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ECONOMIC COMMISSION FOR EUROPE  
COMMITTEE ON AGRICULTURAL PROBLEMS  
Working Party on standardization  
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Geneva  
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REPORT OF THE EIGHTH SESSION OF THE  
JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON  
STANDARDIZATION OF FRUIT JUICES

8-12 March 1971  
Geneva

REPORT OF THE EIGHTH SESSION OF THE  
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STANDARDIZATION OF FRUIT JUICES

1. The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices held its eighth session at the Palais des Nations, Geneva from 8 to 12 March 1971, under the chairmanship of Professor W. Pilnik (The Netherlands).
2. The session was attended by 60 participants, including the representatives and observers of 26 countries and observers from 4 international organizations. The list of participants is contained in Appendix I to this Report.

Adoption of Agenda

3. The Group of Experts unanimously adopted the provisional agenda without any amendments.

Election of Rapporteur

4. Mr. L. G. Hanson (United Kingdom) agreed to accept the position of Rapporteur for the meeting.

Reconsideration of the Draft Standard for Apple Juice at Step 7 of the Procedure

5. The Group of Experts had before it document ALINORM 70/14, Appendix III which contained the proposed Draft Standard for Apple Juice preserved exclusively by physical means.

The Group of Experts reconsidered the above-mentioned standard and agreed to amend it in the light of the general decisions which were taken at its seventh session and which were as follows:

- (a) The second last sentence in the section on "Description" was amended to read "The juice may have been concentrated and later reconstituted"
- (b) The sections in the standard dealing with classification of defectives and acceptance and the reference to the Sampling Plan for Pre-packaged Foods were deleted
- (c) The provision on pesticide residues was deleted
- (d) The section on hygiene was amended as in the other standards
- (e) The labelling provisions on net contents and additional requirements were amended as in the other standards
- (f) The relevant methods of analysis, when endorsed by the Codex Committee on Methods of Analysis and Sampling will be referenced in the standard.

Description

6. The Group agreed to introduce the botanical nomenclature "Pyrus malus L" into the standard.

The Group agreed that the standard did not apply to juice which would be subjected to further processing and that the term "for direct consumption" adequately covered this point.

### Soluble Apple Solids

7. The Group confirmed its decision that the soluble solids content of apple juice should be not less than 10°Brix. This minimum figure had been chosen to take account of the low-sugar characteristics of the apples grown in several countries. The delegations of the Federal Republic of Germany, Italy and France expressed the view that the minimum content should be raised to 11°Brix.

### Sugar

8. The Group discussed again whether to allow the addition of sugar to apple juice. At its seventh session, the Group has agreed (paragraphs 11 and 12 of ALINORM 71/14) to allow the addition of sugar to fruit juices for sweetening purposes subject to certain conditions. It had formulated provisions for orange juice and grapefruit juice but had subsequently decided not to provide for the addition of sugar to lemon juice (paragraph 65). The delegation from Switzerland, with support from other delegations, suggested that the addition of sugar to apple juice was not necessary and that it would be wrong to allow it just because it had been permitted in other juices. The delegations of Algeria, Canada, the Federal Republic of Germany, France and Switzerland reaffirmed their objections to the addition of sugar as recorded in paragraph 12 of the Report of its Seventh session (ALINORM 71/14).

Several delegations said that it was not the practice of their countries to add sugar because an acceptable product could be made with a minimum of 10°Brix and they emphasized the importance of retaining 10°Brix as the minimum figure (see paragraph 7 above). The delegations of Finland, Sweden and Norway explained, however, that it had been found necessary to add sugar to apple juice for domestic consumption which was made from home-grown apples because of the high acidity of such apples.

The Group considered whether it would be appropriate to provide for the addition of sugar to adjust the sugar/acid ratio but only when the acidity of the juice would otherwise be unacceptable. However, after a full discussion, the Group decided that, as almost all the apple juices passing in international trade contained no added sugar and as sugar was not being added other than in exceptional circumstances, no provision for the addition of sugar to apple juice should be included in the standard. Paragraph 2.2 was therefore deleted.

The Group agreed to place on record its view that if the Scandinavian countries considered it necessary, for climatic or other reasons, to add sugar to apple juice in order to make the product acceptable to the consumer it should be possible for them to deal with the problem in a suitable manner under the Acceptance Procedures.

### Organoleptic Properties

9. The delegation of Switzerland drew the attention of the Group to what appeared to be an error of translation between the French and English texts in the second sentence of this paragraph. The English word "flavour" had been translated as "saveur" in the French text. In the opinion of Switzerland it was not the "saveur" which is removed and restored but rather the "aroma". The Group agreed that as far as the English text was concerned it was not really the flavour which could be removed and restored but the volatile part of the flavour which is lost during the concentration process. It was agreed that it was not the intention of the paragraph to restrict the restoration of the volatile flavouring components to the particular apple juice from which they had been removed.

In order to make this point quite clear the Group agreed to reword the sentence in the following manner:

"Natural volatile apple juice components may be restored to any apple juice from which natural apple juice components have been removed".

The delegation of the Federal Republic of Germany objected to the word "any" because they did not wish to allow the mixing of concentrates and volatiles from juices of different countries.

The delegation of France assured the Group that the substitution of the word "l'arôme" for la "la saveur" was sufficiently clear in the French language to have the same meaning as the revised English version. The French text would thus read as follows:

"Il est admis de restituer l'arôme de jus de pomme naturel à un jus de pomme dont l'arôme a été enlevé".

The delegation of Spain informed the Group that as far as the Spanish text was concerned there was no need to make any changes whatsoever as the Spanish version was quite precise and no misunderstandings were possible.

The Group agreed that similar changes should be applied to the other fruit juice standards at Step 8 and noted that they could be considered as editorial comments.

#### Use of Carbon Dioxide

10. The Group noted that although the labelling section contained a reference to the obligatory use of the term "carbonated" when more than 2 g/kg of carbon dioxide was present in the apple juice, there was no mention of the fact that the juice could be "carbonated". The Group decided to put a new sub-section on the use of Carbon Dioxide under the Essential Composition and Quality Factors to the effect that "the apple juice may be 'carbonated'".

