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ECONOMIC COMMISSION FOR EUROPE  
COMMITTEE ON AGRICULTURAL PROBLEMS  
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Foodstuffs  
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JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX ALIMENTARIUS COMMISSION

Eighth Session

REPORT OF THE SEVENTH SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS  
GROUP OF EXPERTS ON STANDARDIZATION OF FRUIT JUICES

20-24 July 1970  
Rome, Italy

REPORT OF THE SEVENTH SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS  
GROUP OF EXPERTS ON STANDARDIZATION OF FRUIT JUICES

1. The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices held its seventh session at FAO Headquarters, Rome, from 20 to 24 July 1970, under the chairmanship of Professor W. Pilnik (Netherlands).
2. The Group of Experts was welcomed on behalf of the Directors- General of FAO and WHO and the Executive Secretary of the Economic Commission for Europe by Mr. G.O. Kermode, Chief, Joint FAO/WHO Food Standards Programme.
3. The session was attended by 66 participants, including the representatives and observers of 27 countries and observers . from 6 international organizations. The list of participants is contained in Appendix I to this Report. The Joint Secretaries were Mr. L.W. Jacobson of UNECE and Mr. H.J. McNally of FAO.

Adoption of Agenda

4. The Group of Experts adopted the provisional agenda for the session, with a slight re-arrangement of the order of items relating to the subject of methods of analysis and sampling of fruit juices.

Consideration of points made by the Seventh Session of the Codex Alimentarius Commission regarding the draft standards for apricot, peach and pear nectars, apple juice, orange juice, lemon juice and grapefruit juice

5. The Commission had noted that there were a number of inconsistencies in the labelling provisions of some of the above draft standards, to which the Codex Committee on Food Labelling had drawn attention. The volume of Step 8 comments on the draft standards had also been very extensive and a considerable number of comments had been on points of substance which had proved to be controversial in the Group of Experts and on which the Group had not reached a consensus of opinion. In these circumstances, the Commission had decided that the draft standards were not ready for advancement to Step 9 and had agreed that they should be returned to the Group of Experts for re-consideration at Step 7, and that the Group of Experts should return them to the Commission for consideration at Step 8, if, in the opinion of the Group, they were ready for advancement to Step 9. The Group was instructed by the Commission to present, in any event, a full report to the Eighth Session of the Commission on a number of specific points which had been made by the Commission and which were reproduced in document CODEX/FJ 70/2 (UNECE ref.: AGRI/WP.1/656) and on any other matters, as appropriate. The Group of Experts agreed to deal with the various points made by the Commission in the order in which they appear below.

Consideration of proposal to elaborate separate standards for fruit juices preserved by different physical means

6. The Group of Experts had before it document CODEX/FJ 70/3 (UNECE ref.: AGRI/WP.1/662) containing the comments of the USA on all the points which had been made by the Commission. The document also contained, as a basis for discussion, proposed draft standards for:

Orange juice

- (i) canned orange juice, preserved by heat treatment
- (ii) refrigerated, pasteurized orange juice, and

- (iii) orange juice made from concentrate, normally preserved by refrigeration.

#### Grapefruit juice

- (i) canned grapefruit juice (including the reconstituted product), preserved by heat treatment
- (ii) refrigerated, pasteurized grapefruit juice.

7. The delegation of the USA stated that, in its view, the standards being developed by the Group of Experts for citrus juices preserved by physical means were too broad, in that they sought to deal in one and the same standard with juices which had been physically preserved, independent of the fact that different means of physical preservation resulted in differences of identity between the juices. Furthermore, the standards now contained provisions on soluble solids, the addition of sugars and the use of concentrate, and it would be more meaningful to elaborate standards to take account of the resultant differences in the types of physically preserved juices being offered to the consumer. The proposed draft standards contained in the US document reflected, as nearly as possible, in the Codex format, the current requirements of US identity and grade standards.

8. The Group noted that the only significant specific provision which had been introduced into the standards in recent times was that concerning soluble solids. The Group also recalled the decision which it had taken at its session in 1964 that the standards would prescribe minimum requirements for each fruit juice and would not deal with quality grades. It had been decided therefore, by the Group of Experts in 1964 to have only one standard for each physically preserved fruit juice. The Group also noted that the Commission had considered the question of graded quality standards and that the Commission had decided that such standards should not be elaborated at present. It would, therefore, be contrary to the decision of the Commission to elaborate separate standards based on quality differences between the various types of physically preserved juices. It was also pointed out that although a given fruit juice might be preserved by different physical means, this did not result in any intrinsic differences in the composition of the juice.

9. The Group of Experts agreed, with the exception of the delegation of the USA, to proceed on the basis of the existing draft standards and not to adopt the proposal of the USA to elaborate separate standards. The delegation of the USA reserved its position on the grounds that, in its view, differences in methods of preservation coupled with other major differences among the several types of orange juice products and grapefruit juice products amount to differences in identity which justify separate standards for each.

#### Addition of sugars to fruit juices

10. The Group considered the question of whether or not the addition of sugars to fruit juices should be allowed. The Group agreed that the reasons for the addition of sugars to fruit juices were either:

- (i) to adjust the acid/sugar ratio in fruit juice with a high acid and/or low sugar content, or
- (ii) to give the fruit a pronounced sweet flavour.

11. Some delegations stated that for certain fruit juices, for instance, apple juice and grape juice, it was not necessary to add sugar as the sugar content of the natural product was quite sufficient. However, other delegations stated that in their countries it was sometimes necessary, as a result of the climatic conditions or different varieties of

fruit, to add sugar in order to correct the sugar/acid balance of the fruit. The delegation of Switzerland objected to the addition of sugars for the purpose of adjusting the acid/sugar ratio, since present technology enabled the acid/sugar ratio to be reduced without recourse to adding sugar (de-acidifying grape juice or adding concentrate to other juices).

12. The Group noted that as the standards were international standards, they had to take into account the conditions in all the producing countries. The Group decided, with the exception of the delegations of the Federal Republic of Germany and Switzerland, that the addition of sugars to fruit juices for sweetening purposes should be permitted, subject to the fixation of proper limits in each standard and to appropriate labelling. The Group also decided that the addition of sugars to fruit juices in order to adjust the acid/sugar ratio should also be permitted subject to the fixation of proper limits in each standard and to appropriate labelling. On this latter decision, the delegations of Algeria, the Federal Republic of Germany, France and Switzerland reserved their positions as regards apple juice and grape juice. The delegation of Canada reserved its position as regards apple juice. The delegation of Tunisia reserved its position as regards grape juice and the delegation of Italy reserved its position as regards grape juice and tomato juice. The representative of the International Wine Office stated that the IWO was opposed to any addition of sugar in grape juice on the grounds that such addition was not necessary and that it was possible to have a range of naturally sweet grape juices.

#### Consideration of the question whether the standards should be expressed on soluble fruit solids or on total soluble solids

13. The Group recognized that where sugars were added to juices, there was no method of analysis available at present which could determine with any degree of accuracy what amount of the soluble solids had been contributed by the fruit ingredient and what amount had been contributed by the added sugars. There was therefore a difficulty from the enforcement point of view, but this would still be the case even if the standards prohibited the addition of sugars. Nevertheless, it was important that the provision be drafted in such a way that the principle of permitting only limited amounts of sugar was not weakened.

