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UN ECONOMIC COMMISSION FOR EUROPE COMMITTEE ON AGRICULTURAL PROBLEMS

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX ALIMENTARIUS COMMISSION

Working Party on Standardization of Perishable Produce

CODEX ALIMENTARIUS COMMISSION
Sixteenth Session
Geneva, 1-12 July 1985

REPORT OF TOE SIXTEENTH SESSION OF THE JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON STANDARDIZATION OF FRUIT JUICES
Geneva, 30 April - 4 May 1984

INTRODUCTION

1. The Joint ECE/Codex Alimentarius Group of Experts on the Standardization of Fruit Juices held its Sixteenth Session in the Palais des Nations, Geneva, Switzerland, from 30 April to 4 May 1984 under the Chairmanship of Professor Dr. W. Pilnik (Netherlands).

2. The Session was attended by 64 participants including the delegations of Argentina, Austria, Belgium, Brazil, Canada, Denmark, Egypt, Finland, France, Federal Republic of Germany, Greece, India, Islamic Republic of Iran, Israel, Japan, Netherlands, Norway, Panama, Poland, Senegal, Spain, Switzerland, Thailand, United Kingdom, United States of America.

Observers were present from South Africa, Association of Official Analytical Chemists (AOAC), European Economic Community (EEC, Council and Commission), Commission de l'Industrie des Jus de Fruits et Legumes de la CEE (CIAA), International Federation of Fruit Juice Producers (IFFJP) and the World Health Organization (WHO).

3. The Session was opened by the Chairman who welcomed delegates and emphasized the particular spirit of cooperation which had always prevailed at the sessions of the Group of Experts. It had therefore not only been possible to elaborate standards for fruit juices but to examine and agree also *on* such matters of principles as e.g. the definitions for fruit juices, concentrated fruit juices and fruit nectars.

4. Dr. A. Randell of the Secretariat, speaking on behalf of the UN/ECE welcomed delegates to Geneva and recalled that the Group of Experts, which had already been established in October 1962, could be considered as one of the best examples of fruitful cooperation between UN/ECE and the Codex Alimentarius Commission.

ADOPTION OF THE AGENDA (Agenda Item 2)

5. The Group of Experts had before it the provisional agenda for the Session as set out in document CX/FJ 84/1 (AGRI/WP.l/GE.4/13).

6. The Group of Experts agreed that the Ad Hoc Working Group on Methods of Analysis and Sampling should meet during the Session to give consideration to the working paper on the revision of methods of analysis (CX/FJ 84/11 -

AGRI/WP.1/GE.4/R.72) and other matters on methods of analysis and sampling arising from the Committee on Methods of Analysis.

7. The Group of Experts noted that the Committee on Methods of Analysis had elaborated and the Commission had accepted for inclusion in the Procedure Manual General Principles of Sampling (Appendix IV to ALINORM 83/23). This matter was referred to the Working Group. It was agreed that the Chairman of the Working Group, Professor Dr. H. Woidich could report back to the Committee under Item 13 (see paras 164-169).

8. The Group of Experts was informed that a considerable number of matters concerning contaminants had been referred to the Committee or had arisen from the Group's discussions on contaminants at its fifteenth session. In view of the complexity of the matter, the Group of Experts decided to establish an Ad-hoc Working Group under the Chairmanship of the United Kingdom which would made recommendations to the plenary session. The Ad-hoc Working Group, consisting of the delegations of Switzerland, Netherlands, United Kingdom, Spain, Thailand, Austria and the United States, was asked to give consideration to the items set forth in working paper CX/FJ 84/2-Part II (AGRI/WP.1/GE.4/R.63) having regard also to the surveys on contaminants carried by CCPFV, the data from the Joint FAO/WHO Food Monitoring Programme and to papers on contaminants prepared for earlier sessions.

9. It was agreed that the terms of reference of the Working Group would include the following: environmental contaminants (Cd and Hg), maximum limits for tin and lead in single strength as well as in concentrated fruit juices and certain non-toxic contaminants (Fe and Cu), consideration of sampling plans for contaminants. It was also agreed that the Chairman of the Working Group would report back to the plenary session under Item 4 which was moved down in the agenda (see paras 108-121). With the above slight changes the Group of Experts adopted the provisional agenda.

MATTERS OF INTEREST (Agenda Item 3)

Codex Alimentarius Commission - Fifteenth Session (ALINORM 83/43)

Codex Standard for Concentrated Pineapple Juice Preserved Exclusively by Physical Means

10. The Group of Experts was informed that the Commission had adopted at Step 8 the above standard and noted that there had been opposition against the use of stannous chloride as food additive as well as against the maximum level of tin.

11. The Group of Experts was also informed that the sixteenth session of the Committee on Food Labelling had not endorsed the date marking provisions elaborated by this Committee as included in this particular standard and which had been proposed as a consequential amendment to all Codex standards for fruit juices, concentrated fruit juices and nectars (see paras 27-28 of ALINORM 83/14). The Committee on Food Labelling had based its decision on the proposal of CCPFV to include in its standards the original guideline text for the date of minimum durability,

12. However, at the Fifteenth Session of the Commission the Secretariat of CCPFV had stated that that Committee would reconsider its proposal and the Commission therefore referred the provision elaborated by the Group of Experts back to the Committee on Food Labelling. The Seventeenth Session of CCFL endorsed the Group of Expert's provision on date marking, but decided also to discuss at its next session date marking provisions for all shelf stable products as a general matter.

13. The Committee was informed that the Secretariat had issued Supplement 1 to Volume X of the Codex Alimentarius containing the newly adopted standards and amendments.

Codex Standard for Concentrated Pineapple Juice with Preservatives for Manufacturing

14. The Group of Experts was informed that the Commission had adopted the above standard at Step 8 and that it had been included in Supplement 1.

Draft Standards for Guava Nectar, Mango Juice and Pulp Mango Nectar Preserved Exclusively by Physical Means (Appendices III, IV, V to ALINORM 83/14)

15. The Group of Experts noted that the Commission had advanced the above three standards to Step 6 of the Procedure. Subsequently comments had been requested by CL 1983/28 for discussion under Items 7, 8 and 9. The Group of Experts decided therefore to defer any further discussion on these standards.

16. The delegation of Brazil, referring to para. 317 of the Report of the Fifteenth Session of the Commission, pointed out that the delegation of Brazil to the Commission had made the statement that para. 103 of ALINORM 83/14 did not reflect the position of Brazil with regard to mango juice, because the Brazilian standard did not contain the following sentence. "Excess insoluble solids are eliminated by physical process such as sieving, centrifugation, etc." The delegation of Brazil was of the opinion that para. 317 of the Commission Report should be reworded to indicate exactly the position of Brazil. It was agreed to discuss this matter further under Item 9. (See para. 107).

Codex Committee on Food Additives - Sixteenth Session (ALINORM 83/12A)

17. The Group of Experts noted the endorsements given by CCFA to the food additives and contaminants in the standards mentioned above and agreed to take this matter up under Items 7, 8 and 9.

18. The Group of Experts also noted that (a) the request of CCFA to consider the need for provisions for non-toxic contaminants, and (b) sampling plans for contaminants had been referred to the Ad-hoc Working Group on Contaminants (see paras 108-121).

Codex Committee on Food Additives - Seventeenth Session (ALINORM 85/12)

19. The Group of Experts was informed that the recently held Seventeenth Session of the Codex Committee on Food Additives had disscussed the question of tin in the context of its work on food additive and contaminant intake. The intake studies indicated that there was no need for concern when considering the long-term exposure, however the Committee had drawn attention to the statement of the 26th Report of the Joint FAO/WHO Expert Committee on Food Additives that acute gastric manifestations appeared to occur at around 200 mg/kg of tin in foods. The Committee had endorsed the view that the levels of tin prescribed in Codex standards should be established for different types of food based on Good Manufacturing Practice and that they should be realistic and lower than the 250 mg/kg currently prescribed in most Codex standards for canned foods. The Committee had also stated that attention should be given to the levels of tin in canned foods for infants and children and to the problem of long-term storage of foods packed in unlacquered cans.

20. The delegation of Thailand had expressed its reservation concerning this proposal and had drawn attention to the view of the Coordinating Committee for Asia that the maximum level of tin should be set at 250 mg/kg for all kind of foods.

21. The Group of Experts was informed that a Circular Letter would be issued on behalf of CCFA requesting further information. (See also paras 108-121).

Codex Committee on Food Labelling - Seventeenth Session (ALINORM 85/22)

22. The Group of Experts had been informed earlier in the session of the reconsideration by CCFL of the date marking provisions for Codex Standards for Fruit Juices, Concentrated Fruit Juices and Nectars (see paras 11 to 13 above).

23. The observer from EEC drew attention to the fact that the date marking provisions adopted for fruit juices differed from those proposed for other canned foods. The Secretariat informed the Group of Experts that, since the date marking of shelf stable products would be discussed as a general matter by the next session of CCFL, it would be appropriate for this Committee to submit recommendations or comments to CCFL. The Group of Experts agreed to this proposal but wished to examine also the revised date marking provisions elaborated by CCPFV for processed fruits and vegetables. It was agreed to discuss date marking provisions for shelf stable products further in connection with one of the draft standards on the agenda (see paras 76-77).

Codex Committee on Methods of Analysis and Sampling - Thirteenth Session (ALINORM 83/23)

24. The Group of Experts was informed of the endorsements given to methods of analysis and their classification. It was agreed to refer this matter to the Ad-hoc Working Group on Methods of Analysis and Sampling (see paras 164-169).

Length and Content of Codex Reports - Thirtieth Session of the Executive Committee (ALINORM 83/4)

25. The Group of Experts was informed that the above Committee had been requested to look into the possibility of reducing the length and improving the structure of Codex Committee reports. The Executive Committee had agreed that reports should be as brief and concise as possible without sacrificing essential details and important points. The Executive Committee also noted that different Committees might favour different formats of reports and decided therefore that individual Committees should decide on what kind of report was the most appropriate for them. The Fifteenth Session of the Commission had confirmed this opinion and had decided to underline key words indicating decisions taken or action planned.

26. The Group of Experts was of the opinion that the form and structure of its previous reports met all of the Group's requirements and that they should not be altered. It considered it important to be able to recall previous discussions on matters of principle especially in view of the longer interval between meetings. The Group of Experts complimented the Secretariat on the preparation of complete and concise draft reports upon which its own reports were based.

General Standard for Fruit (Based) Prinks and related Amendment of Terms of Reference

27. The Group of Experts was informed that the International Federation of Fruit Juice Producers (IFFJP) had elaborated a draft of a standard for fruit drinks with a high fruit juice content. Due to the timing of meetings this standard had not been discussed by the Group of Experts at its fifteenth session but had been submitted to the ECE Secretariat and subsequently to the Codex Secretariat.