#### Processing aids - Clarifying agents

11. The Group gave further consideration to the list of clarifying agents which had been included in the food additive section of the standard at its Fifth Session (ALINORM 69/14, paragraph 8(f)). It was pointed out that these substances were in fact processing aids and were not really food additives and were not intended to be present in the final product and that other Codex standards (e.g. for Fats and Oils and Sugars) did not include provisions for such processing aids. A number of delegations therefore proposed that they should be omitted from the standard particularly as a specific list of substances could not readily be amended and therefore might impede technological developments. Other delegations emphasized the importance of developing some control over the use of clarifying agents because their use could affect the apple juice and because there might conceivably be a health hazard without any control. The Group therefore decided to request the Codex Committee on Food Additives to consider the elaboration of a permitted list of clarifying agents for fruit juices and noted that they were used in some other foods, e.g. wine and beer. It was noted that a control over the use of enzymes was already being developed by the Codex Committee on Food Additive

The Group also agreed to retain a list of clarifying agents but to place it in a separate section of the standard under the heading of "Processing Aids" so as to make it clear that these substances were not ingredients or additives. The following amendments were also agreed:

1. Description - A sentence was added as follows:  
"The juice may be clarified with the aid of the clarifying and filtering agents listed in Section 4."
2. "Processing aids" - the following was added at the end of the list: "Any other clarifying or filtering agent in accordance with national legislation and as approved by the Codex Committee on Food Additives".

It was further agreed that "pure vegetable carbon, pure nitrogen, and pure carbon dioxide" (when not added for the purposes of "carbonation") were processing aids and that they should be included in the new section "Processing aids" under the sub-paragraph "Others".

The delegation of the Netherlands informed the Group that they were opposed to the introduction of any detailed description of a technological process in a standard for fruit juices and therefore to any list of permitted processing aids.

#### Maximum level for tin

12. The Group had agreed to a maximum level of 150 mg/kg for tin in apple juice after a full discussion at its last session (ALINORM 71/14, paragraph 27). After further discussion the delegations of Denmark, the Federal Republic of Germany, Finland, France, Norway and Sweden considered that this figure was still too high and reserved their positions accordingly. The delegations of the Federal Republic of Germany and Finland reaffirmed their positions in respect to all fruit juices.

#### Water used for reconstitution of apple juice and other fruit juices

13. The delegation of the Federal Republic of Germany drew attention to the need to consider the inclusion of provisions relating to the type of water used for the reconstitution of apple juice. The hygienic requirements and control over the amount of nitrates had been considered at the Sixth Session (ALINORM 70/14, paragraph 8) and at the Seventh Session (ALINORM 71/14, paragraph 27) and the Group agreed that no amendments to the standards were necessary in view of the provisions in the Hygiene Section and in the Recommended International Code of Practice on the General Principles of Food Hygiene.

However, the Group decided that it would be appropriate to make it clear that only water which was suitable for the purpose should be used for the reconstitution of a juice. It was agreed to amend the sentence in the description section to read as follows:

"The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice."

The Group agreed that this was an important amendment which should be made to the other standards, including those at Step 8 and asked the Secretariat to arrange for them to be considered as editorial amendments.

#### Labelling

14. The Group agreed to include in the list of ingredients the declaration of "1-ascorbic acid as antioxidant" or "anti-oxidant" as had been done in the standard for nectars. The delegation of the Federal Republic of Germany reserved its position as regards the declaration on the label of 1-ascorbic acid when used as a processing acid.

It was noted that in the section on net contents the words "units" should be after "British". The standard was amended accordingly and it was agreed that this editorial amendment should also be applied to the other Step 8 standards.

With regard to the use of the term "carbonated", the delegation of France pointed out that in the French text this should read "gazifiée".

#### Labelling of an apple juice produced by reconstitution

15. The Group considered the labelling of apple juice produced by reconstitution from an apple concentrate against the background of the decisions taken at its Seventh session that no distinction should be made in the name of the product but that the fact of reconstitution should be declared in the list of ingredients (ALINORM 71/14, paragraphs 18 to 20). The Group also took into account its previous discussion on orange juice as recorded in paragraph 59 of ALINORM 71/14 and noted that the question of the adequacy of the provisions relating to the declaration of ingredients in the Recommended General Standard for the Labelling of Pre-packaged Foods was being brought to the attention of the Codex Committee on Food Labelling.

The delegations whose reservations had been recorded in the above-mentioned paragraphs of the Report of the Seventh Session said that their reservations were also applicable to and relevant to, apple juice. The delegations of Canada and Finland also expressed reservations about the omission of a reference to reconstitution in the name of the product.

The Group agreed to edit the standard for apple juice on the same lines as had been done in the standards for orange juice, grapefruit juice and lemon juice. The Group then considered whether it might be possible to formulate a requirement about the prominence of a statement on the label to the effect that the product had been reconstituted. This requirement might be elaborated on the general lines envisaged in the proposal of the United States of America for orange juice (ALINORM 71/14, paragraph 59) or by including a more specific provision which would require the declaration of ingredients (including the reference to the fact of reconstitution) to be made on the label in immediate proximity to the name of the product. The Group finally decided, however, to maintain the existing text.

#### Advancement of the Standard to Step 8

16. The Group agreed to advance the Draft Standard for Apple Juice to Step 8 of the Procedure.

#### Consideration at Step 7 of the Draft Standard for Grape Juice

17. The Group considered the above standard as contained in Appendix V to ALINORM 69/14, in the light of the general decisions which had been taken for apple juice, and taking account of the comments on the standard which had been submitted at Step 6 and which were contained in CODEX/FRUJU/69/3 and its Addenda.

#### Description

18. The Group agreed that the standard was intended to include both the Vitis labrusca L. and the Vitis Vinifera L. and its hybrids, and therefore decided that the above botanical nomenclature should be inserted into the standard. The Group also agreed that, where it was appropriate to do so, the standard should include separate provisions relating to the two types of grapes.