14. Some delegations thought that the standards should be expressed on total soluble solids. Others favoured soluble fruit solids and, by way of compromise, still others considered that both total soluble solids and soluble fruit solids should be provided for. The Group agreed that the standards should be expressed on soluble fruit solids exclusive of added sugar.

#### Question of whether reconstituted juices are different from the non-reconstituted juices

15. The Group recalled that it had discussed fully the question of the use of concentrates for the production of single strength juices at its last session and that all delegations, with the exception of the delegation of France, had agreed to their use. In the circumstances, the Group did not think it necessary to pursue this matter further. In the opinion of the majority of the Group, the problem was essentially a labelling one and would be dealt with in considering labelling. The delegation of France reaffirmed the reservation which it had made at the last session on the use of concentrates for the manufacture of single strength juices.

#### Labelling

16. In considering the subject of labelling, the Group of Experts took note of the decisions and views of the Fifth Session of the Codex Committee on Food Labelling

regarding the labelling of nectars and fruit juices (ALINORM 70/22). A number of delegations pointed out that there was an increasing tendency in many countries to require the declaration of a complete list of ingredients, in response to consumer demand for more informative labelling. Other delegations doubted whether a complete list of ingredients would always be meaningful to the consumer.

### Fruit Juices

17. The general consensus in the Group of Experts was that there should be a complete list of ingredients on the label in descending order of proportion.

18. The only ingredients that gave rise to any difficulty as to how they should be declared were l-ascorbic acid and water in the case of (a) reconstituted juices and (b) nectars. Some delegations considered that, in the case of juices made from concentrates, the name of the product should indicate that the juices were, in fact reconstituted or juices made from concentrate. The delegations which took this view based their position on the consideration that the differences between a reconstituted juice and a juice obtained directly from the fruit were so significant, especially as regards their market value, as to warrant a distinction between the two products in the name of the products. Other delegations considered that the differences between the two types of product were not sufficiently significant to merit a distinction between them being made in the name of the product. The delegations which took this view stated that modern technology enabled a reconstituted juice to be marketed which could be at least as good and sometimes better than the non-reconstituted product. The majority of the Group agreed that while no distinction should be made in the name between the two types of product, the differences were sufficient to warrant the fact of reconstitution being declared in the list of ingredients. The delegations of France, Italy, Algeria and Tunisia reserved their positions on this decision, as they considered that there were very significant differences between the two types of product, and that the interests of the consumer required that these differences be reflected prominently in the name of the products. The delegation of France stated that this was a fundamental issue and took the strongest possible exception to the decision of the Group of Experts, pointing out that, in its view, the name was particularly important, because there was a risk that the list of ingredients, which was intended to complete the name, would not be sufficiently obvious to the consumer. The delegation of Italy associated itself with the position of the French delegation.

19. Following on the above decision, the majority of the Group agreed that the name of the reconstituted product would be apple juice, orange juice, etc., as the case might be. It would still be open to those countries which required the fact of reconstitution to be made known in the name of the product to continue to require that reconstituted products on sale in their domestic markets be so labelled and to take a minor deviation in this respect under the Acceptance Procedure for Codex Standards.

20. In considering the question of how the fact of reconstitution should be declared in the list of ingredients, the Group agreed that the terms "reconstituted fruit juice" or "fruit juice made from concentrate" or "fruit juice made from concentrated fruit juice", would indicate clearly to the consumer that water had been added. Since some delegations had indicated that in their countries the fact of reconstitution would still be required to be reflected in the name of the product, the delegation of Switzerland indicated that it would have been prepared to agree to the fact of reconstitution being declared in the list of ingredients provided that all other delegations had agreed that the fact of reconstitution need not be declared in the name of the product. The delegation of Switzerland,

therefore, reserved its position, because it saw no necessity to declare anywhere on the label the fact of reconstitution.

21. As regards l-ascorbic acid, the Group agreed that this additive should be listed in the list of ingredients as "l-ascorbic acid as an antioxidant" or as "antioxidant".

22. As regards, the addition of sugars, the Group agreed that where the amounts added were small and for the purpose of adjusting the acid/sugar ratio, the name of the product would remain unchanged, but that where sugars were added for the purpose of achieving a pronounced sweetness in the product, the name of the product should be modified accordingly, by the use of a term such as "sweetened". In both cases, sugars would be listed in the list of ingredients.

#### Nectars

23. The Group agreed to the principle of a complete list of ingredients for nectars, as it had done for fruit juices. The Group also agreed that consumer interests did not require that added water be mentioned in the list of ingredients, since this could mislead the consumer, especially as, under the General Standard for the Labelling of Prepackaged Foods, added water would have to appear at the top of the list of ingredients. The Group agreed, however, that the provision in 7.6.1 of the draft standard should be amended in the following terms "The words 'minimum fruit content X%' shall appear in close proximity to the name, where 'X' is the minimum prescribed for the nectar in 2.1". It was also agreed that l-ascorbic acid would be declared as an antioxidant, as in the case of fruit juices (see paragraph 21). It was further agreed that it would not be necessary to indicate in the list of ingredients whether the product had been made from concentrated fruit ingredient. The delegations of France and Italy reserved their positions on this point, stating that if concentrated fruit ingredient was used, this fact should be stated in the list of ingredients. The delegation of Finland also thought that if concentrate was used this fact should be indicated on the label. The delegation of the Federal Republic of Germany stated that the actual content of fruit ingredient in the product should be declared on the label in order to give the consumer correct information.

#### Maximum level for tin in fruit juices

24. The Group of Experts re-considered the figure of 250 mg/kg for tin in fruit juices, which had not been endorsed by the Codex Committee on Food Additives. The Group, which had before it a paper prepared by the Federal Republic of Germany on tin in fruit products (CODEX/FJ 70/5, UNECE ref.: AGRI/WP.1/656), was informed by the delegations of the Federal Republic of Germany, Italy, Spain and the United Kingdom of the results of the recent research on levels of tin in food products, particularly in fruit juices and nectars. The Group recognized that the factors influencing the level of tin in fruit juices were mainly the following:

- pH of the product
- presence of oxygen
- presence of nitrates
- thickness of tin layer
- fill of containers
- temperature and duration of storage

25. The Group noted that the level of nitrates in the water, used for reconstituting fruit juices or for processing of nectars, was of special interest from the point of view of its corrosive effects on tin.

26. The Group considered possible ways of reducing the tin content in fruit juices, such as, use of demineralized water, lacquering of containers, information on storage and use and other technological and marketing improvements. The Group concluded that it would not be possible at this stage in the light of the information available to propose a lower limit for tin in fruit juices and nectars. It was agreed that this question should be kept under review and that an appropriate footnote to this effect should be included in the standards where the maximum limit was 250 mg/kg. The Group agreed to retain the maximum level of 150 mg/kg of tin in apple juice.

27. The Group further agreed that the attention of WHO should be drawn to the problem of the level of nitrates in water, and requested that the appropriate WHO Expert Committee should examine what should be:

- the maximum level of nitrates in water to be used in food products and what measures could be taken to ensure water used in food products did not exceed this level.

The Group further requested that the Joint FAO/WHO Expert Committee on Food Additives should review the toxicological significance of levels of tin in fruit juices up to 250 mg/kg.