28. The Twenty-Ninth Session of the Executive Committee had been requested to approve elaboration of the above standard and, in this context, to amend the Group's

terms of reference to reflect more precisely the work carried out by the Group. The Executive Committee had agreed that the draft be sent out at Step 3 in order to facilitate progress, but that the Commission should be requested to approve the elaboration of the Standard (paras 125-130 of ALINORM 83/3). The standard was contained in paper CX/FJ 84/10, of which only the English version had been distributed.

29. At the Fifteenth Session of the Commission the delegation of Canada had strongly opposed the elaboration of a Codex standard for products which, in its opinion, fell within the broad description of "soft drinks". Other delegations had supported Canada. The Commission had therefore decided not to continue with the further elaboration of the standard, and the request for comments at Step 3 was withdrawn (paras 322-323 of ALINORM 83/43).

30. The Group of Experts recalled that it had considered at previous sessions the need for a standard for fruit based drinks and that it had not been able to reach a conclusion.

31. The Chairman informed the Group that the recent General Assembly of IFFJP had noted the Commission's decision with disappointment and proposed that the Group of Experts should discuss the need for such a standard based on its technological expertise.

32. The observer of IFFJP pointed out that a large amount of work had been done on the draft as contained in CX/FJ 84/10. He was of the opinion that it was necessary, for the sake of protecting the consumer, to lay down requirements for a minimum percentage of fruit juice. This would guarantee a certain amount of fruit ingredient in products where the name on the label indicated the presence of fruit juice and would, therefore, be in the interest of the consumer as well as the producers.

33. One delegation held the view that it might be very difficult to establish an international standard and quoted examples of other bodies which had not been successful because of the wide range of percentage juice addition.

34. Other delegations were in favour of the development of a standard for fruit (based) drinks in view of a growing international trade of products with high fruit ingredient content.

35. Delegations opposing the elaboration of the standard thought that it would not be possible to achieve agreement on the standard since even national legislation had encountered difficulties. It was also pointed out that there were no suitable methods for the determination of fruit ingredient content.

36. The Group of Experts requested the Secretariat to make the draft standard (CX/FJ 84/10) available as a Conference Room Document to give delegations the opportunity to study the draft. The Group of Experts decided to continue its discussion on the subject under future work (see paras 170-175).

Progress Report on Acceptances

37. The Group of Experts had before it working paper CX/FJ 84/2-Part I, Add. 1 (AGRI/WP.1/GE.4/R.63). The Group of Experts noted that the Fifteenth Session of the Commission had again placed emphasis on obtaining more acceptances. The Commission had in particular considered that those countries which had participated in the development of Codex standards should, in the first place, give lead to others, in order to encourage a wider degree of acceptance of the standards (para. 47 of ALINORM 83/43).

38. The Group of Experts was informed of the following notifications from governments which had been received since February 1982:

> Cuba had accepted with specified deviations the Codex standards for grapefuit juice and tomato juice preserved exclusively by physical means. The Dominican Republic has communicated that products complying with Codex standards may be freely circulated in that country. Details and indications of specified deviations are forthcoming.
> Kenya has established a standard for orange juice (KS 05-407) which has included all the requirements laid down in the relevant Codex standard.
> Thailand has notified the Secretariat that it is prepared to permit entry of products conforming to the Codex standards and complying with the relevant provisions in Thailand's law, especially the labelling requirements.

39. The delegation of Japan stated that it was rather difficult for that country to accept the Codex standards for fruit juices since national standards had already been established for quality criteria and hygiene provisions. However, products in conformity with the Codex standards could freely circulate in Japan provided they complied with the relevant Japan food legislation. The delegation of Japan agreed to indicate in writing to the Secretariat the relevant national food regulations since this information would be of interest to countries which export to Japan.

40. The delegation of Switzerland recalled that Switzerland had notified the Secretariat of products complying with Codex standards which could be freely circulated in Switzerland.

41. The delegation of Spain stated that in Spain standards for citrus fruit juices would come in force for imports and exports in the near future. Since these products were of special importance additional specifications had been established.

CONSIDERATION OF DEFINITION FOR FRUIT JUICES (Item 5)

42. The Group of Experts had for its consideration document CX/FJ 84/4 - AGRI/WP.1/GE.4/R.64, prepared by the Chairman, Prof. Dr. W. Pilnik and Prof. Dr. H.J. Bielig of the delegation of the Federal Republic of Germany. The document was introduced by the Chairman who recalled that the fifteenth session of the Group of Experts had requested information to indicate whether or not the definition of fruit juices should be amended to take into account recent technological developments in the methods of obtaining juices from fruits.

43. The Chairman stated that these new technologies were excluded by the present definition which referred only to production of juice by a "mechanical process". The chairman and Prof. Bielig noted that the new technologies, in particular water extraction of the fruit and enzymic degradation of the fruit mash before pressing, had now come into regular use in some countries. He noted that other processes could be developed which would produce products of equal quality to the mechanically pressed juice, and therefore there was a risk that the current standards would be rendered obsolete unless a broad interpretation of a juice was prepared.

44. The delegations of Brazil, and the United States expressed their support for the amendment proposed in the paper. Other delegations expressed concern that the amendment of the definition could lead to the appearance in the market place of products which did not have the usual characteristics of a fruit juice as expected by the consumer. It was noted that the new processes were not currently applicable to all fruits. The observer from the EEC noted that the diffusion process was not permitted for juices

moving in trade inside the community, but that the process was authorized for certain concentrated fruit juices in some member states.

45. The delegations of Switzerland and France drew attention to the problems of defining the analytical characteristics of juices prepared by the diffusion process. The Chairman noted that the "equivalence" of these characteristics with those of a mechanically pressed juice could be determined by the statistically valid data already assembled for the principal fruit juices.

46. The delegation of Spain supported by France expressed its opinion that the process referred to in standards should be the mechanical process only, as the other processes would inherently alter the nature of the juice. It noted that the paper prepared by Profs. Pilnik and Bielig had not been sent to governments for comment.

47. The delegation of the Federal Republic of Germany stated that the main objective was to ensure the preparation of a quality product and not to deceive the consumer. It suggested that appropriate labelling of juices prepared from concentrates obtained by the water extraction process and a limitation of this technology to certain fruits could provide a satisfactory solution. It was also suggested that the amendment proposed in the paper could be reworded so as to make it clear in the statement on definition in each standard that the products should have the characteristic colour, aroma, flavour and analytical composition of the mechanically pressed juice.

48. The Group of Experts agreed to defer its decision on the matter, and agreed to append the paper to the present report (Appendix I) and to request government comments.

49. The delegation of Switzerland drew the attention of the Group to the impact which any change in the definition might have on the acceptances of standards already notified by governments and that for its part, if need be, it would reconsider its acceptances.

CONSIDERATION OF PROPOSED DRAFT GENERAL STANDARD FOR FRUIT NECTARS PRESERVED EXCLUSIVELY BY PHYSICAL MEANS AT STEP 4 OF THE PROCEDURE (Item 6)

50. The Group of Experts had before it the above standard as contained in Appendix VI to ALINORM 83/14 and comments received thereon in working paper CX/FJ 84/4 (AGRI/WP.1/GE.4/R.65).(France, Italy, Poland, Portugal, Switzerland and Thailand).

51. The Chairman of the Group, in introducing the item, recalled that comments had been requested on the text of the standard as well as on the field of application, i.e., whether the general standard should cover all fruit nectars or only those for which no individual standard had been elaborated (para. 158 of ALINORM 83/14). The Chairman referred to Volume X of the Codex Alimentarius which contained all standards for nectars elaborated so far.

52. The Group of Experts noted the view of several delegations that it was desirable for the general standard to include all nectars, but decided, however, following the decisions of the Milk Committee and the Committee on Fats and Oils, to include in the General Standard only those nectars which were not subject to individual standards. The standard was revised accordingly and used as Conference Room Document No. 4 for further consideration, section by section.

Section 1 - Scope

53. The Group of Experts agreed that it was necessary to introduce a section on scope to indicate clearly to which nectars the standard was intended to apply.

54. The delegation of the United States pointed out that Section 3.1 - Minimum Content of Fruit Ingredient - stipulated a minimum content of 50% m/m with an exception for highly acid or strongly flavoured fruits for which the minimum content was set at 25% m/m. It would, however, not be possible to produce nectars of some fruits such as lemons, limes or cranberries with such a high fruit ingredient content. Therefore, these products should either be exempted from the scope, or else Section 3.1 would have to be amended to prescribe even lower minima of fruit ingredient. This view was supported by the delegations of the United Kingdom, Canada and Thailand.

55. Other delegations expressed the opinion that fruit nectars were characterized by the considerable content of fruit ingredient and consumers would not accept nectars with a low fruit ingredient content. The delegation of Spain, supported by other delegations, stated that fruit nectars not containing a minimum of 25% or another agreed amount should be contemplated in a different standard. This was agreed by the Group of Experts.

56. The Group of Experts agreed not to change the section on scope, but to come back to this question under Section 3.1.

Section 2 - Description

57. The Group of Experts decided not to make any change to this section.

Section 3 - Essential Composition and Quality Factors
Section 3.1 - Minimum Content of Fruit Ingredient

58. The Group of Experts confirmed its decision on highly acidic fruit as set forth in para. 55 above. The Group of Experts was also of the opinion that governments could request the elaboration of a specific individual standard for products with a lower minimum fruit ingredient content if that was considered appropriate. The Group of Experts retained the minimum fruit ingredient levels as 50% m/m, with the exception of highly acid of strongly flavoured fruits for which a minimum of 25% m/m was established. The observer of the EEC submitted a conference document containing the relevant data from the EEC directive on fruit juices and nectars.

Section 3.2 - Sugars

59. The Group of Experts recalled that it had permitted in earlier standards the use of liquid sugars and agreed to amend the provision in this standard accordingly.

60. The Group of Experts noted that the Codex Standard for Apricot, Peach and Pear Nectars (CODEX STAN 44-1981) did not yet contain a provision for other than solid sugars and agreed that the standard should be amended to include the revised text (consequential amendment). The Secretariat was requested to take the necessary action possibly in connection with a recent Step 8 standard.

Section 3.3 - Lemon [and/or Lime] Juice

61. The Group of Experts was informed that the written comments received on this matter had been in favour of permitting lime juice, except for Italy which had been of the opinion that certain fruit nectars needed not to be acidified.

62. The Group of Experts was also informed that the addition of lime juice had not been agreed to in earlier discussions since it might impart a specific flavour. The Group

of Experts noted that such a flavour need not occur under the present processing conditions of lime juice.

63. One delegation proposed the introduction of a maximum limit for the addition of lime or lemon juice to retain the organoleptic characteristics of the fruit from which the nectar was made. This was not accepted.

