longana) whole or broken segments prepared from peeled and pitted fruit.

Oranges (including Mandarin) ---------- whole segments prepared from peeled, deseeded fruit.

Grapes ---------- (Cultivated Edible species of Vitis) whole grapes of any seedless variety.

Maraschino Cherries ---------- (Prepared from fruit conforming with the characteristics of Prunus avium) whole or halves (and pitted).

Passionfruit ------ (Cultivated edible species of Passiflora) pulp with or without seeds.

Jack Fruit

Melon

Rambutan

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:

	Minimum	Maximum
Basic Fruits		
Pineapple	45%	65%
Papaw (Papaya) or Mango (singly or in combination)	25%	50%
Banana	5%	15%
Optional Fruits		
Litchi	5%	20%
Melon	5%	20%
Longan	5%	20%
Guava	5%	15%
Cashew	2%	5%
Jack Fruit	5%	20%
Grape	3%	15%
Rambutan	5%	20%
Oranges **(including Mandarin)**	3%	15%
Maraschino Cherries	trace	1%
Passionfruit		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 is the sole packing medium.

(b) Water and Fruit Juice ------ in which water and fruit juice(s) from the specified fruits, is the sole liquid packing medium.

(c) Fruit Juice ---------- in which one or more fruit juice(s) from the specified fruits, which may be strained or filtered, is the sole liquid packing medium.

(d) With Sugar(s) ---------- any of the foregoing packing media (a) through (c) may have one or more of the following sugars added: sucrose, invert sugar syrup, dextrose, dried glucose syrup, glucose syrup, fructose, and fructose syrup.

2.2.1 Classification of packing media when sugars are added

(a) When sugars are added to fruit juice(s), the liquid media shall be not less than 14° Brix and they 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.

(b) When sugars are added to water or water and one or more fruit juices the liquid media shall be classified on the basis of the cut-out strength as follows:

Basic Syrup Strengths

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

Optional Packing Media

When not prohibited in the country of sale, the following packing media may be used:

Slightly Sweetened Water Water Slightly Sweetened Extra Light Syrup	Not less than 10° Brix but less than 14° Brix.
Extra Heavy Syrup	Not more than 22° Brix.

2.2.2 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 Ingredients

Nutritive sweeteners, flavourings other than artificial flavourings, 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 weights 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 ingredient should be 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:

	Defect	Maximum Limits
(a)	Blemished fruit pieces --- (consisting of pieces of fruit with dark surface areas, spots penetrating the fruit, and other abnormalities).	2 pieces/100 g of drained fruit
(b)	Peel --- (based on averages) --- (considered a defect only when occurring on, or from those fruits which are peeled).	6.5 cm^2/450 g of total contents
(c)	Seeds, Seed Material & Extraneous Vegetable Matter ---	2 g/500 g 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 subsection 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.

Additives	Maximum Level in the End Product
Colouring Matter	
Erythrosine (To colour cherries only when artificially coloured cherries are used).	No Limit
Natural Flavours	
Natural fruit essence	No Limit
Natural flavours	No Limit
Anti-oxidant	
Ascorbic acid	700 mg/kg
Erythorbic acid	700 mg/kg
Acidifying Agent	
Citric acid	Limited by good manufacturing practice
Firming Agents	
Calcium chloride Calcium lactate Calcium gluconate	350 mg/kg as Ca

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 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 micro-organisms in amounts which may represent a hazard to health.

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 "Defective"

A container that fails to meet the requirement for minimum fill of 6.1.1 shall be considered a defective.

6.1.1.2 Acceptance

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

6.1.2 Minimum Drained Weight

6.1.2.1 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.

6.1.2.2 The requirements for minimum drained weight shall be deemed to 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.

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 "Tropical Fruit Salad".

7.1.2 When the packing medium is composed of water, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as part of the name or in close proximity thereto as:

"In water" - or "Packed in water"

7.1.3 When the packing medium is composed solely of a single fruit juice, the packing medium shall be declared as part of the name or in close proximity thereto as:

"In (name of fruit) juice"

7.1.4 When the packing medium is composed of two or more fruit juices, it shall be declared as part of the name or in close proximity thereto:

"In (name of fruits) juice"
or
"In fruit juices"
or
"In mixed fruit juices"

7.1.5 When sugars are added to one or more fruit juices, the packing medium shall be declared as may be appropriate:

"Lightly sweetened (name of fruit) juice"
or
"Heavily sweetened (name of fruits) juice(s)"
or
"Lightly sweetened fruit juices"
or
"Heavily sweetened mixed fruit juice(s)"

7.1.6 When sugars are added to water, or water and one or more fruit juices, the packing medium shall be declared as may be appropriate:

"Light syrup" or "Heavy syrup"
or
"Water slightly sweetened" or "Slightly sweetened water"
or
"Extra light syrup" or "Extra heavy syrup"

7.1.7 When the packing medium contains water and one or more fruit juice(s), in which the fruit juice comprises 50% or more by volume of the packing medium, the packing medium shall be designated to indicate the preponderance of such fruit juice, as for example:

"(name of fruits) juice(s) and water"

7.1.8 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

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with subsection 3.2 (c) of the General Standard for the Labelling of Prepackaged Foods, except that water and fruit juice need not be declared; and except as provided in 7.2.2.