#### Reconsideration of the draft standard for apricot, peach and pear nectars at Step 7 of the Procedure

28. The Group of Experts considered the above standard contained in Appendix II to ALINORM 70/14 in the light of the general decisions it had taken earlier in the session, and taking into account the comments on the standard which had been submitted at Step 8. The decisions taken by the Group and the main points emerging from the discussions are set out hereunder:

#### Description

29. The Group agreed to leave this section unchanged.

#### Essential Composition and Quality Factors

30. The representative of the Commission of the European Economic Community informed the Group that the Commission of the European Economic Community had drawn up proposals for fruit juices and similar products, according to which 40% was the minimum fruit content for pulpy apricot nectars and 50% was the minimum fruit content for other kinds of pulpy fruit nectars. The delegation of Yugoslavia stated that in its view the minimum content of fruit ingredient in the case of peach and apricot nectars should be 35% and in the case of pear nectars 40%. Argentina in its Step 8 comments had requested that the minimum content of fruit ingredient for all three nectars should be 50%. As the existing figures in the draft standard represented a compromise arrived at after lengthy discussions at earlier sessions of the Group, the Group decided to make no change in this provision of the standard. The Group agreed that it would be desirable to consider establishing at a later stage, when information from the producing countries was available on this subject, the minimum soluble solids content of single strength apricot, peach and pear fruit ingredient when measuring the minimum content of fruit ingredient prescribed in the standard for apricot, peach and pear nectars.

31. As regards the provision on soluble solids, the delegation of Netherlands stated that it considered a minimum figure of 13% to be too high because it resulted in the product being too sweet for the consumer in the Netherlands. On the basis of consumer preference, the delegation of Netherlands proposed that for peach and pear nectar the

minimum soluble solids figure should be 11% and for apricot nectar 12% Argentine had requested in the Step 8 comments that the figure for soluble solids content should be raised to 14% for peach and pear nectars and to 15% for apricot nectars. As only the delegations of Finland and Sweden supported the proposal of the delegation of Netherlands and as there was no support for the proposal of the delegation of Argentina, the Group agreed to leave the figure for minimum soluble solids content unchanged at 13%. The delegation of Poland reaffirmed its reservation on the way in which the provision on soluble solids was expressed in the standard, stating that it did not agree with the expression of the results in °Brix. This reservation of the Polish delegation applied to all of the draft standards.

32. The attention of the Group was drawn to the fact that there was no provision in the standard on volatile acids. The Group decided not to include such a provision in the standard at this stage but agreed to consider, at a later stage, the question of whether it would be appropriate to have such a provision in respect of nectars and other diluted fruit juice products.

33. The Group decided to delete the provisions on classification of defectives and on acceptance in this Section of the standard and also in Section 6 of the standard on weights and measures. The considerations which led the Group of Experts to this decision are dealt with in paragraphs 46 to 49.

#### Food Additives

34. Since it was possible, subject to the provisions laid down in the labelling section of the standard, to add l-ascorbic acid for the purpose of vitaminizing the product, the Group agreed to delete the heading "Antioxidants" in section 3.1.2 of the standard. The Group also decided to delete the heading "Acidifying Agents".

#### Contaminants

35. The Group agreed that section 4.1 "Pesticide Residues" should be deleted noting that the levels would be fixed in due course on the raw materials, by the Codex Committee on Pesticide Residues. Given the various types of pesticides that could be used, it was the intention that levels for the raw material laid down by the Codex Committee on Pesticide Residues should be included in the standard in due course by reference only.

36. The Group took note of the Step 8 comment of the delegation of Argentina that the maximum levels for copper and lead be set at 10 ppm and 2 ppm, respectively and that new levels be established for arsenic and tin not in excess of 0.1 ppm and 100 ppm, respectively. The delegation of Poland stated that it had now withdrawn its previous reservation on the level for copper, and could accept the figure of 5 mg/kg. The delegation of Poland maintained its reservation, however, on the figure of 250 mg/kg for tin, stating that in its view the figure should be reduced to 150 mg/kg. The delegation of Spain reserved its position on the figure of 0.3 mg/kg for lead as it considered that the figure should be raised to 0.5 mg/kg. The delegations of Finland, Yugoslavia and France also reserved their positions on the figure for tin content stating that in their view the figure should be reduced to 150 mg/kg. The delegation of Italy proposed that the figure for lead should be raised to 1 mg/kg, to be reduced after two years to 0.5 mg/kg. A substantial number of delegations were in favour of raising the level for lead to 0.5 mg/kg, but the number of such delegations was not such as to constitute a general consensus in the Group. Taking into account that the figure for lead was under review in

the Codex Committee on Food Additives, it was decided not to change the figure in the standard at this time.

### Hygiene

37. The Group was informed that the Codex Committee on Food Hygiene had seen merit in the Group's decision to delete the provision on mould count from the standard, but had recommended that a statement should be made in the standards for fruit juices that the product should be free from excessive mould. The Group's attention was also brought to the view expressed by the Food Hygiene Committee that there might be a need for the development of more suitable methodology in this field. The Group did not think it desirable to include in the standard a provision recommending that the product should be free from excessive mould, as there could be significant variations in opinion as to what constituted excessive mould. The Group's difficulty in accepting the recommendation of the Food Hygiene Committee was one of a practical nature therefore, but the Group did agree with the view of the Food Hygiene Committee that there was a need for the development of more suitable methodology in this area, and thought that when satisfactory methodology became available it could be included in the standard at a later stage. The Group noted that there were certain safeguards provided in section 5.2 of the standard which recommended that certain codes of hygienic practice should be followed in the preparation of the product. The Group agreed to amend editorially section 5.1.2 of the standard to read as in the revised version of the standard.

### Weights and Measures

38. Apart from the deletion of the provisions in this section on Classification of Defectives and Acceptance, the only other change which was made in this section of the standard was an editorial one to sub-section 6.1.1 Minimum Fill.

### Labelling

39. The Group agreed to amend the provision on the declaration of minimum percentage of fruit content to make it perfectly clear that it was the minimum percentage as laid down in the standard that was to be declared and not the actual percentage that was in the product. The Group decided that this information should be shown in close proximity to the name of the product. The section on the list of ingredients was amended to make it clear that added water need not be declared, and to require that the addition of l-ascorbic acid should be declared as "l-ascorbic acid as antioxidant" or "antioxidant". The section on net contents was amended by deleting the reference to avoirdupois, as this was not applicable, and substituting therefor a reference to the British and American systems of measurement. The delegation of Switzerland reserved its position on the provision requiring l-ascorbic acid to be declared as an antioxidant, because it was opposed to any mention whatsoever of l-ascorbic acid on the label, even when qualified to indicate its technological use, on the grounds that it could mislead consumers, the majority of whom knew that "Vitamin C" and "l-ascorbic acid" were synonymous terms. The delegation of the Federal Republic of Germany was also opposed to the mention of l-ascorbic acid, pointing out that, as l-ascorbic acid was added for technological reasons, it might not be present at all in the product by the time it reached the consumer.