### Soluble Solids

19. The Group considered whether the figure of 16°Brix should be lowered to 15°Brix because of the characteristics of grapes grown in some countries. The delegation of the Federal Republic of Germany proposed that the figure should be reduced to 13.5° Brix. With the exception of the delegation of Yugoslavia, the Group agreed that the figure of 16°Brix was too high and that it should be amended to 15°Brix, The remainder of the sub-paragraph was amended in the light of the decisions taken for the other fruit juice standards.

### Sugars

20. The delegation of the USA informed the Group that the Concord grape (Vitis labrusca L.) were grapes of a high acid and highly flavoured character. In the USA the established commercial practice was to add sugar to juice derived from such grapes in order to make it acceptable to the consumer. The Group noted that sugar was not being added to juice made from other grapes and agreed therefore to amend the standard in Section 2.2 to provide for the addition of sugars to juice of the Vitis labrusca L.

### Volatile Acids

21. The delegation of Spain proposed that the figure of 0.4 g/kg be lowered to 0.2 g/kg as in their opinion the present figure was much too high. However, the Group decided to maintain the existing text.

### Organoleptic Properties

22. The Group agreed to make similar changes to the wording of this sub-paragraph as had already been done for the apple juice. It was further agreed to provide for the differences between the Vitis labrusca L. and the Vitis vinifera L. and its hybrids.

### Use of Concentrate

23. The Group decided that as far as the use of concentrate was concerned it would also be necessary to differentiate between the two types of grapes.

### Use of Carbon Dioxide

24. As had already been done in the apple juice standard, a similar sub-paragraph was introduced into the grape juice standard.

25. The Group agreed to amend this sub-paragraph in the light of the decisions taken for apple juice.

### Processing aids - De-Acidifying agents

26. The Group agreed to include provisions for processing aids on the lines of those included in the standard for apple juice to provide for the use of pure precipitated calcium carbonate as a de-acidifying agent in order to provide means of adjusting the high acidity of some grapes by removal of the tartaric acid. It was noted that calcium carbonate had been used for many years in some countries where, because of the climatic conditions the characteristics of the grapes included a high acidity and that its use did not result in a residue in the final product. The effect of the removal of tartaric acid could be regarded as being beneficial in view of the opinions expressed about excessive intake of this substance by the Joint FAO/WHO Expert Committee on Food Additives and because the result was a product which was in accord with consumer expectation of a grape juice.

27. Some delegations expressed the view that it might be appropriate to inform the consumer that the nature of the particular grape juice had been altered and that this could be done by a suitable declaration on the label e.g. "de-acidified by calcium carbonate". These delegations drew attention to corresponding labelling requirements when sugar was added to fruit juices including grape juice. It was agreed to include the provision for the use of Pure precipitated Calcium Carbonate and to ask Governments for comments on the need for a labelling provision.

#### Acidifying agents

28. The delegation of Algeria proposed the inclusion of tartaric acid as an acidifying agent for use with those grapes with an acidity of an average of 3.5 to 4.0 g/kg titratable acidity expressed as tartaric acid and with soluble solids of 17° - 18°Brix. The delegation of the Federal Republic of Germany expressed reservations about the technological feasibilities of and the need for the use of tartaric acid because of its insolubility in grape juice and the delegation of Switzerland suggested that tartaric acid would have to be used together with malic acid and citric acid. It was noted that these three acids were commonly found in fruit and that provision had been made for their use in nectars. The Group agreed to defer its decision on the use of acidifying agents until further technological information was available. The delegation of Switzerland agreed to prepare a paper for the next Session of the Group which would take into account data on this subject to be supplied by Algeria. This paper would deal with the justification for the adjustment of the acidity by the use of tartaric acid and all other relevant details including the need for a limit of the amount of citric acid.

#### Contaminants - Sulphur dioxide

29. Consequential editing amendments were made to this section on contaminants. The Group considered again the question of the provision for a residue of 50 mg/kg of sulphur dioxide which would, in accordance with decisions taken at previous sessions, be reduced to 10 mg/kg after an interval of 3 years from the date of publication of the standard for acceptance by Governments (ALINORM 69/14, paragraph 11). During the discussion it was noted that a residue could be present for one or more of three reasons: firstly: chemical sterilization of the plant e.g. for hygienic purposes; secondly: the treatment of the raw material (grapes) with a small amount of sulphur dioxide to help to arrest fermentation before or after the extraction of the juice and thirdly: to help manufacture of the final product from a juice preserved by chemical means i.e. with sulphur dioxide.

30. It was agreed that it would be necessary to make clear in the standard why the residue of sulphur dioxide was being allowed. It would be necessary therefore in due course to redraft the provisions which had been included in 4.2.1.3 and 6.2.7 of the standard as contained in Appendix V of ALINORM 69/14. However, several delegations expressed serious doubts about any use of sulphur dioxide which would result in a level higher than 10 mg/kg since a higher level might have some preservative effects. Some delegations drew attention to the inclusion of the phrase "preserved exclusively by physical means" in the description section and said that in their view the intention of this phrase was that neither the fruit product nor any intermediate product should be chemically preserved. These and other delegations questioned whether a product prepared from chemically preserved juice could be regarded as complying with the standard.

31. Delegations in favour of the existing provisions in the standard pointed out that in some countries, it was at present essential to preserve some grape juice by the

sulphiting process, because of the short harvesting season and the large quantity of rapes which could not otherwise be dealt with by processes such as concentration, freezing and pasteurisation.

32. The Group noted that a maximum level of 10 mg/kg would cover adequately any residue resulting from hygienic treatment, and that such residue might be regarded as being a necessary contaminant of the manufacturing process which need not require a declaration on the label (as in the Codex standard for sugars). However, it did not appear that a maximum of 10 mg/kg would be sufficient for any intermediate treatment of the raw material. It was agreed that Governments should be asked to comment, on whether contamination by sulphur dioxide should be provided for in the standard and, if so, for which of the reasons set out in paragraph 29. Governments should also comment on how the provisions for maximum levels and for declaration on the label should be elaborated. The Group reaffirmed, however, the previous decision that any level of SO<sub>2</sub> should be reduced to 10 mg/kg after the transitional period of three years, after the adoption of the standard at Step 9. The delegation of Yugoslavia expressed the view that there was no need for any sulphur dioxide at all.