64. The Group of Experts decided to permit the use of lemon juice or lime juice and amended Section 3.3 accordingly.

65. The delegation of the Federal Republic of Germany stated that the addition of lemon juice should be only permitted as an acidifying agent in certain nectars and that lime juice should not be permitted at all for this purpose. The observer of the EEC drew attention to similar provisions included in the EEC Directive. The Group of Experts agreed that such additions were self-limiting.

66. The Group of Experts also decided that the provision for lemon juice in other nectar standards should also be amended to include lime juice as an alternative. The Secretariat was instructed to take action on this consequential amendment possibly in connection with a recent Step 8 standard.

67. The Group of Experts did not agree with a proposal to permit the use of specific sweet juices to increase the sugar content of a nectar. It was considered that such a product would be a mixed nectar.

Section 3.4 - Soluble Solids

68. Several delegations were of the opinion that the proposed minimum limit of 13% m/m of soluble solids was too high and could result in a very sweet product. It was also noted that several countries had objected to the additions of large amounts of sugar for nutritional reasons. The Group of Experts agreed that the provision of a minimum fruit ingredient content would safeguard the quality of the product and, therefore, a minimum level for soluble solids was not necessary.

69. The Group of Experts agreed with the maximum level of 20% m/m and deleted the square brackets.

Section 3.5 - Ethanol Content

70. The Group of Experts noted the written comments from Egypt which did require that no alcohol be contained in the product, since alcohol present would indicate bad hygienic practices and was also unacceptable for religious reasons.

71. The Group of Experts was informed that the alcohol was derived from yeast activity and the internal metabolism of fruits and was therefore inevitable. The Group was also informed that a maximum level of 3 g/kg was very high for nectars which consisted of only 50% of fruit ingredient and that the limit could be lowered to 1.5 g/kg. Several delegations were of the opinion that they had to obtain more technical advice on this proposal. The Group of Experts decided therefore to include the value of 1.5 g/kg in square brackets and to request government comments.

Section 4 - Food Additives

72. The observer of the EEC stated that only citric acid was permitted to be used in specific nectars and that L-ascorbic acid was used only as an antioxidant. The delegation of the Federal Republic of Germany and the observer of the EEC stated their objection to the use of acids in this standard. The delegations of France, Belgium and Greece supported the observer from the EEC. It was noted that the above comments

applied to all nectar standards under consideration. The delegation of Egypt stated that Egypt did not permit acidifying or neutralizing agents as they would mask the use of over- or under-ripe fruits.

73. The Group of Experts noted that the written comments did not support the use of fumaric acid and deleted this additive.

74. The Group of Experts agreed that carbonated nectars were produced and added a provision for carbon dioxide in this section and consequentially an appropriate labelling provision to Section 8. (New Section 8.9.4).

Section 5 - Contaminants

75. The Group of Experts decided to return to this section after a general discussion of contaminants (see paras 108-121).

Section 8.7 - Date Marking

76. The Group of Experts was informed of the date marking provisions for minimum durability which had been elaborated by CCPFV as an amendment to all standards elaborated by that Committee. It differed from the text of the Group of Experts in that it had two cut-off points (3 months and 18 months). The Group of Experts was also informed that the CCPFV version had not yet been endorsed by CCFL and recalled that CCFL would consider date marking of shelf stable products as a general matter at its next session.

77. The delegation of Switzerland was of the opinion that no special text was needed for the date marking of canned foods and that the mentioning of the year only was not informative to the consumer. The delegation of Switzerland proposed that the guideline text elaborated by CCFL should be used in all standards. The Group of Experts decided to retain Section 8.7 unchanged.

Section 8.10 - Non-retail Containers

78. The Secretariat informed the Group that CCFL would discuss at its next session the need to develop guidelines for the labelling of non-retail containers and had instructed the Secretariat to prepare a paper on all provisions on non-retail containers in Codex standards.

Statement by the Delegation of Argentina

79. Concerning the provisions for labelling, the delegation of Argentina informed the Group of Experts that the Argentinian Food Code prescribed that all food products have to bear on the label an indication of the year of harvest, production or packaging; the day, month and year of packaging, or the date of manufacture and the period of durability according to the particular requirements foreseen in the Code. The labelling of containers has to include a mandatory declaration of the country of origin and of the mode of preservation. This requirement was also applicable to the products considered under Items 7, 8 and 9. With regard to Section 8.10 it was useful to include the date of manufacture in the accompanying documentation or the labels of non-retail containers.

Status of the Standard

80. The Group of Experts decided to advance the Proposed Draft General Standard for Fruit Nectars to Step 5 of the Procedure. The revised text is contained in Appendix IV in this report.

81. The delegation of Canada stated that a standard for nectars had been difficult to establish in Canada and was presently under discussion again. He stated further that while Canada might not accept the above standard; it would likely permit free circulation of products complying with the provisions of the standard and the relevant Canadian regulations.

CONSIDERATION OF THE DRAFT STANDARD FOR GUAVA NECTAR PRESERVED EXCLUSIVELY BY PHYSICAL MEANS (Item 7)

82. The Group of Experts had before it the Draft Standard (ALINORM 83/14 - AGRI/WP.1/GE.4/R.12, Appendix III) and the comments of Denmark, Egypt, France, Ireland, Norway, Poland, Sweden, Switzerland and Thailand as contained in document CX/FJ 84/5 - AGRI/WP. 1/GE.4/R.66. It was noted that the Commission had advanced the standard at Step 5 of the Procedure at its Fifteenth Session, July 1983.

Essential Composition and Quality Factors

83. The delegations of Thailand and Japan and the observer from South Africa proposed that the lower limit for fruit ingredient should be reduced from 25% m/m to 20% m/m noting that this was sufficient to give a palatable and tasty product. The delegation of Egypt noted that its legislation required a minimum of 30%, and that a lower level would affect quality and nutrition. It was agreed to retain the present minimum of 25% and to delete the square brackets. The delegations of Japan and Thailand and the observer from South Africa reaffirmed their opinion that a level of 20% would be adequate.

Soluble Solids

84. Recalling its earlier discussion (see paras 68-69) in regard to the draft General Standard for Fruit Nectars, the Group of Experts agreed to delete the requirements for a minimum level of soluble solids. It furthermore agreed to request the Commission to take retrospective action and to delete this requirement from all Codex Standards for Nectars in view of the general opinion that such a requirement was unnecessary given the changes in consumer preferences. The delegation of Egypt noted that a minimum level of 15% soluble solids was required under Egyptian legislation.

Ethanol Content

85. It was proposed by several delegations, based on the earlier discussion of the Proposed Draft General Standard, to reduce the maximum allowable level for ethanol to 1.5%. The delegations of Thailand and Panama expressed some doubt that this level could be achieved by fruit processing industries in tropical countries, and stated that they would have to consult their industries before agreeing to the proposal.

86. The delegation of the Islamic Republic of Iran referred to the obligation of the Islamic peoples to avoid consumption of alcohol, and asked whether or not products in which alcohol may be present could not be labelled accordingly. The Chairman pointed out that the development of small traces of ethanol was unavoidable even under the best manufacturing practice due to the biochemistry of fruit and the inevitable presence of yeast. The requirement in the standard was intended to limit the presence of ethanol to the lowest achieveable level under Good Manufacturing Practice.

87. The Group of Experts agreed not to amend the current maximum level at the present session. It noted that governments would have the opportunity to make their comments at Step 8, and would also be asked to comment in the Proposed Draft General Standards for Nectars and Juices. If any changes were made when the General

Standards were adopted by the Commission then a retrospective amendment could be made to all standards.

Lemon or Lime Juice

88. The Group agreed to retain the optional use of either lemon or lime juice as an acidifying agent. Several delegations pointed out that as guava was an acidic fruit there should be no need for this provision.

Food Additives

89. Those delegations opposing the use of lemon or lime juice also opposed the use of citric or malic acids as acidulants. The Group of Experts decided to leave this section unchanged.

90. The Group of Experts agreed to delete the provision allowing the use of red colour in this product. Several delegations noted that if red colour was to be used it would have to be a natural colouring such as beta-carotene, canthaxanthine or natural extract. The latter proposal was made by the delegation of Iran.

Contaminants

91. See paras 108-121. Status of the Standard

92. The Group of Experts agreed to advance the Draft Standard for Guava Nectar Preserved Exclusively by Physical Means to Step 8 of the Codex Procedure, and to submit it to the Commission for adoption as a World-wide Codex Standard. The revised text of the standard is contained in Appendix II to this report.

CONSIDERATION OF THE DRAFT STANDARD FOR PULPY MANGO NECTAR PRESERVED EXCLUSIVELY BY PHYSICAL MEANS (Item 8)

93. The Group of Experts had before it the Draft Standard (ALINORM 83/14 - AGRI/WP.1/GE.4/R.12, Appendix V) and written comments from Denmark, Egypt, France, Ireland, Norway, Poland, Sweden, Switzerland (CX/FJ 84/6 - AGRI/WP.1/GE.4/R.67) and Cuba (Conference Room Document No. 2).

94. The Chairman introduced the Draft Standard, stating that it had been the subject of a great deal of controversy both within the Group of Experts and at the Commission. It had become clear that in may countries a product which conformed to the usual definition of a nectar was traditionally sold and exported under the name "Mango Juice", and that to restrict this trade would have a negative impact on the economies of these countries. He also noted the concern of other countries that a clear distinction between the terms "juice" and "nectar" needed to be maintained. He indicated that although it was possible to prepare a drinkable mango juice from 100% fruit ingredient by sieving or centrifugation that this product was not produced nor traded on a large scale. Its preparation also resulted in low yield and excessive waste. Under the circumstances he proposed a compromise solution, which would allow products to be sold in their traditional markets under names, which would neither deceive nor mislead the consumer. Based on this proposal, the Group of Experts began its consideration of the Draft Standard.

Title of the Standard

95. It was agreed to amend the title of the standard to read "Draft Standard for Liquid Pulpy Mango Products prepared Exclusively by Physical Means". Some delegations were of the opinion that the title of the standard should reflect the name of the food, but

the Group of Experts was informed that the Commission had established a similar precedent when it adopted the Standard for Extra Hard Grating Cheese.

Essential Composition and Quality Factors

96. It was noted that the pulpy nature of the fruit would allow the preparation of a palatable and drinkable product with a minimum fruit ingredient of 30% m/m. This view was supported by the delegations of Brazil and Egypt. The delegations of the Federal Republic of Germany, France and United Kingdom and the observer from the EEC stated that the minimum fruit ingredient required under their regulations for nectars was 50% m/m and reserved their positions accordingly. The Group of Experts maintained the minimum level at 30% and withdrew the square brackets.

97. In accordance with its earlier decisions the Group deleted the provision for a minimum soluble solids content, and also withdrew the square brackets from the maximum proposed soluble solids content of 20% m/m (expressed as Brix).