40. As regards the section on country of origin, a number of delegations sought clarification as to the meaning, when applied to nectars and fruit juices, of the provision in this section requiring that "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". It was pointed out that this provision had been taken directly from the General Standard for the Labelling of Prepackaged Foods, that it had, of necessity, to be drafted in general terms in the General Standard to cover all foods, and that it had been incorporated in most Codex standards. Some delegations thought that the provision was inapplicable in the present standard, and one delegation considered that if the nature of the product had been changed, then the product would no longer meet the requirements of the standard.

41. It was pointed out that it did not follow that, as a result of having undergone processing in a second country, the product would no longer meet the requirements of the standard. For example, the product might have been reconstituted in a second country or sugar might have been added in a second country, but the product could still meet the requirements of the standard. In the case of nectars, for example, it was clear that the country in which the nectar was produced - and not the country which supplied the fruit ingredient - would be the country of origin. Similarly, a country which manufactured fruit juices from imported concentrates or which blended imported single strength juices would be the country of origin of the product offered for sale to the consumer.

42. Attention was drawn to the fact that the standard also required the name and address of the manufacturer, packer, distributor, importer, exporter or vendor of the product to be declared. The Italian and French delegations stated that, in their countries, if the product concerned had been packaged by the importer, it was then the importer who was presumed to be legally responsible for the product. It was pointed out, however, that this was not or might not be the case in some other countries.

43. The Group of Experts also considered the question of whether it was necessary to make the declaration of country of origin mandatory. Some delegations thought that this would not be necessary where the product was manufactured in the country in which it was sold. . Other delegations thought that this would constitute discrimination against imported products. It was also pointed out that it was a matter of opinion whether the consumer needed to be informed of the country of origin of the kind of products being dealt with by the Group, to enable him to choose between products from different countries. The suggestion was also put forward that the provision should read as in the General Standard for the Labelling of Prepackaged Foods "The country of origin shall be declared if its omission would mislead or deceive the consumer". It was pointed out, however, that the Commission had asked its subsidiary bodies to exercise a decision on this provision in respect of the products they were dealing with, as otherwise it would be up to each country to decide whether the country of origin should be declared, and this would not be in the interests of international standardization,

44. After the above exchange of views, the Group of Experts decided to leave the section on country of origin unchanged.

45. The Group also deleted the optional provisions in section 7.6.4 (a) and 7.6.4 (c) of the standard, as suggested by the Codex Committee on Food Labelling, since section 6,1 of the General Standard for the Labelling of Prepackaged Foods, which was attracted in the standard for nectars, enabled any additional information to be displayed on the label, provided that such information was not in conflict with the mandatory requirements of the standard nor would mislead or deceive the consumer in any way whatsoever in respect of the product. The Group also amended section 7.6.4 (b) to cover also liquid nectars kept under very low temperature conditions.

## Sampling Plans

46. The Group considered the provisions on "Classification of Defectives" and "Acceptance" in the sections of the standard relating to Essential Composition and Quality Factors, Fill of Container and Net Contents, The sampling plans applicable in the standard were the Sampling Plans for Processed Fruits and Vegetables, which had been developed for the purpose of determining whether a lot was in conformity with a given standard for processed fruits and vegetables in the matter of quality criteria and minimum fill of containers. These Sampling Plans had been drawn up on the basis of a 95% probability and an acceptable quality level (AQL) of 6,5%. This meant, in effect, that 95% of the time, samples drawn from given lots would be accepted with up to 6.5/6 of defects, or vice-versa, for 5% of the time the manufacturer would risk having a lot rejected even though the total defects were in reality less than 6,5%. It had been pointed out at the Seventh Session of the Commission that it would be up to each subsidiary body of the Commission to examine these plans with particular reference to determining appropriate AQLs for quality criteria and quality defects in individual foods,

47. The Group agreed that it was not in a position at this stage to decide whether an AQL of 6.5 would be appropriate for fairly homogeneous products such as nectars and fruit juices. A number of delegations were in favour of retaining the provisions on Classification of Defectives, Acceptance, and Sampling for Examination in the standard, because they provided some international measure of protection to the manufacturer against rejection of consignments on an arbitrary basis. On the other hand, the Group was not in a position, at this stage, to determine whether an AQL of 6.5 would be suitable for relatively homogeneous products such as nectars and fruit juices. Neither was the Group in a position, at this stage, to fix an alternative AQL.

48. Consideration was given to the point whether it would be sufficient to lay down in the standard the number of containers, varying with the size of the consignment, which would constitute a representative sample (using the figures given in the Sampling Plans for Processed Fruits and Vegetables), but without going further and prescribing an acceptance figure for the representative sample. However, the point was also made that the figures given for representative samples in the Plans were linked to the AQL.

49. The Group thought it best to delete from the standard all reference to the Sampling Plans at this stage, and to rely on the good sense and judgement of national control authorities in dealing with consignments of nectars and fruit juices. The delegation of Hungary reserved its position on this decision of the Group. The Group agreed that it would be desirable to include sampling plans in the standards in due course, when sampling plans which, in the Group's judgment, would be suitable for nectars and fruit juices became available. The delegations of Spain and the Netherlands agreed to study this question and, if possible, to put forward proposals for consideration by the Group at its next session.

## Methods of analysis

50. The Group also agreed to delete section 8.2 of the standard at this stage, noting that when all the relevant methods of analysis had been endorsed by the Codex Committee on Methods of Analysis and Sampling, they would be referenced in the standard.

### Advancement of Standard to Step 8

51. The Group agreed to advance the standard for apricot, peach and pear nectars to Step 8 of the Procedure.

### Reconsideration of the Draft Standards for Orange Juice, Grapefruit Juice and Lemon juice at Step 7 of the Procedure

52. The Group of Experts considered the above three standards contained in Appendices IV, V and VI to Document ALINORM 70/14 in the light of the general decisions which it had taken earlier in the session and taking into account the comments on the standards which had been submitted at Step 8. The following amendments were made to all three standards:

- (a) The Group made an editorial amendment in the Description section as follows: "the juice may have been concentrated and later reconstituted".
- (b) As in the standard for nectars, the sections in the standards dealing with classification of defectives and acceptance and the reference to the Sampling Plan for Prepackaged Foods were deleted.
- (c) The provision on pesticide residues was deleted.
- (d) The section on hygiene was amended in the same way as in the standard for nectars.
- (e) The amendments which had been made in the labelling section of the standard for nectars and which affected the provision on Net Contents and Additional Requirements were also applied in the three standards.
- (f) As in the standard for nectars, the relevant methods of analysis, when endorsed by the Codex Committee on Methods of Analysis and Sampling, will be referenced in the standard.

### Draft Standard for Orange Juice

#### Description

53. It was agreed that in the Spanish version of the standard the words "o jugo" be inserted after the word "zumo", in accordance with the wish which had been expressed by Argentina in its Step 8 comments. "Jugo" was the usual term in Argentina for "juice".

#### Essential Composition and Quality Factors

54. As regards the section on soluble solids the delegation of the USA stated that the minimum figure of 10.5% was not suitable as it was too high for some categories of orange juice and too low for others. The delegation of the USA referred to the proposals which it had submitted to the Group to have separate standards for citrus juices preserved by different physical means. These proposals contained different BRIX figures for the different categories of orange juice. The delegation of the USA could not agree to a single BRIX figure for orange juices without adversely affecting the interests of the consumer in the USA. It was pointed out that the BRIX figure could be adjusted by the addition of concentrates. The Group decided not to change the figure in the standard and the delegation of the USA reserved its position on this decision.