33. The delegations of the Netherlands, the Federal Republic of Germany, USA and Switzerland stated that they would regard a juice which had been produced from raw material which, at any time, had been preserved by chemical means as not complying with the description section of the standard. These delegations said that they regards any use of chemical preservations as a processing aid (except for the hygienic treatments) as being unacceptable and that it was necessary to distinguish clearly between products preserved exclusively by physical means, and products which, in their view, were preserved even temporarily, by chemical means. The delegations of the Federal Republic of Germany and the Netherlands stated that the product should be distinguished in the name of the product.

#### Tin

34. The delegations of Finland and Poland reserved their positions because they considered that the maximum figure for tin was too high. Poland considered it should now be reduced to 150 mg/kg and Finland to an even lower figure.

#### Maximum amount of sugar and consequential labelling provisions

35. The delegation of the USA proposed that a maximum figure of 75 g/kg for sugars should be included (see paragraph 20) and suggested that the label of a grape juice made from Vitis labrusca L. should include a declaration "sugar added" if no more than 25 g/kg of sugar was added and that the name should include the word "sweetened" for amounts of more than 25 g/kg. It might also be appropriate to include a reference to the "Concord" grape on the label.

36. Several delegations expressed the view that these additional provisions would result in fundamental differences in the grape juice prepared from the two types of grape and that it would be preferable therefore to deal with them in separate standards. The Group decided to place all the provisions relating specifically to Vitis labrusca L. in square brackets and to ask Governments to comment on whether to include them in the standard or in a separate standard. It was noted that as the Vitis labrusca L. was a grape it would be necessary to ensure that a juice made from it could be sold as a grape juice.

### Status of the Standard

37. The Group agreed that the standard could not be advanced to Step 8 because of the substantial amendments which had been made. Governments should be asked to comment, in particular, on how best to deal with the problems of the Concord grape. It was therefore agreed that the draft standard as amended should be returned to Step 6 for a further round of Government comments.

### Consideration at Step 7 of the Draft Standard for Tomato Juice

38. The Group examined the above standard as contained in Appendix VI to ALINORM 69/14 in the light of the general decisions which it had taken for apple juice, and taking into account the comments on the standard which had been submitted at Step 6 and which were contained in Codex/FRUJU/69/3 and its addenda.

### Description

39. The Group agreed to include the botanical name for tomatoes "Lycopersicum esculentum L. " into the standard.

### Addition of Sugars

40. The Group considered the question of the necessity to allow the addition of sugars to tomato juice. It was pointed out that there was no need to adjust the sugar/acid ratio as had been provided for in the standard for the other juices. In the absence of any technological reasons to justify the addition of sugars to tomato juice, the Group therefore decided that all references to the addition of sugars should be deleted from the standard. The delegations of Canada, France, the Netherlands and Poland reserved their positions on this decision.

### Addition of Salt

41. The Group considered written comments from Israel suggesting that a maximum limit should be set for the total salt content in order to control the amount of salt which could be added. The Group also took note that the major part of the trade in tomato juice was tomato juice with salt added. It was agreed that it would not be necessary to provide for any limits for salt whether added or not as when it was used in excess it would produce an unacceptable product.

### Addition of Spices

42. The Group were reminded that a standard for Tomato Juice Cocktail was to be elaborated by the Netherlands and USA for future examination by the Group of Experts, and that this standard would include provisions for the addition of spices to tomato juice. The Group confirmed its previous decision not to provide for the addition of spices to tomato juice as reflected in the Report of its Fifth Session (ALINORM 69/14, paragraph 12). The delegation of Switzerland reserved its position because it considered that the addition of spices could be regarded as being similar to the addition of salt.

### Use of Concentrate

43. The delegations of Italy, Canada and the USA reiterated their reserves on the principle of using concentrates for the manufacture of tomato juice.

### Hygiene

44. The Group took note that the Howard Mould Count Method was being used in many countries for tomato juice. The Group noted that although the Codex Committee

on Food Hygiene had at its Fifth Session endorsed the mandatory provision relating to the Howard Mould Count it had at its Sixth Session expressed the view that a similar provision in Processed Tomato Concentrates should be advisory. The Codex Committee on Food Hygiene had considered that it would be difficult to obtain reproducible results with all analysts under all conditions. The delegations of Finland, Poland and Switzerland expressed the same viewpoint and the Group decided to adopt a similar provision in the standard for tomato juice.

#### Contaminants

45. The delegation of the USA drew the attention of the Group to the results of recent analysis they had done regarding the maximum level of lead present in tomato juice. Using modern analytical methods, such as the atomic absorption method, they had discovered that actual levels for lead were higher than that prescribed in the standard. It therefore proposed that the figure for lead should be raised to 1.0 mg/kg which would be a more realistic figure. This would be subject to review in two or three years, after further analytical data had been developed by other countries. The delegation of Italy supported this proposal. The delegations of Federal Republic of Germany, Finland and Yugoslavia said that they could not agree to an increase in the figure for lead because of the general problem of lead contamination. The attention of the Group was called to the paragraphs in the report of the Seventh Session dealing with the question of maximum limits for lead in the other standards at Step 8. The Group was informed that the levels had been temporarily endorsed by the Codex Committee of Food Additives.

The Group agreed that the present work being carried out on the levels of lead in fruit juices using modern analytical methods appeared to indicate that the levels included in all the standards might be too low. It was decided therefore, not to change the present figure for tomato juice but to bring the whole question to the Members of the Commission and to request Governments to pay particular attention to this point in their analytical research and also to try and identify sources of contamination which were not necessarily under the control of the fruit juice producers but which might be due to sources such as environmental pollution. The delegation of Spain reaffirmed its reserve as it still considered that the figure should be 0,5 mg/kg for this and other juices. The delegation of the Federal Republic of Germany agreed to prepare a paper for the next session of the Group on Lead Contamination.