98 It was agreed to allow the use of either lemon or lime juice as an acidifying agent.

Food Additives

99. In view of the numerous written comments received, and the opinions expressed by delegations, the Group of Experts agreed to delete reference to the use of fumaric acid or beta-carotene. The delegations of Belgium, the Federal Republic of Germany, Greece, France, and the observer from the EEC opposed the use of acidifying agents in nectars, and in the case of the Federal Republic of Germany this extended to the use of lemon or lime juice.

Contaminants

100. See paras 108-121.

Name of the Food

101. As indicated above, a number of delegations expressed their strong opinion that a diluted sugared product should in all cases be called a "nectar". However, recognizing the trade implications for this product in all regions of the world, the Group of Experts agreed on the following text for this section:

> "The name of the product shall be "mango nectar" or "pulpy mango nectar". For products with a fruit ingredient content of 50% m/m or more the name of the product shall either be "mango nectar", "pulpy mango nectar", "mango juice" or "pulpy mango juice" that name being selected which would not mislead or deceive the consumer."
>
> Footnote: When accepting this standard Governments shall indicate which name is required to be used in their country.

102. The delegations of Canada, France and Switzerland expressed their strong misgivings about this proposal and their opinion that the importing countries would be obliged to demand that the product should be called "nectar". The delegation of Egypt was of the opinion that the product containing 30% fruit ingredient should also be permitted under the name "mango juice".

103. It was noted that the minimum fruit content would in all cases be given in close proximity to the name of the food.

104. Some consequential editorial amendments were made in the Section Additional Requirements, and Non-Retail Containers.

Status of the Standard

105. The Group of Experts advanced the Draft Standard for Liquid Pulpy Mango Products Preserved Exclusively by Physical Means to Step 8 of the Procedure. The revised standard is contained in Appendix III to this report. The delegation of France made known its reservation against advancing the standard since it could not accept the present title.

106. The delegations of Belgium and Switzerland expressed their general reservations with regard to the standard, stating that the standard endangered the present categorization of products and that it contained unnecessary provisions for food additives.

CONSIDERATION OF THE DRAFT STANDARD FOR MANGO JUICE PRESERVED EXCLUSIVELY BY PHYSICAL MEANS (Item 9)

107. In view of the above discussion, particularly since the Draft Standard for Liquid Mango Products Preserved Exclusively by Physical Means allowed the name "mango juice" to be used in regions where the products were commonly known by this name, the Group of Experts agreed to withdraw the Draft Standard for Mango Juice (ALINORM 83/14 - AGRI/WP.1/GE.4/R.12, Appendix IV) from further consideration.

CONTAMINANTS IN STANDARDS FOR FRUIT JUICES, CONCENTRATED FRUIT JUICES AND NECTARS (Item 4)

108. The Group of Experts had before it document CX/FJ 84/3 - AGRI/WP.1/GE.4/R.64 and the report of the Ad-hoc Working Group which had been set up to consider the matters raised in the paper (see para. 8 above), and which is reproduced as Appendix IX to the present report.

109. The Working Group's report was introduced by its Chairman, Dr. R. Harding (United Kingdom) who summarized its contents. He noted that, in regard to environmental contaminants the Working Group had been of the opinion that data generated by the Joint FAO/WHO Food Contamination Monitoring Programme (JFCMP) showed that the contribution of fruit juices to the intake of cadmium was of little or no significance and that it was unnecessary to establish maximum levels. The absence of data on mercury, both in the JFCMP and in the survey carried out by the Committee on Processed Fruits and Vegetables seemed to confirm that there was no concern over this contaminant in canned fruit products and no level was recommended.

110. The Group of Experts accepted the views of the Working Group.

Lead (Pb)

111. It was noted that the Working Group had recommended that the present maximum limits for lead should be replaced with a maximum average limit based on a composite sample of ten sample units, and that the limit should accordingly be lowered to 0.2 mg/kg. The delegation of Thailand noted that there were few data from tropical countries, and the delegation of India noted that higher lead levels were commonly found after storage in warm climates.

112. The representative of WHO expressed the view that the above value was too high for the point of view of health implications and, in particular, the value was excessive as far as intake by children was concerned.

113. The Group of Experts agreed that the available data on actual limits of lead needed to be supplemented by more data particularly from tropical countries and agreed

to maintain the maximum level of 0.3 mg/kg under review. In the meantime the Secretariat was asked to issue a Circular Letter in the form of a questionnaire requesting more data. The questionnaire should be based upon the one used by the Committee on Processed Fruits and Vegetables.

Tin (Sn)

114. The Group of Experts supported the views of the Working Party (para. 12 of Appendix IX) that the present available data were insufficient and that more information should be collected by means of a questionnaire.

115. Many delegations spoke strongly in favour of reducing the maximum level of tin from 250 mg/kg to 200 mg/kg, and some recommended even lower levels. It was recommended that different levels should be established for different packing materials. The delegation of Switzerland proposed 50 mg/kg and 150 mg/kg for juices packed in non-lacquered tin cans. It was pointed out that products repacked from metal cans to non-metal containers would pose a problem.

116. It was agreed to maintain the present maximum level of 250 mg/kg, but to keep this level under review, with the aim of lowering it if the incoming data showed that this were possible.

Arsenic (As)

117. The Ad-hoc Working Group had not considered the question of the maximum levels for arsenic. Changes in the use of pesticides and other arsenicals seemed to indicate that levels of arsenic would be far below those which would pose any problem. However, before deleting the maximum level, the Group of Experts agreed to request information from governments on the use of arsenical sprays on fruit intended for processing into juice, and on levels of arsenic actually found.

Concentrated Products

118. The Group of Experts supported the proposal of the Working Group (para. 13 of Appendix IX) not to amend the provisions for contaminants in concentrated juices for **the** reasons given.

"Non-toxic" Contaminants

119. The Group of Experts agreed to maintain maximum levels for copper, iron and zinc in its standards, as there were corresponding recommendations on the maximum tolerable or allowable intakes established by JECFA for each of these elements.

120. The Group of Experts expressed its appreciation to the Ad-hoc Working Group and to Dr. Harding for the thorough and valuable report.

121. The representative of WHO noted that at the proposed maximum level for arsenic of 0.2 mg/kg and with a fruit juice consumption of 0.25 kg/60 kg person/day the intake of arsenic from fruit juice alone would be approximately 40% of the Provisional Maximum Tolerable Daily Intake.

CONSIDERATION OF PROPOSED DRAFT GENERAL STANDARD FOR FRUIT JUICES PRESERVED EXCLUSIVELY BY PHYSICAL MEANS AT STEP 4 OF THE PROCEDURE (Item 10)

122. The Group of Experts had before it the above standard as contained in working paper CX/FJ 84/8 - AGRI/WP.1/GE.4/R.69, and comments thereon in Addenda 1 and 2 of the above document (Australia, Denmark, France, Ireland, New Zealand, Norway,

Poland, Switzerland and Thailand and Canada). Further comments were submitted as Conference Room Documents 1 and 2 (Egypt, Cuba and South Africa).

123. As already decided for the General Standard for Fruit Nectars, the Group of Experts agreed that the standard should cover only those juices which were not subject to individual Codex standards. The Group of Experts gave consideration, section by section, to a revised text (Conference Room Document No. 5) having regard also to the applicable comments.

Section 1 - Scope

124. The Group of Experts agreed with the scope of the standard. Section 2 - Description

125. The Group of Experts noted that the description followed the format of the equivalent section in individual standards and agreed to it.

Section 3.2 - Sugars

126. The observer of the EEC pointed out that whereas in the EEC Directive sugar addition of up to 15 g/kg for correcting acidity did not have to be mentioned in connection with the name of the food, addition of sugar up to 100 g for certain juices and up to 200 for very acidic juices was permitted if the product was labelled "sweetened". The Group of Experts agreed that in view of provision 8.1.2 only a maximum of sugar addition had to be set. The delegation of Switzerland was in principle opposed to the sweetening of fruit juices and proposed a maximum of 50 g which could be added to certain juices. The delegation further pointed out that very acid juices were not drinkable as such. With the addition of a large amount of sugar they had to be diluted to nectars. Other delegations felt that, since this was a general standard covering also juices of very acid fruits, a limit of 100 g/kg was more appropriate.

127. The delegation of India stated that in the case of natural fruit juices and pulps sugar was added to the extent of 20 g/kg to correct acidity and improve the taste. In the case of sweetened juices and pulps sugar up to 100 g/kg was permitted.

128 The delegation of Spain pointed out that in the Spanish version the term "azucarado" should be used instead of "endulcorante" since the latter comprised also other sweetening agents.

129. The Group of Experts agreed to a maximum level of sugars of 100 g/kg and deleted the square brackets. The delegation of India proposed to permit the use of sugar syrup. There was no support for this proposal.

Section 3.5 - Use of Concentrates

130. It was proposed to clarify the meaning of this section by deleting the words "type of". No change was made. One delegation questioned whether this provision would be interpreted as permitting partially reconstituted juices.

Use of Citrus Juices as Acidifying Agents

131. The delegation of Greece proposed to permit the use of acid citrus juices as acidifying agents,. The Group of Experts did not agree with this proposal.

Section 4 - Food Additives

132. The delegation of the Federal Republic of Germany opposed the use of acids in fruit juices. This was supported by the delegations of Belgium and France and the observer of the EEC. The delegation of Argentina did not agree to the use of malic acid.

133. The Group of Experts established a maximum level of 400 mg/kg in the final product for L-ascorbic acid and agreed that the use of carbon dioxide should be limited by GMP.

134. The observer of the EEC wished to place the term "possible" in the heading to give countries the opportunity to select. The Chairman explained that this was implicit in the title and there was no compulsory addition of food additives. The Group of Experts did not take any action.

Processing Aids

135. The delegation of the Federal Republic of Germany stated that whereas processing aids had been included in individual standards, they had been omitted from this standard.

136. The Chairman informed the Group of Experts that CCFA was at present establishing an inventory list of processing aids and the status of this list was not yet clear. He advised therefore to await further decisions from CCFA and to consider at a later stage whether an amendment of the finalized individual standards was necessary. The Group of Experts agreed not to include at present a list of processing aids in the standard.

Carry-over Principle

137. The Group of Experts confirmed its decision made at an earlier session and included in the Exaplanatory Notes of Volume X of the Codex Alimentarius that the carry-over principle was not relevant to this standard.

Section 5 - Contaminants

138. There was a general discussion of contaminants based on the report of an Ad-hoc Working Group (see paras 108-121). No change was made to this section.

Section 8.1.2 - Name of the Food (Declaration of Sugars)

139. The delegation of Spain proposed that in this section also the quantitative declaration in percent of the sugars should be required. This was supported by the delegation of The Netherlands where the National Nutrition Council had recommended that the sugar intake should be lowered, and by the delegations of Iran, the Federal Republic of Germany and Greece.