55. The Group agreed that the maximum amount of sugars which would be permitted to be added to orange juice was 50 g/kg of the final product. At the same time, the Group agreed that if the amount of sugars added was in excess of 15 g/kg the words "X

added" should plainly and conspicuously accompany the name of the product, where X was the name of the sugar added. Since the amount of sugars added was not the only factor to be taken into account in determining the sweetness of the product, and since it was the Brix/acid ratio therefrom which was the determining factor, the Group agreed that if the ratio of total soluble solids, as determined in section 2.1 of the standard, to the total titratable acid expressed as anhydrous citric acid was more than 15 to 1, the words "sweetened" could be used in lieu of the statement "X added". The Group agreed that where sugars were added in an amount less than 15 g/kg, the name of the product would not be affected but the sugars would be indicated in the list of ingredients. The delegation of the Federal Republic of Germany maintained that the product which contained more than 15 g/kg of added sugar must be labelled as "sweetened", independent of the Brix/acid ratio.

56. A number of delegations considered that the figure for essential oils ought to be raised to 0.5 ml/kg. The justification advanced for increasing the figure was that some consumers preferred orange juice with a rather high oil content, just as others preferred orange juice with a low oil content. There appeared to be no reason therefore for not raising the figure to meet the wishes of some consumers. On the other hand, other delegations stated that this was a substantial increase and would render the product less than satisfactory in their countries. The Group unanimously agreed on a compromise figure of 0.4 ml/kg.

57. The delegation of France mentioned that, except for frozen concentrates, other concentrates had lost most of their essential oils during their processing and, therefore, where such products were used, it was necessary to enrich the reconstituted product with other essential oils and that, consequently, the use of Citrus essential oils should be allowed as an ingredient. It was also noted that the best essential oils used in these cases were the deterpenised ones and that, if there was no provision in the standard on this, some fraudulent practices such as dilution of concentrates with more water and sugars, or the use of essential oils coming from species or varieties of citrus fruit other than those covered by the standard, would be possible. In conclusion, the delegation of France proposed that only-frozen concentrates should be allowed in the standards in order to avoid such practices. The Group did not agree with this conclusion, and although recognizing that it was difficult to safeguard consumers against well prepared falsifications, decided not to amend the standards in this way.

58. As regards the section on Contaminants, the delegation of Poland withdrew its reservation on the level for copper and this withdrawal applied to all the standards. As regards lead, the delegation of Poland was in favour of raising the figure to 0.4 mg/kg, on the basis of levels found in practice in large containers. The delegation of Italy requested that the figure for lead be raised to 1 mg/kg. The delegation of Spain requested a figure of 0.5 mg/kg on the understanding that it should be reviewed later. As, in all, there were only four delegations in favour of changing the figure for lead, the Group decided to leave the figure in the standard unaltered. The delegation of Italy reserved its position on this decision.

59. In the labelling section of the standard, it was agreed that, in addition to the provisions governing the addition of sugars referred to earlier in the report, there should be a complete list of ingredients, except that it would not be necessary to declare the addition of water. The Group agreed that where orange juice was made from concentrate the fact of reconstitution should be declared in the list of ingredients as the first ingredient, as "orange juice made from concentrate" or "reconstituted orange juice" or "orange juice made from concentrated orange juice". The delegation of France

reserved its position stating that if the product was made from concentrate the fact of reconstitution should be indicated in the name of the product as well as in the list of ingredients. The delegation of Switzerland also reserved its position, as it was opposed to the use of the word "concentrate" in the list of ingredients. The delegation of the USA stated that the fact of reconstitution should be indicated in a more prominent position than in the list of ingredients. It was pointed out that section 4.1 of the General Standard for the Labelling of Prepackaged Foods required that all statements on the label should be clear, prominent and readily legible, but the Group thought that it would be desirable for the Codex Committee on Food Labelling to consider whether, in relation to the declaration of ingredients, this provision was adequate.

60. The delegation of the USA proposed that, in accordance with the existing commercial practice, the standard should provide for the addition of juice of *Citrus reticulata* up to a maximum of 10%. The addition of *Citrus reticulata* juice improved the colour of the product and had no adverse effect on the flavour or on the nutritional value of the product. The delegation of the USA stated that the regulations of several European countries permitted fruit juices to have added to them limited amounts of juices of other fruits. As an example, it cited the Danish Law of 12 July 1958 which permitted the addition of 5% pear juice to apple juice. Many delegations stated that they would be prepared to accept the proposal of the delegation of the USA, provided that it was made clear in the name of the product that the product was a mixture. As a compromise, the delegation of the USA proposed that the addition of the juice of *Citrus reticulata* be permitted in the standard subject to the declaration of the addition of the juice of *Citrus reticulata* in the list of ingredients. Several delegations were opposed to this proposal on the grounds that orange juice and mandarine orange juice were two different products from two different fruits and that, therefore, if mandarine juice was added to orange juice the resultant product was not entirely orange juice. In the opinion of these delegations, it would be fundamentally wrong therefore not to make this fact clearly known to the consumer in the name\* of the product. The delegation of the USA stated that both juices were derived from the same genus. It was not found possible to arrive at a general consensus in the Group regarding the U.S. proposal, as only nine delegations stated that they would be in favour of the proposal whereas eight delegations were against it. Three delegations were neither for nor against the proposal.

61. In the absence of a general consensus on the U.S. proposal, the Group decided not to amend the standard as proposed by the delegation of the U.S.A. The Group agreed, however, that this was an issue which should be brought to the attention of the Codex Committee on Food Labelling for guidance and that it would be a matter for the Commission to resolve.

62. The Group agreed to advance the standard for orange juice to Step 8 of the Procedure.

#### Reconsideration at Step 7 of draft standards for grapefruit juice and lemon juice

63. The Group agreed that the standards for grapefruit juice and lemon juice should be amended along the lines agreed upon in the case of the standard for orange juice, account being taken of the fact that the standard for lemon juice did not provide for the addition of sugars.

64. In the case of the standard for grapefruit juice, the delegation of the Netherlands proposed that the maximum quantity of added sugars should be raised from 50 g/kg to 100 g/kg on the grounds that in the Netherlands there was a significant demand for such a product. Several delegations pointed out that the addition of sugars to the amount

proposed by the Netherlands would result in a product which was rather more in the nature of a fruit drink than a fruit juice. The Group decided therefore to make no change in the standard regarding the amount of sugars permitted to be added. The delegation of the Netherlands reserved its position on this decision of the Group, The delegation of the USA stated that it would have preferred to have separate standards elaborated for (a) canned grapefruit juice and (b) refrigerated pasteurized grapefruit juice.