#### Labelling

46. The Group agreed that the addition of salt should be shown in the list of ingredients.

#### Advancement of the Standard to step 8

47. The Group agreed to advance the Draft Standard for Tomato Juice to Step 8 of the Procedure.

#### Draft standards for Concentrated Apple/Juice and other concentrated juices

48. The Group discussed the draft provisional standards for concentrated apple juice, orange juice, and grape juice (Appendices IX, X and XI of ALINORM 69/14; at Step 7. The Group took into account Government comments and in particular the proposed draft standard for sweetened concentrated orange juice as prepared by the delegation of the United States of America (Appendix x of Codex/FRUJU/69/3). In view of the decisions about the addition of sugar to apple juice, grape juice and orange juice it was decided to have separate standards for unsweetened and sweetened concentrated

juices and that, for the time being, it would only be necessary, so far as sweetened concentrates were concerned, to elaborate a standard for orange juice. The Group revised the draft standard for concentrated apple juice.

49. The amended draft includes provisions based on those in the draft standard for apple juice and it also makes provision in section 3 whereby the concentrated juice after reconstitution must comply with the provision of that standard. The only two provisions in the draft standard for apple juice which appeared to be inappropriate for a product reconstituted from a concentrated juice were sections 2.4 (organoleptic properties, second sentence only) and 2.5 (use of concentrate). However, it was noted that these two provisions were of a permissive nature. Some delegations considered that the standard for concentrated apple juice should apply to products intended for sale to the consumers immediately after being reconstituted, e.g. from dispensers or from vending machines. It was noted that the consumer would, in those circumstances, expect to get apple juice which complied with the standard for apple juice. Most delegations also considered that it was essential to ensure that products which were intended for further processing should not be required to comply with the standard because they could be changed before being sold to the consumer and might, in many cases, be intended for sale other than as a fruit juice e.g. in soft drinks.

50. The revised standard includes a Scope section drafted in positive terms and an alternative Scope section with negative provisions. Passages were included in square brackets on which comments are particularly requested.

51. In the Description section, provisions were included defining the process of concentration and the juice from which the concentrate is made.

52. In section 3.2 (Organoleptic properties) some delegations were not convinced that a requirement "the product shall have the characteristic colour, aroma and flavour of concentrated apple juice" would be practicable because of the variations in such properties and in the degree of concentration.

53. The delegation of Romania drew the attention of the Group to the decision of the International Organization for Standardization (ISO) to substitute the word "sensoric" for "organoleptic" in all its technical committees and requested that the Codex Alimentarius Commission take this decision into account when elaborating future standards. The delegation of Romania further suggested that there should be attached as an annex to each standard an explanatory list of all the technological and scientific words used in the standard.

54. It was decided that it was necessary to provide (Section 3.3) for the addition of an apple juice concentrate, apple juice or suitable water in order to reflect the manufacturing practice of adjusting the degree of concentration and other factors. Some delegations thought that it was unlikely that a carbonated concentrate would be manufactured but in view of the relatively low degree of minimum concentration (2 to 1) it was agreed that a provision should be included on the line of that in the standard for apple juice.

55. The figure in the labelling section (Section 9.6.2) was put in square brackets and governments should be asked to comment on what the appropriate level should be at which a declaration to the consumer would be meaningful.

Provisions for dilution instructions were included (section 9.7) but the delegation of Canada proposed that in view of the great range of possible concentrations they be included in the name of the product and that Section 9.1.1 should read as follows:

"The name of the product shall be concentrated "apple juice". The number of parts by volume of H<sub>2</sub>O which have to be added to one part by volume of the concentrate to obtain single strength juice shall plainly and conspicuously accompany the name of the product".

The Group took note of the request of the delegation of Italy that in the proposed draft standard for concentrated grape juice a provision should be made that containers intended for direct consumption should weigh no more than 2 kg in order to prevent any different use of the product.

#### Status of the standards

56. It was agreed that the standard for concentrated apple juice, as revised, should be returned to Step 6 for a further round of government comments. The standard for concentrated orange juice (unsweetened) and concentrated grape juice (*Vitis vinifera* L. and its hybrids only) were also returned to Step 6 after editing in accordance with the decisions on concentrated apple juice, *mutatis mutandis*. The Secretariat was authorized to make the appropriate editing amendments to the draft standard for sweetened concentrated orange juice which should then be sent out at Step 3. It was noted that it would be necessary to include an appropriate provision in the concentrated orange juice (for example in the Scope section) to refer to the sweetened product if the two standards were in due course sent forward to the Commission at different steps in the procedure. It was agreed that the amended draft standards would be issued in a separate document to this Report.

#### Standards for other concentrated fruit juices

57. Governments were invited to consider what the figure for the minimum degree of concentration should be for any other concentrated fruit juice for which they considered standards were justified (e.g. lemon juice, grapefruit juice, pineapple juice). It would then be possible, at the appropriate time, for draft standards for these concentrated juices to be elaborated.

#### Consideration of a Future Work Programme for the Group

58. The Group had before them a paper prepared by the United Kingdom on Future Work (CODEX/FRUJU/69/5) together with the written comments by governments on the paper and also took into account the Classification and Definition Framework for Fruit Juices and Fruit Juice Products (CODEX/FRUJU/69/7) which had been drawn up at its First and Second Sessions. It was suggested that the main emphasis of the work programme should be placed on standards for products intended for direct sale to the consumer. It therefore appeared to be appropriate to give priority, after completion of work already in hand, to the elaboration of standards for clear nectars (and in particular for blackcurrant nectar) and similar products with a high juice content. The delegations of the Netherlands and the Federal Republic of Germany were therefore asked to provide working papers covering these products, taking into account the criteria for the establishment of work priorities (page 45 of the Procedural Manual of the Commission). The paper by the Federal Republic of Germany would provide statistic of national and international trade. Consideration of the other matters listed in paragraph 21 of ALINORM 69/14 could be examined again in the light of details provided by the delegations listed in the paragraph in accordance with the work criteria. It was noted that the questions of blended juices or mixtures of juices needed to be considered and also that there was an important trade in products which might be described as 'ingredient' juices which had different characteristics from concentrated juices and needed to be

kept separate. There was also the question of standards for fruit juices preserved by a combination of chemical and physical means (ALINORM 70/14, paragraph 11). The United Kingdom delegation was asked to provide a note on these 'ingredient' juices.