140. The delegation of Switzerland, supported by the delegation of the United States, was in favour of a quantitative declaration of sugar if more than 50 g/kg had been added.

141. The delegation of Canada was opposed to a quantitative declaration of added sugars.

142. The Group of Experts agreed to place Section 8.1.2 in square brackets and to request comments on it as well as on the following two alternative versions:

> [8.1.2 If the quantity of added sugar or sugars exceeds 15 g but does not exceed 50 g/kg the words "'x' added" shall plainly and conspicuously accompany the name of the product where "x" represents the name or names of the sugar or sugars added. If the quantity of added sugar or sugars exceeds 50 g/kg the words "'x' added" shall plainly and conspicuously accompany the name of the product where "x" represents the total quantity of added sugars in percent and the name or names of the sugar or sugars added. In addition thereto the term "sweetened" may be used];

or

[If the quantity of added sugar or sugars exceeds 15 g/kg the words "'x' added" shall plainly and conspicuously accompany the name of the product where "x" represents the total quantity of added sugars in percent and the name or names of the sugar or sugars added.

In addition thereto the term "sweetened" may be used].

Section 8.2 - List of Ingredients

143. The delegations of Canada and the United States stated their opposition to the non-declaration of water in the list of ingredients of reconstituted products.

144. The delegation of France proposed to make it mandatory to declare the fact of reconstitution in close proximity to the name. The Group of Experts was informed that the revised text of the General Standard for the Labelling of Prepackaged Foods contained a similar provision. The Group of Experts agreed that it might have to revise the labelling sections of its standards once the revised General Labelling Standard has been adopted by the Commission.

Status of the Standard

145. The Group of Experts decided to return the Proposed Draft General Standard for Fruit Juices Preserved Exclusively by Physical Means to Step 3 of the Procedure. The revised text of the standard is contained in Appendix V to this report.

CONSIDERATION OF DRAFT GUIDELINES ON MIXED FRUIT JUICES AND MIXED FRUIT NECTARS (Item 11)

146. The Group of Experts had before it the above guidelines as contained in Appendix VII to ALINORM 83/14 - AGRI/WP.1/GE.4/R.12, and comments thereon from France, Italy, New Zealand, Poland, Switzerland and Thailand. (Document CX/FJ 84/9 - AGRI/WP.1/GE.4/R.70). The Group noted that these guidelines were being developed outside the Step Procedure and would, when finalized, be submitted to the Commission for adoption.

147. The Group of Experts decided to adjust the guidelines to the revised texts of the General Standards for Fruit Nectars and Fruit Juices (see Appendices IV and V). It was agreed therefore to delete Sections 2.1 to 2.3 and to amend Sections 2.4 and 2.5 to include reference to the above General Standards.

Mixed Fruit Juices (Section 3) Section 3.2

148. The delegation of France pointed out that the present wording of Section 3.2 was superfluous since the definition of mixed fruit juices permitted the use of sweetened juices and that no provision should be made to permit an addition of sugars to the mixed juice. The delegation of the United Kingdom was of the opinion that it should be left open whether the addition of sugars be made to the ingredient juices or to the final product. The Group of Experts decided that the amount of the added sugar in the mixed juice should not exceed that in the individual juices and amended Section 3.2 accordingly. The section was placed in square brackets for government comments.

Section 3.3.2.1

149. The delegation of Switzerland proposed that Section 3.3.2.1 should be modified, because it was not understood why a mixed fruit juice might not be so called unless it was derived from at least four different types of fruit. A mixture of two fruit juices was

already a mixed fruit juice. In order to obtain a clear regulation regarding labelling, it was essential to fix the minimum amount of any fruit that a juice must contain if this fruit was to appear in the name. The following text was proposed: "The specific name of a juice containing several kinds of fruit juices should be explicit and clearly indicate the nature of the juice (e.g. mixed fruit juice); if, on the contrary, express mention is made in the name of particular kinds of fruit juices, this may not be indicated unless the finished product contains at least 5% m/m of each. In this case, juice contents of 10% m/m and over must be shown in the specific name". In this way, it would be possible to avoid only the fruit juices with the greatest value being mentioned in the name, thereby deceiving the consumer. However, the proposal was not accepted by the Group of Experts.

Section 3.3.2.2

150. The Group of Experts agreed to take the same action as for Section 8.1.2 in the General Standard for Fruit Juices (see para. 142).

Section 3.3.3.2

151. It was questioned whether there was a need to require the quantitative declaration in percent of the different juices. It was recalled that this provision had been included for the purpose of providing the consumer with adequate information on the product. The Group of Experts agreed that no quantitative declaration in percent of the ingredients was necessary. It decided to require indication on the label that lemon or lime juice were used for acidification where they were used for that purpose.

Section 3.3.10.3

152. The Group of Experts noted the written comments which supported version 1 of this provision. The delegation of Poland, referring to its written comments, stated that it would now also prefer version 1. The Group agreed to retain version 1 of Section 3.3.10.3.

Section 4 - Mixed Fruit Nectars

Changes in Accordance with the Revised General Standard for Fruit Nectars

153. The Group of Experts agreed to:

(a) Delete Table 1.

(b) Amend Section 4.2 - Soluble Solids Content.

(c) Introduce Section 8.1.2 as new Section 4.3.1.2 and to reconsider the old Section 4.3.1.2.

(d) Refer in Section 4.3.3.2 to the actual minimum percentage of fruit ingredient.

Changes in Accordance with the Revised Text on Mixed Fruit Juices

154. The Group of Experts agreed to:

(a) Include a provision requiring indication of used lime and lemon juice for acidification.

(b) Retain version 1 of Section 4.3.10.2.

Status of the Guidelines

155. The Group of Experts decided to separate the Guidelines on Mixed Fruit Juices from the one on Mixed Fruit Nectars, to edit them and to finalize the two guidelines when

agreement has been achieved on the General Standards for Fruit Juices and Fruit Nectars. The revised texts of the Guidelines are contained in Appendices VI and VII.

PROPOSALS BY THE COORDINATING COMMITTEE FOR ASIA TO AMEND CERTAIN CODEX STANDARDS FOR FRUIT JUICES (Item 12)

156. The Group of Experts recalled that it had been informed of these amendments at its previous session, but that due to the timing of sessions it had not been possible to discuss them in depth. The Group of Experts agreed to consider the two proposals as set out in CX/FJ 84/12 - AGRI/WP.1/GE.4/R.73.

Maximum Level for Tin

157. The Group of Experts had been requested to consider the increase of the maximum level for tin from 150 mg/kg to 250 mg/kg in the standards for apple juice and for grape juice.

158. The Group of Experts agreed that the Coordinating Committee should be informed of the results of its work on maximum levels of tin for all standards, and that the request from the Coordinating Committee could be further considered at the next session of the Group of Experts when new data were available from Governments on tin levels in relation to a specific sampling plan for different types of containers (see paras 108-121).

Organoleptic Properties - Restoration of Natural Volatile Juice Components

159. The Group of Experts examined a proposal by the Coordinating Committee for Asia to amend the above section in the standards for apple juice, grape juice and pineapple juice to read as follows:

> "Natural volatile ... juice components may be restored only ... juice from which the natural volatile ... juice components have been [removed] lost during processing."

160. The Chairman of the Group explained the need for removing natural volatile juice components for several reasons. Volatiles had to be removed (trapped from the vapours) in the concentration process and were then added back to the concentrate. He pointed out that removal of volatiles was also indicated in some cases for single-strength juices, which could develop off-flavour during a prolonged storage. In this case the removal of volatiles and its later restoration extended considerably the shelf-life of the product.

161. The delegation of Thailand pointed out that in countries of the region it was not always possible, for technological reasons, to recover natural volatile juice components during processing and that the present wording of the provision might be interpreted as not permitting the addition of natural volatile juice components from the same type of fruit obtained commercially.

162. The Group of Experts confirmed that this was possible in the provision as presently worded and that it was indeed a widespread technique. Large amounts of natural volatile juice components moved in international trade.

163. Following these explanations, the delegation of Thailand decided to withdraw the proposed amendment. It was agreed by the Group of Experts that the Coordinating Committee for Asia should be informed accordingly.

REVISION OF METHODS OF ANALYSIS (Item 13)

164. The Group of Experts had before it the report of the Ad-hoc Working Group on Methods of Analysis and which was introduced by the Rapporteur, Dr. R. Wood (United Kingdom). The Working Group had based its discussion on the document prepared by the Secretariat CX/FJ 84/11, AGRI/WP.1/GE.4/R.72.

165. Dr. Wood noted that the Working Group had reviewed all of the methods that were required in all of the standards established by the Group. Methods for which there was no corresponding quantitative limit had been deleted. The Working Group had proposed that all of the methods should be submitted to the Codex Committee on Methods of Analysis and Sampling for endorsement, after which they should be applied retrospectively to all of the standards replacing the existing methods and references given. In addition he stressed that the adoption of the General Principles for the selection of Codex Sampling Procedures would include the work of the Group of Experts in Future.

166. It was noted that for some of the more traditional methods it was unlikely that suitable data on collaborative studies would be available, nor was it likely that they would be generated.

167. The Working Group had considered that the method and provision for hydroxymethylfurfural (HMF) was superfluous, as it was rarely needed in the light of new processing technologies. The Group of Experts agreed that the Standard for Apricot, Peach and Pear Nectars Preserved Exclusively by Physical Means (CODEX STAN 44-1981) should be amended by the deletion of Section 2.8-Hydroxymethylfurfural, and requested the Commission to approve the initiation of the amendment procedure at Step 3.

168. The Group of Experts adopted the report of the Ad-hoc Working Group, which appears as Appendix X to this report. The delegation of France noted that the International Organization for Standardization (ISO) had elaborated methods of determination of metal contaminants.

169. The Group of Experts expressed its warm appreciation to the Chairman of the Working Group, Prof. H. Woidich and to Dr. Wood, for their comprehensive and detailed work.

FUTURE WORK (Item 14)

(a) Fruit-Based Drinks

170. The Group of Experts noted that the Codex Alimentarius Commission, at its Fifteenth Session had considered a proposal to extend its Terms of Reference and to consider the elaboration of a general standard for fruit-based drinks (ALINORM 83/43, paras 322 and 323). The proposal had found no support and the Commission had acccordingly decided not to continue with the further elaboration of the proposed standard (see also paras 27-36 above). After studying the Conference Room Document (CX/FJ 84/10) containing the text of the proposed draft standard the Group of Experts resumed its discussion of the feasibility of future works in this area.

171. It was recalled that similar proposals made in 1968 and 1971 had found support, but that work had not actually been started.

172. Several delegations stated their opinion that the proposal to elaborate a Standard for Fruit-Based Drinks with a High Content of Fruit Ingredient would be of significant importance for the fruit juice industry, and would be useful to the consumer who wished

to make a choice between such a product and a soft drink which had a lower, if any, level of fruit ingredient.