65. As regards the standard for lemon juice the Group made an editorial amendment to the description section of the standard and reduced the figure for soluble lemon solids from 7.5% to 6%, The Group also agreed to provide for a total acidity of the lemon juice of not less than 4.5% w/w expressed as anhydrous citric acid. The Group agreed not to provide for the addition of sugars to lemon juice, as in order to do so it would be necessary to provide for a far greater quantity than had been rejected in the case of the standard for grapefruit juice,

66. As regards the section on contaminants, it was agreed to raise the figure for lead from 0,3 to 1 mg/kg. In reaching this decision the Group took account of the fact that lemon juice was not consumed directly by the consumer, but rather used as an ingredient in other foods, and that levels of lead found in practice in lemon juice were much higher than the level contained in the standard,

67. The Group agreed to advance the standards for grapefruit juice and lemon juice to Step 8 of the procedure.

#### Methods of Analysis in Fruit Juices and Nectars

68. The Group was informed that the Codex Committee on Methods of Analysis and Sampling at its Fifth Session had endorsed 20 referee methods of analysis applicable to various fruit juices and nectars. References to these methods appear in Appendix III to ALINORM 70/41. The Group noted that several important provisions of the standards were not covered yet by appropriate methods of analysis, in particular:

- (a) Minimum content of fruit ingredient (in apricot peach and pear nectars).
- (b) Soluble fruit solids of fruit juices (exclusive of added sugars), where the addition of sugars was permitted by the standards,
- (c) Degree of concentration of fruit juices.
- (d) Differentiation between juices obtained by direct expression and those obtained by reconstitution of concentrates.
- (e) Minimum fill of containers;

and that it would be extremely difficult to elaborate appropriate referee methods covering some of these provisions. Nevertheless, the Chairman of the Sub-Commission on Analyses of the International Federation of Fruit Juice Producers agreed to undertake new development of their studies on points (a) and (b). Concerning (c), the Group did not see any necessity to develop methods for the determination of the degree of concentration of fruit juices because it had already agreed to characterize concentrated fruit juices by their Brix value. Concerning (d), the Group had before it a paper prepared by the delegation of Israel mentioning that there was every prospect of arriving at some definite conclusion in the near future, through different new approaches (determination of amino acids, vitamins of the B group, pigments, anti-serums). Concerning (e) minimum fill of containers, the Group agreed to ask the Drafting Group to submit to the Codex Committee on Methods of Analysis and Sampling for endorsement a method proposed by the USA delegation and published in the Almanac of the Canning,

Freezing, Preserving Industries, 55th Edition, 1970, E.E. Judge and Sons, Westminster MD (pp. 131-132).

69. The Group agreed that, as an amendment had been made in the standards for orange juice and grapefruit juice with respect to soluble solids to read "(exclusive of added sugars)", the method endorsed for this provision by the Fifth Session of the Codex Committee on Methods of Analysis and Sampling was no longer applicable to these juices for the reasons mentioned in ALINORM 70/23, paragraph 22. The Group also agreed to propose the FIJU method No. 3 "Determination of titratable acid (total acid)", with results expressed as anhydrous citric acid in g/kg, for endorsement by the Codex Committee on Methods of Analysis and Sampling, in the standards for orange, grapefruit and lemon juices.

70. The Group agreed that, although it had been requested by the Commission to consider the expression of the figures included in all standards preferably per litre, it strongly preferred not to modify the standards at this stage. It agreed to a general proposal made by the Chairman of the Sub-Commission on Analyses of the International Federation of Fruit Juice Producers to undertake to convert expressions by volume into expressions by mass (kilogramme) in all methods of analysis for fruit juices.

#### Agenda for the Eighth Session of the Group of Experts

71. The Group agreed to deal with the Step 7 standards for fruit juices which, for lack of time, it had not been able to deal with at the present session. In addition, it would deal with the draft standard for pineapple juice and would review the classification framework for fruit juices. It would also deal with the proposals which the delegation of the United Kingdom had put forward in document CODEX/FRUJU/69/5 dealing with the future work of the Group and in particular with ingredient juices. In addition, the Group would consider possible proposals for an acceptance plan to be prepared by the delegations of Spain and the Netherlands. Attention was drawn to the fact that the classification and definition framework contained a reference to fruit juice products. It was agreed that the views of governments should be sought on this document with particular reference to the section dealing with fruit juice products. This would enable the Group to consider more profitably at its next session the question of where the line of distinction lay between fruit juice products and soft drinks.

#### The Election of Chairman and Vice-Chairman

72. The Group unanimously re-elected Prof. W. Pilnik of the Netherlands to serve as Chairman and Mr. W. Orłowski of Poland to serve as Vice-chairman until the end of the Eighth Session.

#### Date and Place of Next Session

73. The Group noted that the next session of the Group would probably be held in Geneva and a number of delegates expressed the wish that the next session be held in February or March 1971. The Secretariat undertook to examine the feasibility of these dates.

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 Les chefs de délégations figurent en tête et les suppléants, conseillers et consultants sont énumérés par ordre alphabétique.  
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**DRAFT STANDARD FOR APRICOT, PEACH AND PEAR NECTARS PRESERVED  
EXCLUSIVELY BY PHYSICAL MEANS**<sup>1</sup>

<sup>1</sup> For the purpose of this standard and at this time preservation by physical means does not include ionizing radiation.

(To be submitted to the Codex Alimentarius Commission at Step 8 of the Procedure)

1. **DESCRIPTION**

Unfermented but fermentable pulpy product, intended for direct consumption, obtained by blending the total edible part of sound and ripe apricots, peaches or pears, concentrated or unconcentrated, with water and sugars, and preserved exclusively by physical means.

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Minimum Content of Fruit Ingredient**

The product shall contain not less than 40% in the case of peach and pear nectars, and not less than 35% in the case of apricot nectars, by weight of single strength fruit ingredient or the equivalent derived from any concentrated fruit ingredient.

2.2 **Sugars**

The following sugars may be used: sucrose (white sugar), dextrose and glucose syrup as defined by the Codex Alimentarius Commission.

2.3 **Honey**

Honey, as defined by the Codex Alimentarius Commission, may be used if it is the sole added sweetening ingredient.

2.4 **Lemon juice**

Lemon juice may be added as an acidifying agent.

2.5 **Soluble Solids**

The soluble solids content of the product shall be not less than 13% by weight as determined by refractometer at 20°C, uncorrected for acidity and read as °Brix on the International Sucrose Scales.

2.6 **Apparent Viscosity**

The apparent viscosity of the product shall be such that the flow-time is not less than 30 seconds, as determined by the method of Lamb and Lewis (J.A.O.A.C., vol. 42, No. 2, p. 411, 1959).

2.7 **Ethanol Content**

Ethanol content shall not exceed 3 g/kg.

2.8 **Hydroxymethyl Furfural**

Not more than 10 mg/kg.

## 2.9 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of the fruit from which it is made.

## 3. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives:

Citric acid  
Malic acid  
L-ascorbic acid

## 4. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives except as otherwise indicated:

4.1	<u>Contaminant</u>	<u>Maximum level</u>
	Arsenic (As)	0.2 mg/kg
	Lead (Pb)	0.3 mg/kg (temporarily endorsed)
	Copper (Cu)	5 mg/kg
	Zinc (Zn)	5 mg/kg
	Iron (Fe)	15 mg/kg
	Tin (Sn)	250 mg/kg provisional limit (not endorsed) <sup>2</sup>

<sup>2</sup> The provisional limit of 250 mg/kg for tin is currently under review and will be re-examined in two years time.

4.2	<u>Contaminant</u>	<u>Maximum level</u>
	Total metal content precipitable by potassium hexacyanoferrate (II)	20 mg/kg expressed as Fe

## 5. HYGIENE

5.1 The following provisions in respect of the food hygiene of the product have been endorsed by the Codex Committee on Food Hygiene except as otherwise indicated:

5.1.1 Micro-organisms capable of development under normal conditions of storage - none

5.1.2 The product shall not contain any substances originating from microorganisms in amounts which are toxic - (to be endorsed)

5.2 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Code of Hygienic Practice for Canned Fruit and Vegetable Products and the Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products, as appropriate.