59. The Group noted that the term 'fruit juice' was used in the reference to its responsibility on page 69 of the Procedural Manual ("to elaborate world-wide standards for fruit juices"). The delegation of the United Kingdom thought that the Commission might therefore wish at some time to consider the need for extended terms of reference in case it became necessary to elaborate standards for fruit juice products other than those analogous to pulpy-type nectars which had already been dealt with. Some delegations of the Group drew attention to the need for consumer protection because many products which contained little or no fruit juice might be confused with fruit juices or fruit juice products with a high juice content. It appeared to be desirable to elaborate standards for all these products including soft drinks, so long as the work criteria were complied with.

#### Proposed Draft standard for Pineapple Juice

60. The Group authorized the Secretariat to make any further amendments to the proposed draft standard for pineapple juice in the light of the decisions taken at the present session, and to send the amended standard out to governments for comments at Step 3.

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

61. The Group agreed that the agenda for its next session should include the reconsideration of the Draft Standards for Grape Juice, Concentrated Apple Juice, Concentrated Orange Juice and Concentrated Grape Juice at Step 7. It was also agreed that the Proposed Draft Standards for Sweetened Concentrated Orange Juice and Pineapple Juice should be considered in the light of government comments. The Group would consider a paper on lead contamination to be prepared by the Federal Republic of Germany and in addition the problems of the maximum levels for tin and sulphur dioxide would also be reviewed. In addition, papers on clear nectars (The Netherlands), fruit products with high juice content (Spain) and 'ingredient juices' (the United Kingdom) would also be considered. The Group also expressed the wish that the Sampling Plans should be considered if the paper to be prepared by the delegations of the Netherlands and Spain was ready in time for the next session.

#### Status of Standards being elaborated by the Committee (prepared by the Secretariat)

62. I. Standards considered at the Seventh and Eighth Sessions of the Committee at Step 7 of the Procedure
- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"><li>- Apricot, Peach and Pear Nectars</li><li>- Orange Juice</li><li>- Grapefruit Juice</li><li>- Lemon Juice</li><li>- Apple Juice</li><li>- Tomato Juice</li></ul> |  | to be submitted to the Eighth Session of the Codex Alimentarius Commission at Step 8 of the Procedure |
|--|--|---|
- II. Standards considered at the Eighth Session of the Committee at Step 7 and returned to Step 6 for a second round of comments
- Grape Juice
  - Concentrated Apple Juice

- Concentrated Orange Juice
  - Concentrated Grape Juice
- III. Standards sent to Governments for comments at Step 3 of the Procedure
- Sweetened Concentrated Orange Juice
  - Pineapple Juice
- IV. Standards to be considered at step 2 of the Procedure
- Small fruit nectars (blackcurrants, redcurrants, strawberries, raspberries, cranberries, whortleberries, bilberries, cloudberrries and rowanberries).
  - Fruit Products with high juice content.
- V. Standards to be drafted for consideration at Step 2 of the Procedure.
- Tomato juice cocktail
  - Nectars of passion fruit, pay-pay and guava
  - Citrus juice of the specie "Citrus reticulata"
  - Bilberry juice, Cranberry juice, Lime juice and Blackcurrant juice.

#### Election of Chairman and Vice-chairman

63. The Group unanimously re-elected Professor W. Pilnik (Netherlands) to serve as Chairman and Mr. W. Orłowski (Poland) to serve as Vice-chairman until the end of the Ninth Session.

#### Date and Place of Next Session

64. The Group took note that its next session would probably be held in Rome in the spring of 1972.

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LIST OF PARTICIPANTS  
LISTA DE PARTICIPANTES

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DRAFT STANDARD FOR APPLE 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 sound ripe apples (Pyrus malus L.) preserved exclusively by physical means. The juice may be turbid or clear. The juice may be clarified with the aid of the clarifying and filtering agents listed in Section 4 (Processing Aids). The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Soluble Solids

The soluble apple solids content of apple juice shall be not less than 10 per cent by weight as determined by refractometer at 20 C, uncorrected for acidity and read as Brix on the International Sucrose Scales.

2.2 Ethanol Content

The ethanol content shall not exceed 5 g/kg

2.3 Volatile Acids

The volatile acids content shall not exceed 0.4 g/kg expressed as acetic acid.

2.4 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of apple juice. Natural volatile apple juice components may be restored to any apple juice from which natural apple juice components have been removed.

2.5 Use of Concentrate

The addition of concentrate to juice is permitted. Only concentrate from (Pyrus malus L.) may be used.

2.6 Use of Carbon Dioxide

The apple juice may be "carbonated".

3. FOOD ADDITIVES

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

3.1.1 Antioxidants

l-ascorbic acid	-	without limit
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3.1.2 Others

Carbon dioxide	-	without limit
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#### 4. PROCESSING AIDS

##### 4.1 Clarifying agents

- 4.1.1 Clarifying enzymes (without preservatives) (temporarily endorsed)
- 4.1.2 Pectolytic and proteolytic enzymes
- 4.1.3 Edible gelatine
- 4.1.4 Tannin (temporarily endorsed)
- 4.1.5 Bentonite, with low soluble iron content
- 4.1.6 Colloidal solution of silica (silicium dioxide)

##### 4.2 Filtration aids

- 4.2.1 Asbestos (not endorsed)
- 4.2.2 Kieselguhr (diatomite)
- 4.2.3 Cellulose
- 4.2.4 Perlite (not endorsed)

4.3 Any other clarifying and filtering agents in accordance with national legislation and as approved by the Codex Committee on Food Additives.