7.2.2 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".

7.2.3 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:

"L-ascorbic acid added as an anti-oxidant"

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.

8. Methods of Sampling, Analysis, and Examination

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.

8.1 Sampling

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

8.1.1 Size of Sample Unit*

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

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

(1) 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.

8.2 Ascertaining Proportions of Fruit **

8.2.1 Procedure

8.2.1.1 Determine drained weight and keep liquid and fruit separate;

8.2.1.2 Separate individual fruit ingredients, removing those fruits present in lesser amounts (such as cherries, grapes);

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* 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.

8.2.1.3 Weigh the individual fruit ingredients to the nearest gram;

8.2.1.4 Record each fruit's weight and add all of these weights.

8.2.2 Calculation and Expressions of Results

Calculate the percentage of fruit proportions:

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

8.3 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.

8.4 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.

8.5 Method for determination of water capacity of containers

8.5.1 Metal conatiners

8.5.1.1 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.

8.5.2 Glass containers

8.5.2.1 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.

* * *

PROPOSED DRAFT STANDARD FOR CANNED MATURE PROCESSED PEAS

Advanced to Step 5

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, but excludes the sub-species macrocarpum; (b) packed with water to which may be added, 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 water and optional ingredients as follows:-

2.1.1 Other permitted ingredients

Salt, sucrose, invert sugar, invert sugar syrup, dextrose, fructose, fructose syrup, 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 other permitted 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.

	Maximum Limits (based on weight of drained peas)
(a) Blemished peas (peas which are slightly stained or spotted)	10% m/m
(b) Seriously blemished peas (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) Pea fragments (portions of peas: separated or individual cotyledons; crushed, partial, or broken cotyledons; and loose skins)	10% m/m
(d) Extraneous plant material (any vine or leaf or pod material from the pea plant, or other vegetable material such as poppyheads or thistle)	0.5% m/m
Total of the foregoing defects (a), (b), (c), (d)	15% 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 subsection 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 subsection 2.2.6 when the number of "defectives", as defined in subsection 2.2.6, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Sampling Plan 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 in the End Product
(a) Firming Agents	
Calcium chloride Calcium lactate Calcium gluconate	350 mg/kg as Ca
(b) Colouring Matters	
Green S - Colours Index (1956) - 44090 Tartrazine - Colours Index (1956) - 19140 Brilliant Blue FCF	200 mg/kg (singly or in combination)
(c) Flavours	
Natural flavours and their identical synthetic equivalents.	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 Recommended International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RCP 2-1969)

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

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 micro-organisms in amounts which may represent a hazard to health.

5.4 The product shall have received a processing treatment sufficient to destroy all spores of Clostridium Botulinum.

6. WEIGHTS AND MEASURES

6.1 Fill of container

6.1.1 Minimum fill

The container shall be well filled with 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° 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" or "Reconstituted **Dried Peas" or "Cooked Dried Peas" or "Soaked Dried** Peas" **or** the equivalent description used in the country in which the product is intended to be sold.

7.1.2 A declaration, as part of the name or in close proximity to the name, shall be made of characteristic flavourings or seasonings, 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 and soaked.

7.1.5 The addition of artificial colour shall be declared in conjunction with the name of the product.

7.2 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with subsection 3.2 (c) of the 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 SAMPLING, ANALYSIS, AND EXAMINATION

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.

* * *

PROPOSED DRAFT STANDARD
FOR
PICKLED CUCUMBERS (CUCUMBER PICKLES)

Advanced to STEP 3

SCOPE

This standard covers the product commonly known as Cucumber Pickles (in some countries Pickled Cucumbers) and which is prepared with cucumbers as the predominant ingredient and which may include small quantities of vegetables as garnish or seasoning and may also include spices and aromatic herbs. The product may be prepared from desalted cured cucumbers, naturally fermented cucumbers or from fresh cucumbers which are acidulated. While the product is preserved through natural fermentation or added acidulants it may be further preserved by pasteurization with heat, chemical preservation or by other physical means. In some countries the word "cucumbers" is associated with large size fruit whereas the word "gherkin" (in French "cornichons") refers to small fruit - generally less than 70 mm in length. Irrespective of customary national trade practice these products are included in this standard under the name Cucumber Pickles or Pickled Cucumbers.