## 6. WEIGHTS AND MEASURES

### 6.1 Fill of Container

#### 6.1.1 Minimum Fill

The nectar shall occupy not less than 90% v/v of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

## 7. LABELLING (Subject to endorsement by the Codex Committee on Food Labelling)

In addition to Sections 1,2,4 and 6 of the 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 "apricot nectar" or "pulpy apricot nectar", "peach nectar" or "pulpy peach nectar", "pear nectar" or "pulpy pear nectar", as appropriate.

7.1.2 The words "Minimum fruit content X%" shall appear in close proximity to the name of the product where 'X' is the minimum percentage prescribed for the nectar in Section 2.1.

### 7.2 List of Ingredients

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that added water need not be declared.

7.2.2 The addition of l-ascorbic acid shall be declared in the list of ingredients as:

(a) "l-ascorbic acid as antioxidant"

or

(b) "anti-oxidant".

### 7.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems of measurement: Metric ("Système International" units), U.S., British; 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

7.5.1 The country of origin of the product shall be declared.

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

### 7.6 Additional Requirements

The following additional specific provisions shall apply:

- 7.6.1 The pictorial representation of fruit or nectar on the label may only be that of the species of fruit present or the nectar therefrom.
- 7.6.2 No claim shall be made in respect of "Vitamin C" nor shall the term "Vitamin C" appear on the label unless the product contains such quantity of "Vitamin C" as would be accepted by national authorities as warranting such claim or the use of such term.
- 7.6.3 Where fruit nectars require to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product,

7.7 Bulk Packs

In the case of fruit nectars in bulk, the information required in 7.1.1 to 7.6.3 shall either be placed on the container or be given in accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING

(To be finalized later)

DRAFT STANDARD FOR ORANGE JUICE PRESERVED EXCLUSIVELY BY  
PHYSICAL MEANS<sup>1</sup>

<sup>1</sup> For the purpose of this standard and at this time preservation by physical means does not include ionizing radiation.

(To be submitted to the Codex Alimentarius Commission at Step 8 of the Procedure)

1. DESCRIPTION

Unfermented but fermentable juice, intended for direct consumption, obtained by a mechanical process from the endocarp of sound, ripe oranges (*Citrus sinensis* (L) Osbeck), preserved exclusively by physical means. The juice may have been concentrated and later reconstituted,

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Soluble Solids

The soluble solids content of orange juice exclusive of added sugar shall be not less than 10.5% by weight as determined by refractometer at 20°C, uncorrected for acidity and read as °Brix on the International Sucrose Scales.

2.2 Sugars

The following sugars may be added: sucrose (white sugar), dextrose and dried glucose syrup, as defined by the Codex Alimentarius Commission. The quantity added shall not exceed 50 g/kg.

2.3 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

2.4 Volatile Acids

Only traces are allowed.

2.5 Essential Oils

The essential oils content shall not exceed 0.4 ml/kg.

2.6 Organoleptic properties

The product shall have the characteristic colour, aroma and flavour of orange juice. The restitution of natural orange juice flavour to orange juice from which the flavour has been removed is allowed.

2.7 Use of Concentrates

The addition of concentrate to juice is permitted. Only concentrate from Citrus sinensis (L) Osbeck may be used.

3. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, except as otherwise indicated.

<u>Contaminant</u>	Maximum level
Arsenic (As)	0.2 mg/kg
Lead (Pb)	0.3 mg/kg (temporarily endorsed)
Copper (Cu)	5 mg/kg

Zinc	(Zn)	5 mg/kg	
Iron	(Fe)	15 mg/kg	
Tin	(Sn)	250 mg/kg	provisional limit <sup>2</sup> (not endorsed)

- 3.2 Total metal content precipitable by potassium hexacyanoferrate (II) 20 mg/kg expressed as Fe

<sup>2</sup> The provisional limit of 250 mg/kg for tin is currently under review and will be re-examined in two years time.

#### 4. HYGIENE

4.1 The following provisions in respect of the food hygiene of this product have been endorsed by the Codex Committee on Food Hygiene, except as otherwise indicated:

4.1.1 Micro-organisms capable of development under normal conditions of storage - none

4.1.2 The product shall not contain any substances originating from microorganisms in amounts which are toxic - (to be endorsed)

4.2 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Code of Hygienic Practice for Canned Fruit and Vegetable Products and the Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products, as appropriate.

#### 5. WEIGHTS AND MEASURES

##### 5.1 Fill of container

##### 5.1.1 Minimum fill

The orange juice shall occupy not less than 90% v/v 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. LABELLING (Subject to endorsement by the Codex Committee on Food Labelling)

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

##### 6.1 The name of the Food

6.1 The name of the product shall be "orange juice". If a sugar is added in a quantity greater than 15 g/kg, the words "X added" shall plainly and conspicuously accompany the name "orange juice", where X is the name of the sugar added. If the ratio of the total soluble solids, as determined in 2.1, to the total titratable acid expressed as anhydrous citric acid is more than 15 to 1, the word "sweetened" may be used in lieu of the statement "X added".

##### 6.2 List of Ingredients

6.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that added water need not be declared.

6.2.2 In the case of orange juice made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as the first ingredient as follows "orange juice made from concentrate" or "reconstituted orange juice" or "orange juice made from concentrated orange juice".

6.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems of measurement: Metric ("Système International" units), U.S., British, as required by the country in which the product is sold.

6.4 Name and Address

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

6.5 Country of Origin

6.5.1 The country of origin of the product shall be declared.

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

6.6 Additional Requirements

The following additional specific provisions shall apply:

6.6.1 No fruit or fruit juice may be represented pictorially on the label except oranges or orange juice.

6.6.2 Where orange juice requires to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product.

6.7 Bulk Packs

In the case of orange juice in bulk, the information required in 6.1 to 6.6.2 shall either be placed on the container or be given in accompanying documents.

7. METHODS OF ANALYSIS AND SAMPLING

(To be finalized later)

**DRAFT STANDARD FOR GRAPEFRUIT JUICE PRESERVED EXCLUSIVELY BY  
PHYSICAL MEANS**<sup>1</sup>

<sup>1</sup> For the purpose of this standard and at this time preservation by physical means does not include ionizing radiation.

(To be submitted to the Codex Alimentarius Commission at Step 8 of the Procedure)

1. DESCRIPTION

Unfermented but fermentable juice, intended for direct consumption obtained by a mechanical process from the endocarp of sound, ripe grapefruit (Citrus paradisi Macfadyen), preserved exclusively by physical means. The juice may have been concentrated and later reconstituted.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Soluble Solids

The soluble solids content of grapefruit juice exclusive of added sugar shall be not less than 9% by weight as determined by refractometer at 20°C, uncorrected for acidity and read as ° Brix on the International Sucrose Scales.

2.2 Sugars

The following sugars may be added: sucrose (white sugar), dextrose and dried glucose syrup, as defined by the Codex Alimentarius Commission. The quantity added shall not exceed 50 g/kg.