##### 4.4 Others

- 4.4.1 Pure vegetable carbon
- 4.4.2 Pure nitrogen
- 4.4.3 Pure carbon dioxide

#### 5. CONTAMINANTS

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

- | 5.1.1 | <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)   | 10 mg/kg                         |
|       | Tin (Sn)  | 150 mg/kg                        |
| 5.1.2 | Total metal content precipitable by potassium hexacyanoferrate (II) 12 mg/kg expressed as Fe                                      |                                  |
| 5.1.3 | The maximum amount of sulphur dioxide which may be present in the final product shall not exceed 10 mg/kg total SO <sub>2</sub> . |                                  |
| 5.1.4 | Mineral impurities insoluble in 10% hydrochloric acid shall not exceed 20 mg/kg.  |                                  |

#### 6. HYGIENE

6.1 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.

- 6.1.1 Micro-organisms capable of development under normal conditions of storage - None

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

6.2 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 Quick Frozen Fruits, Vegetables and their Juices, as appropriate.

## 7. WEIGHTS AND MEASURES

### 7.1 Fill of Container

#### 7.1.1 Minimum Fill

The apple 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.

## 8. 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:

### 8.1 The Name of the Food

- 8.1.1 The name of the product shall be "apple juice".

### 8.2 List of Ingredients

- 8.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion except that added water need not be declared.
- 8.2.2 In the case of apple juice made from concentrate the fact of reconstitution shall be declared in the list of ingredients as the first ingredient as follows: "apple juice made from concentrate" or "reconstituted apple juice" or "apple juice made from concentrated apple juice".
- 8.2.3 The addition of 1-ascorbic acid shall be declared in the list of ingredients as:
- a) "L-ascorbic acid as antioxidant"
  - b) "antioxidant"

### 8.3 Net Contents

The net contents shall be declared by volume in either the metric ("Système International"), US or British units 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

- 8.5.1 The country of origin of the product shall be declared.
- 8.5.2 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 purpose of labelling.

## 8.6 Additional Requirements

The following additional specific provisions shall apply:

- 8.6.1 No claims 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.
- 8.6.2 The term "carbonated" or an equivalent term in other languages shall be declared on the label if the apple juice contains more than 2 g/kg of carbon dioxide.
- 8.6.3 No fruit or fruit juice may be represented pictorially on the label except apples or apple juice.
- 8.6.4 Where apple juice requires to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product.

## 8.7 Bulk packs

In the case of apple juice in bulk the information required in 8.1 to 8.6.4 shall either be placed on the container or be given in accompanying documents.

## 9. METHODS OF ANALYSIS AND SAMPLING

(To be finalized later).

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

(To be held at Step 6 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 sound ripe grapes (Vitis vinifera L. and its hybrids or Vitis labrusca L.). The juice may be turbid or clear. The juice may be clarified with the aid of the clarifying and filtering agents listed in Section 4 (Processing Aids). The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

**2. ESSENTIAL COMPOSITION AND QUALITY FACTORS**

**2.1 Soluble Solids**

The soluble solids content of grape juice (exclusive of added sugar) shall be not less than 15 Brix 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 to juice of Vitis labrusca L. type only: sucrose (white sugar), dextrose and dried glucose syrup, as defined by the Codex Alimentarius Commission. The quantity added shall not exceed 75 g/kg].

**2.3 Ethanol Content**

The ethanol content shall not exceed 5 g/kg.

**2.4 Volatile Acids**

The volatile acids content shall not exceed 0.4 g/kg expressed as acetic acid.

**2.5 Organoleptic Properties**

**2.5.1 Vitis labrusca L. grape juice**

[The product shall have the characteristic colour, aroma and flavour of grape juice obtained from Vitis labrusca L. Natural volatile grape juice [(vitis labrusca L.)] components may only be restored to any grape juice obtained from Vitis labrusca, L. from which natural grape juice components have been removed]

**2.5.2 Vitis vinifera and its hybrids, grape juice**

The product shall have the characteristic colour, aroma and flavour of grape juice obtained from Vitis vinifera L. and its hybrids. Natural volatile grape juice (Vitis vinifera L. and its hybrids) components may only be restored to any grape juice obtained from Vitis vinifera L. and its hybrids from which natural volatile grape juice components have been removed.

## 2.6 Use of Concentrates

2.6.1 The addition of concentrate obtained from Vitis vinifera L. and its hybrids, may only be added to grape juice obtained from Vitis vinifera L. and its hybrids.

2.6.2 /The addition of concentrate obtained from Vitis labrusca L. may only be added to grape juice obtained from Vitis labrusca L.]

## 3. FOOD ADDITIVES

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

### 3.1.1 Antioxidants

l-ascorbic acids - without limit

### 3.1.2 Others

Pure carbon dioxide - without limit

## 4. PROCESSING AIDS

### 4.1 Clarifying Agents

4.1.1 Clarifying enzymes (without preservatives) - (temporarily endorsed)

4.1.2 Pectolytic and Proteolytic enzymes

4.1.3 Edible Gelatine

4.1.4 Tannin (temporarily endorsed)

4.1.5 Bentonite, with low soluble iron content

4.1.6 Colloidal solution of silica (silicum dioxide)

### 4.2 Filtration Aids

4.2.1 Asbestos (not endorsed)

4.2.2 Kieselguhr (diatomite) (endorsed)

4.2.3 Cellulose (endorsed)

4.2.4 Perlite (not endorsed)

4.3 Any other clarifying and filtering agents in accordance with national legislation and as approved by the Codex Committee on Food Additives.