173. The delegation of Belgium, reaffirming the position of its delegation at the Commission Session, stated that he would agree to the elaboration of this standard if all products in the group of soft drinks or drinks with fruit ingredients below those allowed in nectars would be standardized.

174. The delegations of Canada, United Kingdom and United States reaffirmed their opposition to the development of the standard and the extension of the terms of reference for the reasons given by the delegation of Canada at the Fifteenth Session of the Commission.

175. The Group of Experts agreed to request the Commission to reconsider the extension of the Group's Terms of Reference and the elaboration of a Standard for Fruit-Based Drinks with a High Content of Fruit Ingredient. The text of the proposed standard is given in Appendix VIII to this report. The Group of Experts considered that it would be appropriate to request comments at Step 3 of the Procedure only after the Commission had given its approval to proceed with the elaboration of the standard.

(b) Vegetable Juices

176. The Chairman, supported by the observer from the Commission of the Fruit and Vegetable Juice Industry of the EEC (CIAA), proposed the elaboration of a general standard for vegetable juices. It was noted that these commodities were becoming of increasing importance in trade, particularly in Europe, and that several European countries had initiated legislation with regard to these products. It was also noted that the manufacturers of vegetable juices were the same as those manufacturing fruit juices.

177. The proposal found wide support among delegations, but it was questioned whether or not the Codex Criteria for Work Priorities would be satisfied. The Group of Experts requested the representative of the CIAA to prepare a justification paper taking into account the Codex Criteria. Several delegations offered to provide a draft standard for discussion based on their own pending regulations.

Aseptic Packaging

178. The delegation of India drew attention to the increasing use of aseptic packaging for fruit juices and pulps, and to the potential problems of contamination through the use of chlorine, hydrogen peroxide, iodophors or other sanitizers. The Group agreed that this subject would be of relevance to many Commodity Committees, and agreed to refer it to the Codex Committee on Food Additives, and to the Codex Committee on Food Hygiene for the possible elaboration of a Code of Practice covering aseptic packaging.

179. The Group of Experts noted that its current work programme included:

(1) Guava Nectar Preserved Exclusively by Physical Means, at Step 8.

(2) Liquid Pulpy Mango Products Preserved Exclusively by Physical Means, at Step 8.

(3) General Standard for Fruit Nectars Preserved Exclusively by Physical Means, at Step 5.

(4) General Standard for Fruit Juices Preserved Exclusively by Physical Means, at Step 5.

(5) Guidelines on Mixed Fruit Nectars.

(6) Guidelines on Mixed Fruit Juices.

(7) Definition of Fruit Juices.

(8) Standard for Fruit-Based Drinks with a High Content of Fruit Ingredient (if approved by the Commission).

(9) Background Paper on Vegetable Juices.

(10) Contaminants in Standards for Fruit Juices, Concentrated Fruit Juices and Fruit Nectars, together with sampling plans.

(11) Revision and further elaboration of methods of analysis and sampling plans.

(12) Review of labelling provisions.

ELECTION OF OFFICERS (Item 15)

180. The Group of Experts re-elected Professor W. Pilnik (Netherlands) as its Chairman, to serve from the end of the present session to the end of the Seventeenth Session of the Group of Experts. The Group also elected Mr. T. Satasuk (Thailand) and Professor Dr. H. Woidich (Austria) to serve as its Vice-Chairmen for the same period.

OTHER BUSINESS (Item 16)

181. The Group of Experts noted that Mr. W. Aldershoff, leader of the delegation of the Netherlands at many of its sessions, was soon to retire from Government Service. The Group expressed its warm appreciation to Mr. Aldershoff for his many positive contributions to its work, and for his sincere and unbiased observations made during its deliberations over many years. The Group wished him a long and productive retirement.

DATE AND PLACE OF THE NEXT SESSION (Item 17)

182. The Group of Experts was informed that the next session would be held in Rome in about two years' time, the exact date to be decided after taking into account the programmes of the Codex Alimentarius Commission and the Working Party on Standardization of Perishable Produce of the United Nations Economic Commission for Europe.

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APPENDIX I

CONSIDERATION OF A DEFINITION OF FRUIT JUICES

(Paper prepared by Prof. Dr. W. Pilnik and Dr. H.J. Bielig)

INTRODUCTION

The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices has' discussed the definition of fruit juices at various sessions. The current definition given in the standards is "juice obtained by a mechanical process". The Experts recognized that various types of extraction or diffusion processes with water had become industrial practice and that these were not covered by the description as "mechanical process". The Group of Experts was reluctant, however, to change this definition, being afraid that by doing so the way would be open to low quality products. On the other hand the Experts also agreed that quality mainly depended on the raw material used and that a restriction to the mechanical process was not in itself a guarantee for obtaining a high quality product.

At its Fifteenth Session, February 1982, the Group of Experts requested the Chairman and Dr. H.J. Bielig of the delegation of the Federal Republic of Germany to provide a technical paper on this subject (ALINORM 83/14 - AGRI/WP.1/GE.4/R.12, para, 46) and to prove or disprove that extraction juices were analytically and organoleptically equal to the mechanically obtained juices, thus assisting the Group to reach a decision on the subject.

The authors wish to state that since the last meeting of the Group industrial practice has superseded theoretical discussions. Extraction processes are widely used and the latest regulatory development in this area is the stated intention of the Government of the Federal Republic of Germany to admit fruit juices made by reconstituting concentrated extraction juices. The Group has always adopted the policy that existing products could not be "standardized away" and the question before the Group at present is therefore how to change the definition of fruit juices to accommodate the fact of large-scale production of fruit juices by processes other than strictly mechanical ones. Furthermore, the authors believe that it is necessary to look to the future and in view of the spacing of the meetings of the Joint Group of Experts and its eventual adjournement sine die, the Group is obliged to safeguard its standards from becoming obsolete. It is therefore suggested to amend the text referring to the definition of fruit juices in the following way:

"Standards for Fruit Juices

- In the Description Section, delete the words "by a mechanical process".
- In the Section Organoleptic Properties, change the title to "Organoleotic and Analytical Properties" and replace the first sentence to read The product shall have *the* colour, aroma, flavour and analytical composition of x juice obtained by a mechanical process".

Standards for Concentrated Fruit Juices

- In the Section Process Definition change the second paragraph to read:

  "The raw material from which this product is obtained is /_ unfermented but fermentable x juice obtained from_/ sound ripe x fruit'[1].

Appropriate standards would have to be made in the general standards and guidelines."

The authors express their opinion that in this way the standards will be open to technological progress without compromising on the identity and quality aspects of fruit juices.

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APPENDIX II

PROPOSED DRAFT STANDARD FOR GUAVA NECTAR PRESERVED EXCLUSIVELY BY PHYSICAL MEANS [1/]

(At Step 8 of the Procedure)

[1/] For the purpose of this standard preservation by physical means does not include ionizing radiation.

1. DESCRIPTION

Unfermented but fermentable pulpy or non-pulpy product, intended for direct consumption, obtained by blending guava juice and/or the total edible sieved or ground or homogenized product of sound, ripe guavas (Psidium Guajava), concentrated or unconcentrated, with water and sugars or honey and preserved exclusively by physical means [1/]

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Minimum Content of Fruit Ingredient

The minimum content of single strength fruit ingredient or the equivalent from concentrated fruit ingredient shall not be less than 25 m/m.

2.2 Sugars

One or more of the sugars as defined by the Codex Alimentarius Commission shall be added.

2.3 Honey

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

2.4 Soluble Solids

The soluble solids content of the product shall be not more than 20.0% m/m as determined by refractometer at 20º C, uncorrected for acidity and read as Brix on the International Sucrose Scales.

2.5 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

2.6 Lemon Juice or Lime Juice

Lemon juice or lime juice may be added as an acidifying agent.

2.7 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of guavas, taking into consideration the addition of honey in substitution for sugars.

3. FOOD ADDITIVES

		Maximum Level
3.1	Citric acid	Limited by GMP
3.2	Malic acid	Limited by GMP

4. CONTAMINANTS

	Contaminant	Maximum Level
4.1	Arsenic (As)	0.2 mg/kg
4.2	Lead (Pb)	0.3 mg/kg [1/ 3/]
4.3	Copper (Cu)	5.0 mg/kg
4.4	Zinc (Zn)	5.0 mg/kg
4.5	Iron (Fe)	15.0 mg/kg
4.6	Tin (Sn)	250.0 mg/kg [2/ 3/]
4.7	Sum of Copper, Zinc and Iron	20.0 mg/kg
4.8	Sulphur dioxide	10.0 mg/kg

[1/] Endorsement postponed.
[2/] Temporarily endorsed.
[3/] These limits remain under review, taking into account a sampling plan.

5. HYGIENE (Subject to endorsement by the Codex Alimentarius Committee on Food Hygiene)

5.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RS 2-1969) and the General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969, Rev.1) recommended by the Codex Alimentarius Commission.

5.2 When tested by appropriate methods of sampling and examination, the product:

(a) shall be free from micro-organisms capable of development under normal conditions of storage;

(b) shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The guava 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 Pre-packaged Foods (Ref. No. CAC/RS 1-1969) the following provisions shall apply:

7.1 The Name of the Food

7.1.1 The name of the product shall be "Guava Nectar" or "Pulpy Guava Nectar", except that the non-pulpy product shall be named "Non-pulpy Guava Nectar".

7.1.2 The words "minimum fruit content X%" shall appear in close proximity to the name of the product where "X" is the actual minimum percentage of fruit ingredient in the final product.

7.2 List of Ingredients

A complete list of ingredients including added water shall be declared on the label in descending order of proportion.

7.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems of measurement: Metric ("Systeme International"), United States or British units according to the needs of the country in which the product is sold. For British units, units of capacity measurement shall be used.

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

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

7.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

7.7 Pate Marking

The "date of minimum durability" (preceded by the words "best before") shall be declared by the month and year in uncoded numerical sequence except that for products with a shelf-life of more than 18 months, the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

7.8 Storage Instructions

In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.

Where practicable, storage instructions should be in close proximity to the date marking•

7.9 Additional Requirements

The following additional specific provisions shall apply:

7.9.1 No fruit or fruit nectar may be represented pictorially on the label except guavas or guava nectar.

7.9.2 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 quantities of "Vitamin C" as would be accepted by national authorities in the country in which the product is sold, as warranting such claim or the use of such term.

7.9.3 When the product contains honey, the declaration "contains honey" shall be in close proximity to the name of the product.

7.9.4 Where the guava nectar is required to be kept under frozen conditions there shall be information for thawing of the product.