2.3 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

2.4 Essential Oils

The essential oils content shall not exceed 0.3 ml/kg.

2.5 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of grapefruit juice. The restitution of natural grapefruit juice flavour to grapefruit juice from which the flavour has been removed is allowed.

2.6 Use of Concentrates

The addition of concentrate to juice is permitted. Only concentrate from Citrus paradisi Macfadyen may be used.

3. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, except as otherwise indicated:

<u>Contaminant</u>	<u>Maximum level</u>
Arsenic (As)	0.2 mg/kg
Lead (Pb)	0.3 mg/kg (temporarily endorsed)
Copper (Cu)	5 mg/kg
Zinc (Zn)	5 mg/kg
Iron (Fe)	15 mg/kg

	Tin (Sn)	250 mg/kg	Provisional limit (not endorsed) <sup>2</sup>
3.2	Total metal content precipitable by potassium hexacyanoferrate (II)	20 mg/kg	expressed as Fe

<sup>2</sup> The provisional limit of 250 mg/kg for tin is currently under review and will be re-examined in two years.

#### 4. HYGIENE

4.1 The following provisions in respect of the food hygiene of this product have been endorsed by the Codex Committee on Food Hygiene, except as otherwise indicated;

4.1.1 Micro-organisms capable of development under normal conditions of storage - none

4.1.2 The product shall not contain any substances originating from micro-organisms in amounts which are toxic - (to be endorsed)

4.2 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Code of Hygienic Practice for Canned Fruit and Vegetable Products and the Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products, as appropriate.

#### 5. WEIGHTS AND MEASURES

##### 5.1 Fill of Container

###### 5.1.1 Minimum Fill

The grapefruit juice shall occupy not less than 90% v/v 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. LABELLING (Subject to endorsement by the Codex Committee on Food Labelling)

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

##### 6.1 The Name of the Food

The name of the product shall be "grapefruit juice". If a sugar is added in a quantity greater than 15 g/kg, the words "X added" shall plainly and conspicuously accompany the name "grapefruit juice", where X is the name of the sugar added. If the ratio of the total soluble solids, as determined in 2.1, to the total titratable acid expressed as anhydrous citric acid is more than 12 to 1, the word "sweetened" may be used in lieu of the statement "X added".

##### 6.2 List of Ingredients

6.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that added water need not be declared.

6.2.2 In the case of grapefruit juice made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as the first ingredient as follows

"grapefruit juice made from concentrate" or "reconstituted grapefruit juice" or "grapefruit juice made from concentrated grapefruit juice".

6.3 Net Content

The net content shall be declared by volume in one or more of the following systems of measurement: Metric ("Système International" units), U.S., British, as required by the country in which the product is sold.

6.4 Name and Address

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

6.5 Country of Origin

6.5.1 The country of origin of the product shall be declared.

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

6.6 Additional Requirements

The following additional specific provisions shall apply:

6.6.1 No fruit or fruit juice may be represented pictorially on the label except grapefruit or grapefruit juice.

6.6.2 Where grapefruit juice requires to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product.

6.7 Bulk Packs

In the case of grapefruit juice in bulk the information required in 6.1 to 6.6.2 shall either be placed on the container or be given in accompanying documents.

7. METHODS OF ANALYSIS AND SAMPLING

(To be finalized later)

**DRAFT STANDARD FOR LEMON JUICE PRESERVED EXCLUSIVELY BY PHYSICAL MEANS**<sup>1</sup>

(To be submitted to the Codex Alimentarius Commission at Step 8 of the Procedure)

<sup>1</sup> For the purpose of this standard and at this time preservation: by physical means does not include ionizing radiation.

**1. DESCRIPTION**

Unfermented but fermentable juice intended for direct consumption, obtained by a mechanical process from the endocarp of sound, ripe lemons (Citrus limon, Burm. f.) preserved exclusively by physical means. The juice may have been concentrated and later reconstituted,

**2. ESSENTIAL COMPOSITION AND QUALITY FACTORS**

**2.1 Soluble Solids and Acidity**

The soluble lemon solids content of lemon juice shall be not less than 6% by weight as determined by refractometer at 20°C, uncorrected for acidity and read as °Brix on the International Sucrose Scales. The total titratable acidity of the lemon juice shall not be less than 4.5% w/w expressed as anhydrous citric acid.

**2.2 Essential Oils**

The essential oils content shall not exceed 0.5 ml/kg.

**2.3 Ethanol Content**

The ethanol content shall not exceed 3 g/kg.

**2.4 Organoleptic Properties**

The product shall have the characteristic colour, aroma and flavour of lemon juice. The restitution of natural lemon juice flavour to lemon juice from which the flavour has been removed is allowed.

**2.5 Use of Concentrates**

The addition of concentrate to juice is permitted.  
Only concentrate from Citrus limon Burm. f. may be used.

**3. CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, except as otherwise indicated:

<b>3.1 <u>Contaminant</u></b>	<b><u>Maximum level</u></b>
Arsenic (As)	0.2 mg/kg
Lead (Pb)	1.0 mg/kg (to be endorsed)
Copper (Cu)	5 mg/kg
Zinc (Zn)	5 mg/kg
Iron (Fe)	15 mg/kg
Tin (Sn)	250 mg/kg provisional limit (not endorsed) <sup>2</sup>
<b>3.2 Total metal content precipitable by potassium hexacyanoferrate (II)</b>	<b>20 mg/kg expressed as Fe</b>

<sup>2</sup> The provisional limit of 250 mg/kg for tin is currently under review and will be re-examined in two years.

#### 4. HYGIENE

4.1 The following provisions in respect of the food hygiene of this product have been endorsed by the Codex Committee on Food Hygiene, except as otherwise indicated.

4.1.1 Micro-organisms capable of development under normal conditions of storage - none

4.1.2 The product shall not contain any substances originating from microorganisms in amounts which are toxic - (to be endorsed)

4.2 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Code of Hygienic Practice for Canned Fruit and Vegetable Products and the Code of Hygienic Practice for Deep Frozen Fruit and Vegetable Products, as appropriate.

#### 5. WEIGHTS AND MEASURES

##### 5.1 Fill of Container

##### 5.1.1 Minimum Fill

The lemon juice shall occupy not less than 90% v/v 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. LABELLING (Subject to endorsement by the Codex Committee on Food Labelling)

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

##### 6.1 The Name of the Food

The name of the product shall be "lemon juice".

##### 6.2 List of Ingredients

6.2.1 In the case of lemon juice made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as the first ingredient as follows "lemon juice made from concentrate" or "reconstituted lemon juice" or "lemon juice made from concentrated lemon juice".

##### 6.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems of measurement: Metric ("Système International" units), U.S., British, as required by the country in which the product is sold.

##### 6.4 Name and Address

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

6.5 Country of Origin

6.5.1 The country of origin of the product shall be declared,

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

6.6 Additional Requirements

The following additional specific provisions shall apply:

6.6.1 No fruit or fruit juice may be represented pictorially on the label except lemons or lemon juice.

6.6.2 Where lemon juice requires to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product.

6.7 Bulk Packs

In the case of lemon juice in bulk the information required in 6,1 to 6.6.2 shall either be placed on the container or be given in accompanying documents.

7. METHODS OF ANALYSIS AND SAMPLING

(To be finalized later)