1.1 Product definition

Cucumber Pickles is the product (a) prepared from clean, sound, cucumbers which may or may not be peeled, (of cultivars or types conforming to the characteristics of Cucumis sativus L; (b) may contain salt, nutritive sweeteners, other vegetables, seasonings, spices or herbs; (c) is preserved in an appropriate manner before or after being sealed in a container - such preservation to include acidulation either by natural fermentation or the addition of a vinegar or an edible acid, and may also include heat pasteurization, refrigeration or a chemical preservative.

1.2 Types and kinds of pack

1.2.1 Fresh Pack Type

Prepared from fresh, uncured cucumbers.

1.2.2 Cured Type

Prepared from cured, fermented cucumbers or from salt stock that is sufficiently desalted and then further processed.

1.2.3 Sub-Types

The foregoing two basic styles may be further designated into recognized trade types according to special formulation and process as follows:

(a) Natural Dills (Cured type only)

Prepared by natural fermentation with added dill.

(b) Fresh-Pack Dills

Prepared from fresh cucumbers and in which the characterizing flavor is derived from dill.

(c) Sour

In which the pickles have a pronounced sour flavour.

(d) Sweet-Sour

In which the pickles have a moderately sweet, sour flavour.

(e) Sweet

In which the pickles have a pronounced sweet flavour.

1.2.4 Analytical Characteristics of the sub-type

Sub-type	Total Acidity (or Acetic)	Salt (Na cl)	Salt-free Solids
Dill (Natural)	0.5% minimum	1.5% to 3.5%	- - - -
Dill (Fresh)	0.5% to 1.5%	1.5% to 3.5%	3.0% max.
Sour	1.5% to 3.5%	1.5% to 3.0%	3.0% max.
Sweet-Sour	0.5% to 3.0%	1.5% to 3.0%	3.0%-12.0%
Sweet	0.5% to 3.0%	1.5% to 3.0%	18.0% min.

1.3 Styles

(a) Whole

Pickles of any length with a maximum diameter of 60 mm. Whole pickles of this style may be designated as "gherkin" when they are no longer than 70 mm.

(b) Finger Cut, Sliced Lengthwise or Spears

Pickles cut lengthwise into sections of approximately equal size.

(c) Ring Cut or Chunks

Pickles cut at right angles to the longitudinal axis having a thickness from 10 to 30 mm and a maximum diameter of 60 mm.

(d) Slices or Cross Cuts

Pickles cut at right angles to the longitudinal axis having a thickness of not more than 6 mm and a maximum diameter of 60 mm.

(e) Relish

Finely cut or chopped pickles.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Basic Ingredients

Cucumbers, vinegar, or an acid either by natural fermentation or by addition, salt.

2.2 Optional Ingredients

Sugar or any other carbohydrate sweetener, aromatic herbs (dill, garlic), spices, vegetables (horseradish root or leaves, onion, carrots, green peppers, yellow peppers, red peppers), flavouring oils.

Vegetable ingredients may not exceed 3 percent of the total drained weight of the product.

2.3 Quality Criteria

2.3.1 Colour

The pickles shall have normal colour characteristics typical of the variety, type of pack and style.

2.3.2 Texture

The pickles shall be reasonably firm, crisp and practically free from shrivelled, soft and flabby units and reasonably free from very large seeds.

2.3.3 Flavour

The pickles shall have a good flavour typical of the type of pack and in consideration of any flavouring or special ingredients used.

2.3.4 Size Uniformity

(a) Whole Style; Spears or Sliced Lengthwise

80% or more, by count, of the pickles with the most uniform appearance meet these requirements for individual containers or sample units:

Length - the variation of length between the longest and the shortest unit shall not exceed 20 mm.

Diameter - the variation from the smallest to the largest diameter does not exceed 20 mm.

(b) Ring Cut; Slices; Cross Cuts

80% of more of the drained weight, of the cuts appearing to be of the largest sizes meet these requirements for individual containers or sample units.

Diameter - the variation from the smallest to the largest diameter shall not exceed 20 mm.

2.3.5 Defects

2.3.5.1 Definition of Defects

(a) Curved Cucumbers means whole cucumbers that are curved at an angle not more than 35° - degree (see diagram).

(b) Misshapen Cucumbers - means whole cucumbers that are curved more than 35°, nubbins, and other deformed pickles (see diagram).

(c) Blemished - means affected by discolouration, scars, scratches, skin breaks or other similar imperfections.

(d) Mechanical damage - means crushed or broken units, slices with missing centers.

(e) Stem - means any attached stalk longer than 10 mm.

(f) Poor texture - excessively shrivelled, very soft or flabby or units with very large seeds.

(g) Off colour - units that vary markedly from the colour typical of the variety and type of pack.