7.10 Non-Retail Containers

In the case of guava nectar in non-retail containers, the information required by Sections 7.1.1. to 7.6 and 7.9.1 to 7.9.4 shall either be given on the container or in an accompanying document except that the name of the product and the name and address of manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING (See Part IV of Volume X of the Codex Alimentarius)

ALINORM 85/14
APPENDIX III

PROPOSED DRAFT STANDARD FOR LIQUID PULPY MANGO PRODUCTS PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

(At Step 8 of the Procedure)

1. DESCRIPTION

1.1 Unfermented but fermentable pulpy product, intended for direct consumption, obtained by blending the total edible sieved or ground or homogenized product of sound, ripe mangoes (Mangifera Indica L.), as defined in Section 1.2, concentrated or unconcentrated, with water and sugars or honey and preserved exclusively by physical means [1/]

[1/] For the purposes of this standard preservation by physical means does not include ionizing radiation.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Minimum Content of Fruit Ingredient

The minimum content of single strength fruit ingredient or the equivalent from concentrated fruit ingredient shall not be less than 30% m/m.

2.2 Sugars

One or more of the sugars as defined by the Codex Alimentarius Commission shall be added.

2.3 Honey

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

2.4 Soluble Solids

The soluble solid content of the product shall be not more than 20% m/m, as determined by refractometer at 20° C, uncorrected for acidity and read as °Brix on the International Sucrose Scales.

2.5 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

2.6 Lemon Juice or Lime Juice

Lemon juice or lime juice may be added as an acidifying agent.

2.7 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of mango, taking into consideration the addition of honey in substitution for sugars.

3. FOOD ADDITIVES

		Maximum Level
3.1	Citric Acid	Limited by GMP
3.2	Malic Acid	Limited by GMP

4. CONTAMINANTS (Subject to endorsement by the Codex Committee on Food Additives)

	Contaminant	Maximum Level
4.1	Arsenic (As)	0.2 mg/kg
4.2	Lead (Pb)	0.3 mg/kg[1/]
4.3	Copper (Cu)	5.0 mg/kg
4.4	Zinc (Zn)	5.0 mg/kg
4.5	Iron (Fe)	15.0 mg/kg
4.6	Tin (Sn)	250.0 mg/kg[1/]
4.7	Sum of copper, zinc and iron	20.0 mg/kg
4.8	Sulphur dioxide	10.0 mg/kg

[1/] Remains under review, taking into account a sampling plan.

5. HYGIENE

5.1 It is recommended that the product covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RCP 2-1969) and the General Principles of Food Hygiene (Ref. No CAC/RCP 1-1969, Rev.l), recommended by the Codex Alimentarius Commission.

5.2 When tested by appropriate methods of sampling and examination the product:

(a) shall be free from micro-organisms capable of development under normal conditions of storage; and

(b) shall not contain any substance originating from micro-organisms in amounts which may represent a hazard to health.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The mango nectar 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 of 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 Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No. CAC/RS 1-1969) the following provisions apply:

7.1 The Name of the Food

7.1.1 The name of the product shall be "mango nectar", or "pulpy mango nectar". For products with a fruit ingredient of 50% m/m or more the name of the product shall either be "mango nectar", "pulpy mango nectar", "mango juice" or "pulpy mango juice", that name being selected which would not mislead or deceive the consumer. [2/]

[2/] Governments when accepting this standard shall indicate which name is required to be used in their country.

7.1.2 The words "minimum fruit content x%" shall appear in close proximity to the name of the product where "x" represents the actual minimum percentage of fruit ingredient in the final product.

7.2 List of Ingredients

A complete list of ingredients including added water shall be declared on the label in descending order of proportion.

7.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems of measurement: Metric ("Systeme International"), United States or British Units, as required by the country in which the product is sold; for British Units, units of capacity measurement shall be used.

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

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

7.6 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or in clear to identify the producing factory and the lot.

7.7 Date Marking

The "date of minimum durability" (preceded by the words "best before") shall be declared by the month and year in uncoded numerical sequence except that for products with a shelf-life of more than 18 months, the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

7.8 Storage Instructions

7.8.1 In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.

7.8.2 Where practicable, storage instructions should be in close proximity to the date-marking.

7.9 Additional Requirements

The following additional specific provisions shall apply:

7.9.1 No fruit or fruit product may be represented pictorially on the label except mangoes or mango product.

7.9.2 When the product contains honey the declaration "contains honey" shall be in close proximity to the name of the product.

7.9.3 Where mango product is required to be kept under frozen conditions, there shall be information for thawing of the product.

7.10 Non-Retail Containers

In the case of the product in non-retail containers, the information required by Sections 7.1.1 to 7.6 and 7.9.1 to 7.9.3, shall either be given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING (See Part IV of Volume X of Codex Alimentarius)

ALINORM 85/14
APPENDIX IV

PROPOSED DRAFT GENERAL STANDARD FOR FRUIT NECTARS PRESERVED EXCLUSIVELY BY PHYSICAL MEANS NOT COVERED BY INDIVIDUAL STANDARDS [1/]

(Advanced to Step 5 of the Procedure)

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

1. SCOPE

This standard applies to pulpy and non-pulpy fruit nectars as defined in Section 2.

This standard does not apply to any nectar which is subject of a specific Codex Commodity Standard.

2. DESCRIPTION

Unfermented but fermentable pulpy or non pulpy product, intended for direct consumption, obtained by blending the fruit juice and/or total edible part ground and/or sieved of sound ripe fruits, concentrated or unconcentrated, with water and sugars or honey and preserved exclusively by physical means. _1/

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Minimum Content of Fruit Ingredient

The product shall contain not less than 50% m/m of single strength fruit ingredient or the equivalent derived from any concentrated fruit ingredient, except in cases where high acidity or strong flavour make lower content necessary. In no case shall the content of the fruit ingredient be less than 25% m/m.

3.2 Sugars

3.2.1 One or more of the sugars, as defined by the Codex Alimentarius Commission, shall be added.

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

3.3 Lemon or Lime Juice

Lemon Juice or lime juice may be added as an acidifying agent.

3.4 Soluble Solids

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

3.5 Ethanol Content

The ethanol content shall not exceed [1.5] g/kg.

3.6 Organoleptic Properties

The product shall have the characteristic colour, aroma and flavour of the fruit from which it is made, taking into consideration the addition of honey in substitution of sugars.

4. FOOD ADDITIVES

		Maximum Level
4.1	Citric acid)	
4.2	Malic acid)	Limited by GMP
4.3	L-ascorbic acid	400 mg/kg in the final product
4.4	Carbon dioxide	Limited by GMP

5. CONTAMINANTS

		Maximum Level
5.1	Arsenic (As)	0.2 mg/kg
5.2	Lead (Pb)	0.3 mg/kg[1/]
5.3	Copper (Cu)	5 mg/kg
5.4	Zinc (Zn)	5 mg/kg
5.5	Iron (Fe)	15 mg/kg
5.6	Tin (Sn)	250 mg/kg[1]
5.7	Sum of copper, zinc and iron	20 mg/kg
5.8	Sulphur dioxide	10 mg/kg

[1/] These limits remain under review, taking into account a sampling plan.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RCP 2-1969) and the General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969, Rev.l) recommended by the Codex Alimentarius Commission.

6.2 When tested by appropriate methods of sampling and examination, the product:

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

(b) shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

7. WEIGHTS AND MEASURES

7.1 Fill of Container

7.1.1 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.

8. LABELLING

In addition to Sections 1, 2, 4 and 6 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1981) the following provisions apply:

8.1 The Name of the Food

8.1.1 The name of the product shall be "x nectar" or "pulpy x nectar" or "nectar of x" or "pulpy nectar of x" where "x" is the common name of the fruit.

8.1.2 The words "Minimum fruit content x%" shall appear in close proximity to the name of the product where "x" is the actual minimum percentage of fruit ingredient in the final product.

8.2 List of Ingredients

8.2.1 A complete list of ingredients including added water shall be declared on the label in descending order of proportion.

8.2.2 The addition of L-ascorbic acid shall be declared in the list of ingredients as:

(a) "L-ascorbic acid as antioxidant" or

(b) "Antioxidant".

8.3 Net Contents

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

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

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

8.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

8.7 Date Marking

The "date of minimum durability" (preceded by the words "best before") shall be declared by the month and year in uncoded numerical sequence except that for products with a shelf-life of more than 18 months, the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

8.8 Storage Instructions

8.8.1 In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.

8.8.2 Where practicable, storage instructions should be in close proximity to the date marking•

8.9 Additional Requirements

The following additional specific provisions shall apply:

8.9.1 No fruit or nectar may be represented pictorially on the label except the species of fruit present or the nectar therefrom.

8.9.2 When the product contains honey the declaration "contains honey" shall appear in close proximity to the name of the product.

8.9.3 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 in the country in which the product is sold, as warranting such claim or the use of such term.

8.9.4 Where the product contains more than 2 g/kg of carbon dioxide the term "carbonated" shall appear in close proximity to the name of the product and carbon dioxide shall also be declared in the list of ingredients.

8.9.5 Where fruit nectars require to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary thawing of the product.

8.10 Non-Retail Containers

In the case of fruit nectars in bulk, the Information required by Sections 8.2 to 8.6 and 8.9.1 to 8.9.3 shall be either given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

See Part IV of Volume X of the Codex Alimentarius.

ALINORM 85/14
APPENDIX V

PROPOSED DRAFT GENERAL STANDARD FOR FRUIT JUICES PRESERVED EXCLUSIVELY BY PHYSICAL MEANS NOT COVERED BY INDIVIDUAL STANDARDS [1/]

(Returned to Step 3 of the Procedure)

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

1. SCOPE

This standard applies to fruit juices as defined in Section 2.

This standard does not apply to any fruit juice which is subject to a specific Codex Commodity Standard.

2. DESCRIPTION

Unfermented but fermentable juice, pulpy, turbid or clear, intended for direct consumption, obtained by a mechanical process, from sound ripe fruit or the flesh thereof, preserved exclusively by physical means. 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.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Soluble Solids

3.1.1 The soluble fruit solids content of the fruit juice (exclusive of added sugars) shall not be less than a value which corresponds to the soluble solids content of the ripe fruit as determined by refractometer at 20 C, uncorrected for acidity and read as Brix on the International Sucrose Scales.

3.2 Sugars

One or more of the solid sugars, as defined by the Codex Alimentarius Commission may be added. The quantity of sugars added shall not exceed 100 g/kg. The addition of sugars is not permitted when the juice has been acidified in accordance with Sections 4.1 and 4.2.

3.3 Ethanol Content

The ethanol content shall not exceed [5] g/kg.

3.4 Organoleptic Properties

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

3.5 Use of Concentrates

The addition of concentrate to juice is permitted. Only concentrate obtained from the same type of fruit may be used.

4. FOOD ADDITIVES

		Maximum Level
4.1	Citric acid)	Limited by GMP
4.2	Malic acid)	

The addition of the acids mentioned in Sections 4.1 and 4.2 is not permitted when the juice contains sugars added in accordance with Section 3.2.