### 4.4 De-acidifying Agent

4.4.1 Pure precipitated calcium carbonate

### 4.5 Others

4.5.1 Pure vegetable carbon

4.5.2 Pure nitrogen

4.5.3 Pure carbon dioxide

## 5. CONTAMINANTS

5.1 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
Copper (Cu)	5 mg/kg
Zinc (Zn)	5 mg/kg
Iron (Fe)	15 mg/kg
Tin (Sn)	250 mg/kg (not endorsed) <sup>1</sup>

5.2 Total metal content precipitable by potassium hexacyanoferrate (II) 17 mg/kg expressed as Fe

5.3 The maximum amount of sulphur dioxide which may be present in the final product obtained from Vitis vinifera L. and its hybrids shall not exceed 50 mg/kg <sup>2</sup> total SO<sub>2</sub> <sup>3</sup>.

<sup>1</sup> The provisional limit of 250 mg/kg for tin is currently under review and will be re-examined at the next session of the Committee.

<sup>2</sup> Subject to review in the light of government comments (see para 32, ALINORM 71/14(A)).

<sup>3</sup> After an interval of 3 years from the date of publication of this standard for acceptance by governments, this figure will be reduced to 10 mg/kg (see para 29, ALINORM 71/14(A)).

5.4 Mineral impurities insoluble in 10% hydrochloric acid shall not exceed 20 mg/kg.

## 6. HYGIENE

6.1 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.

6.1.1 Micro-organisms capable of development under normal conditions of storage - None.

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

6.2 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 Quick Frozen Fruits, Vegetables and their Juices, as appropriate.

## 7. WEIGHTS AND MEASURES

### 7.1 Fill of Container

#### 7.1.1 Minimum fill

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

## 8. 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:

### 8.1 The Name of the good

The name of the product shall be "grape juice". [if a sugar is added in a quantity not exceeding 25 g/kg to grape juice obtained from Vitis labrusca L. the word "X" shall plainly and conspicuously accompany the name "grape juice", where "X" is the name of the sugar added. Where sugar is added in quantities over 25 g/kg to grape juice obtained from Vitis labrusca L. then the name of the product shall be "sweetened grape juice".].

### 8.2 List of Ingredients

- 8.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that added water need not be declared.
- 8.2.2 In the case of grape juice made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as the first ingredient as follows: "grape juice made from concentrate" or "reconstituted grape juice" or "grape juice made from concentrated grape juice".
- 8.2.3 The addition of L-ascorbic acid shall be declared in the list of ingredients as:
  - a) "L-ascorbic acid as antioxidant"
  - b) "antioxidant"

### 8.3 Net Contents

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

- 8.5.1 The country of origin of the product shall be declared.
- 8.5.2 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.

### 8.6 Additional Requirements

The following additional specific provisions shall apply:

- 8.6.1 No fruit or fruit juice may be represented pictorially on the label except grape or grape juice.
- 8.6.2 The term "carbonated" or an equivalent term in other languages shall be declared on the label if the grape juice contains more than [2 g/kg] of carbon dioxide.
- 8.6.3 No claims 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.

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

8.6.5 The presence of sulphur dioxide shall be declared on the label.<sup>1</sup>

<sup>1</sup> Subject to review in the light of government comments (see para 3.2, ALINORM 71/14(A)).

#### 8.7 Bulk Packs

In the case of grape juice in bulk, the information required in 8.1 to 8.6.5 shall either be placed on the container or be given in accompanying documents.

### 9. METHODS OP ANALYSIS AND SAMPLING

(To be finalized later).

**DRAFT STANDARD FOR TOMATO 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 sound, ripe, red or reddish tomatoes (Lycopersicum esculentum L.) preserved exclusively by physical means, the juice being strained free from skins, seeds and other coarse parts of tomatoes, and from other hard substances and impurities. The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

**2. ESSENTIAL COMPOSITION AND QUALITY FACTORS**

**2.1 Soluble Tomato Solids**

The soluble tomato solids content of tomato juice, exclusive of added salt, shall be not less than 4.5° Brix determined by refractometer at 20 C, uncorrected for acidity and read as Brix on the International Sucrose Scales.

**2.2 Salt**

The addition of salt is permitted.

**2.3 Organoleptic Properties**

The product shall have the characteristic colour, aroma and flavour of tomato juice.

**2.4 Use of Concentrate**

The addition of concentrate to juice is permitted. Only concentrate from Lycopersicum esculentum L. may be used.

**3. FOOD ADDITIVES**

None.

**4. CONTAMINANTS**

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

4.1.1 <u>Contaminant</u>	<u>Maximum level</u>
Arsenic As	0.2 mg/kg
Lead Pb	0.3 mg/kg <sup>1</sup>
Copper (Cu)	5 mg/kg
Zinc (Zn)	5 mg/kg
Iron (Fe)	15 mg/kg
Tin (Sn)	250 mg/kg (not endorsed) <sup>2</sup>

<sup>1</sup> Subject to review in the light of further analytical data (see para 45, ALINORM 71/14(A)).

<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.

- 4.1.2 Total metal content precipitable by potassium hexacyanoferrate (II) 17 mg/kg expressed as Fe
- 4.1.3 Mineral impurities insoluble in 10 per cent hydrochloric acid shall not exceed 25 mg/kg.

## 5. HYGIENE

5.1 The following provisions in respect of the food hygiene of this product are subject to endorsement 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 micro-organisms in amounts which are toxic -(to be endorsed ).
- 5.1.3 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Code of Hygienic Practice for Quick Frozen Fruits, Vegetables and their Juices, as appropriate.
- 5.1.4 The product shall not contain mould filaments in a quantity indicative of unsuitable raw materials or unsanitary processing lines. A guide for determining compliance with these requirements would be a mould count, as determined by the Howard Method, not in excess of 30 per cent positive fields.

## 6. WEIGHTS AND MEASURES

### 6.1 Fill of Container

#### 6.1.1 Minimum fill

The tomato juice shall occupy not less than 90 per cent 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 "tomato juice".

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

### 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"), US or British units 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 it or fruit juice may be represented pictorially on the label except tomatoes or tomato juice.

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

### 7.3 al Packs

In the case of tomato juice in bulk, the information required in 7.1 to 7.6.2 shall either be placed on the container or be given in accompanying documents.

## 8. METHODS OP ANALYSIS AND SAMPLING

(To be finalized later).