(h) Hollow centers - whole pickles in which the internal cavity is large or Ring Cuts and Slices in which a substantial portion of the center is missing.

(i) Grit, sand, or silt - means any mineral impurities, whether in the liquid packing medium or imbedded in the skin or flesh of the cucumbers that affect the edibility.

2.3.5.2 Allowances for Defects

2.3.5.2.1 Whole; Finger Cut or Spears

Standard sample unit - 20 whole pickles; 40 Finger Cut or Spears

Defect	Maximum Limit (No. of Units)	
	Whole	Finger Cut or Spears
a) Curved or misshapen	2	2
b) Misshapen	1	1
c) Blemished	2	4
d) Mechanical Damage	1	2
e) Stem	2	2
f) Poor Texture	2	4
g) Off Colour	1	2
h) Hollow Center	1	---
Total a) through h)	6	10

2.3.5.2.2 Ring Cuts; Slices

Standard Sample Unit -- 300 grams

Defect	Maximum Limit (No. of Grams)
a) Blemished	30 grams
b) Mechanical Damage	15 "
c) Poor Texture	15 "
d) Off Colour	15 "
e) Hollow Center	15 "
f) Stems	2 each
Total a) through e)	50 grams

2.3.5.2.3 Relish

Standard Sample Unit -- 200 grams

Defect	Maximum Limit
Blemished	10 grams

2.3.5.2.4 Mineral Impurities

All styles and types, except for pickles that are peeled. 0.04 percent m/m.

2.3.6 Classification of "Defectives"

A container that fails to meet the applicable quality requirements as set out in paragraphs 2.3.1 through 2.3.5 shall be considered a "defective".

2.3.7 Acceptance

A lot will be considered as meeting the requirements for those characteristics specified in 2.2.6 when the number of "defectives" within each classification does not exceed the acceptance number (c) of the appropriate sample plan (AQL-6.5) in the Sampling Plans for Processed Fruits and Vegetables.

3. FOOD ADDITIVES

	Maximum level of use
a) Polysorbate 80 (polyoxyethylene/20 sorbitan monooleate/ - used as a solubilizing and dispersing agent)	500 parts per million
b) Alum (aluminium potassium sulfate)	according to GMP
c) Preservatives	
Sodium benzoate or Benzoic acid; Sorbic acid or its Sodium and Potassium Salts	1,000 parts per million

4. HYGIENE

4.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Hygienic Practice for Canned Fruit and Vegetable Products (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 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 substance originating from microorganisms in amounts which may represent a hazard to health.

5. WEIGHTS AND MEASURES

5.1 Fill of Container

5.1.1 Minimum Fill (Pickles plus Packing Medium)

The container shall be well filled with pickles 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.

5.1.2 Minimum Volume Fill for Whole Style

The drained product shall occupy not less than 55% by weight of the total net weight of the product.

5.1.3 Minimum Drained Weight for Relish

The drained weight of relish shall be not less than 80% in the case of fresh pack and 90% in the case of cured, of the weight of distilled water at 20° C which the sealed container will hold.

5.1.4 Minimum Drained Weight for Other Styles

The drained weight of styles other than Whole Style or Relish shall be not less than 55% in the case of fresh pack and 60% in the case of cured of the weight of distilled water at 20° C which the sealed container will hold.

5.2 Acceptance

The requirements for volume fill of 5.1.2 and drained weights of 5.1.3 and 5.1.4 shall be deemed to be complied with when the average from all containers 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 Standards 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 is:

"Cucumber Pickles", "Pickled Cucumbers" or "Pickles"

6.1.2 The name of the product shall also include the type of pack "Fresh Pack" when the pickles are not of Cured type;

The style of pack in non-transparent containers;

In whole style, the approximate count range, in containers larger than 3 kg.

6.2 List of Ingredients

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

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

7.1 Sampling

Sampling shall be in accordance with the Sampling Plans for Prepackaged Foods, CAC/RM 42-1969

7.2 Test Procedures

7.2.1 Soluble Solids

Soluble solids shall be determined by the Refractometric method. (Reference: Official Methods of Analysis of the Association of Official Analytical Chemists, 11th Edition. 22.019)

7.2.2 Salt (NaCl)

Salt (NaCl) shall be determined by titration with a standard $AgNO_3$ solution.

7.2.3 Total Acidity

Total Acidity shall be determined by titration with a standard NaOH solution using phenol-phthalein indicator.

7.2.4 Drained Weight

Drained weight shall be determined in accordance with Method I, CAC/RM 36-1970

7.2.5 Mineral Impurities

Mineral impurities shall be determined in accordance with the method for Canned Strawberries, Appendix XIV, Ninth Session, ALINORM 72/20A, except steps 13, 14 and 15 relating to treatment with HCl are omitted.

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