4.4	L-Ascorbic acid	400 mg in the final product
4.5	Carbon dioxide	Limited by GMP

5. CONTAMINANTS

		Maximum Level	
5.1	Arsenic (As)	0.2 mg/kg	
5.2	Lead (Pb)	0.3 mg/kg	1/
5.3	Copper (Cu)	5.0 mg/kg	
5.4	Zinc (Zn)	5.0 mg/kg	
5.5	Iron (Fe)	15.0 mg/kg	
5.6	Tin (Sn)	250.0 mg/kg	1
5.7	Sum of copper, zinc and iron	20.0 mg/kg	
5.8	Sulphur dioxide	10.0 mg/kg	

1/ These limits remain under review, taking into account a sampling plan.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the Recommended International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RCP 2-1969) and the General Principles of Food Hygiene (CAC/RCP 1-1969, Rev.l) recommended by the Codex Alimentarius Commission.

6.2 When tested by appropriate methods of sampling and examination, the product:

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

(b) shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

7. WEIGHTS AND MEASURES

6.1 Fill of Container

7.1.1 Minimum Fill

The 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

In addition to Sections 1, 2, 4 and 6 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1981) the following provisions apply:

8.1 The Name of the Food

8.1.1 The name of he product shall be “x juice” or “pulpy x juice” where “x” is the common name of the fruit.

8.1.2 If the quantity of added sugar or sugars exceeds 15 g/kg, the words “ “x” added” * shall plainly and conspicuously accompany the name of the product where “x” represents the name or names of the sugar or sugars added. Instead of the statement “ “x” added” the term “sweetened” may be used.

* See also para. 142.

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 water added for reconstitution of the juice in accordance with Section 2 need not be declared.

8.2.2 In the case of a fruit juice made from concentrate, the fact of reconstitution shall be declared in the list of Ingredients as follows: "x juice made from concentrate" or "reconstituted "x" juice" or ""x" juice made from concentrated "x" juice", where "x" represents the name of the fruit from which the juice has been obtained. If there are no ingredients to be listed in accordance with Section 8.2.1, the expression ""x" juice made from concentrate" or "reconstituted "x" juice" or ""x" juice made from concentrated "x" juice" shall appear on the label.

8.2.3 The addition of L-Ascorbic acid shall be declared in the list of ingredients as:

(a) "L-Ascorbic acid as antioxidant" or
(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"), U.S. or British units, as required by the country in which the product is sold; for British units, units of capacity measurement shall be used.

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

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

8.6 Lot Identification

Each container shall be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

8.7 Date Marking

The "date of minimum durability" (preceded by the words "best before") shall be declared by the month and year in uncoded numerical sequence except that for products with a shelf-life of more than 18 months, the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

8.8 Storage Instructions

8.8.1 In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.

8.8.2 Where practicable, storage instructions should be in close proximity to the date marking•

8.9 Additional Requirements

The following additional specific provisions shall apply:

8.9.1 No fruit or fruit juice may be represented pictorially on the label except the species of fruit present or the juice therefrom.

8.9.2 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 in the country in which the product is sold, as warranting such claim or the use of such term.

8.9.3 Where the product contains more than 2 g/kg of carbon dioxide the term "carbonated" shall appear in close proximity to the name and carbon dioxide shall also be declared in the list of ingredients.

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

8.10 Bulk Packs

In the case of fruit juice in bulk, the information required by Sections 8.1 to 8.6 and 8.9.1 - 8.9.4 shall either be given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

See Part IV of Volume X of the Codex Alimentarius.

ALINORM 85/14
APPENDIX VI

DRAFT GUIDELINES ON MIXED FRUIT JUICES
(Revised Text)

1. SCOPE

1.1 These guidelines apply to mixed fruit juices as defined in Section 2 below, for direct human consumption, preserved exclusively by phuysical means.

2. DESCRIPTION

2.1 Mixed fruit juice is the unfermented but fermentable product obtained from juices of two or more different types of fruit in accordance with the relevant provisions of the Codex General Standard for Fruit Juices Preserved Exclusively by Physical Means not covered by Individual Standards or of the Codex Standards for individual Fruit Juices Preserved Exclusively by Physical Means as appropriate.

3. COMPOSITIONAL REQUIREMENTS

3.1 A mixed fruit juice should be prepared in accordance with Section 2.1.

3.2 One or more of the solid sugars as defined by the Codex Alimentarius Commission [may be added. The total quantity of sugars added should not exceed 100 g/kg.

4. LABELLING REQUIREMENTS*

* Formerly Section 3.3.

In addition to Sections 1, 2, 4 and 6 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1981) the following provisions should apply:

4.1 The Name of the Food

4.1.1 The name of a mixed fruit juice should be "fruit juice", while either this name should be accompanied by or the word "fruit" in this name should be replaced by the enumeration of the types of fruits used in descending order of their quantitative predominance in the product. If the product is derived from four or more different types of fruit the product may be named "mixed fruit juice".

4.1.2 If sugar(s) have been added in amounts exceeding 15 g per kg the indication ** "sweetened" should be part of the name, while the amount of sugars added should be mentioned close to the name expressed in grams per litre, calculated as dry matter.

** See also paras 152 and 140.

4.2 List of Ingredients

4.2.1 A complete list of ingredients should be declared on the label in descending order of proportion and in accordance with the relevant requirements applicabale to the individual juices used, except added water need not be declared.

4.2.2 The name of the types of fruit juice used should appear in the list of ingredients in descending order of their quantitative predominance in the product. If lemon or lime juice are added for the purpose of acidification they should be so declared.

4.2.3 In the case of a juice made from concentrate the fact of reconstitution should be declared in the list of ingredients as follows: "x-juice made from concentrate" or "reconstituted x-juice" or "x-juice made from concentrated x-juice", whereby x stands for the name of the relevant fruit.

4.3 Net Contents

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

4.4 Name and Address

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

4.5 Country of Origin

The country of origin of the product should be declared if its omission would mislead or deceive the consumer.

4.6 Date Marking

The "date of minimum durability" (preceded by the words "best before") should be declared by the month and year in uncoded numerical sequence except that for products with a shelf life of more than 18 months, the year will suffice. The month may be Indicated by letters In those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelflife of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

4.7 Storage Instructions

4.7.1 In addition to the date, any special conditions for the storage of the food should be indicated if the validity of the date depends thereon.

4.7.1 Where practicable, storage Instructions should be in close proximity to the date marking.

4.8 Lot Identification

Each container should be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

4.9 Additional Requirements

The following additional specific provisions should apply as appropriate:

4.9.1 No claims should 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 in the country in which the product is sold as warranting such claim or the use of such term.

4.9.2 Where the product contains more than 2 g/kg of carbon dioxide the term "carbonated" should appear in close proximity to the name and "carbon dioxide" shall also be declared in the list of ingredients.

4.9.3 No fruit or fruit juice may be represented pictorially on the label except the fruits used or the juices present in the product.

4.9.4 Where juice requires to be kept under frozen conditions, there should be information for the thawing of the product.

4.10 Non-Retail Containers

In the case of a mixed fruit juice in non-retail containers, the information recommended in Sections 4.1 to 4.5 and 4.8 to 4.9.4, shall either be given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

ALINORM 85/14
APPENDIX VII

DRAFT GUIDELINES ON MIXED FRUIT NECTARS
(Revised Text)

1. SCOPE

1.1 These guidelines apply to mixed fruit nectars as defined in Section 2 below, for direct human consumption, preserved exclusively by physical means.

2. DESCRIPTION

2.1 Mixed fruit nectar is the product obtained by blending two or more fruit nectars which have been obtained in accordance with the relevant provisions of the Codex General Standard for Fruit Nectars Preserved Exclusively by Physical Means not covered by Individual Standards or by the Codex Standards for Individual Fruit Juices Preserved Exclusively by Physical Means as appropriate.

3. COMPOSITIONAL REQUIREMENTS

3.1 A mixed fruit nectar should be prepared in accordance with Section 2.1 above.

3.2 Soluble Solids

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

4. LABELLING REQUIREMENTS *

In addition to Sections 1, 2, 4 and 6 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1981) the following provisions should apply:

* Formerly Section 4.3.

4.1 The Name of the Food

4.1.1 The name of a mixed fruit nectar should be "fruit nectar" while either this name should be accompanied or the word "fruit" in the name should be replaced by the enumeration of the types of fruits used in descending order of their predominance in the product.

4.1.2 The words "Minimum fruit content x%" shall appear in close proximity to the name of the product where "x" is the actual minimum percentage of fruit ingredient in the final product.

4.1.3 If honey is used as the sole sweetening agent, the words "with honey" or "contains [honey" should appear in close proximity to the name of the product.

4.2 List of Ingredients

4.2.1 A complete list of ingredients should be declared on the label in descending order of proportion.

4.2.2 The names of the types of fruit used should be mentioned in the list of ingredients in descending order of their quantitative predominance in the product each name being accompanied by a figure indicating the actual minimum percentage of the product consisting of the relevant fruit ingredient. If lemon or lime juices are added for the purpose of acidification they should be so declared.

4.3 Net Contents

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

4.4 Name and Address

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

4.5 Country of Origin

The country of origin of the product should be declared if its omission would mislead or deceive the consumer.

4.6 Date Marking

The "date of minimum durability" (preceded by the words "best before") should be declared by the month and year in uncoded numerical sequence except that for products with a shelflife of more than 18 months, the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelflife of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

4.7 Storage Instructions

4.7.1 In addition to the date, any special conditions for the storage of the food should be indicated if the validity of the date depends thereon.

4.7.2 Where practicable, storage instructions should be in close proximity to the date marking.

4.8 Lot Identification

Each container should be embossed or otherwise permanently marked, in code or in clear, to identify the producing factory and the lot.

4.9 Additional Requirements

The following additional specific provisions should apply as appropriate:

4.9.1 No claims should 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 in the country in which the product is sold as warranting such claim or the use of such term.

4.9.2 No fruit or fruit juice or fruit nectar may be represented pictorially on the label except the fruits used or the juices or fruit nectars present in the product.

4.9.3 Where the product requires to be kept under frozen conditions, there should be information for the thawing of the product.

4.10 Non-Retail Containers

In the case of a mixed fruit nectar in non-retail containers, the information recommended in Sections 4.1 to 4.5 and 4.8 to 4.9.3, shall either be given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

ALINORM 85/14
APPENDIX VIII

PROPOSED DRAFT STANDARD FOR FRUIT (BASED) DRINKS PRESERVED EXCLUSIVELY BY PHYSICAL MEANS [1/] *

(CX/FJ 84/10 -AGRI/WP.1/GE.4/R.71)

[1/] For the purpose of this standard, preservation by physical means does not include ionizing radiation.

* IFFJP had proposed the following title: "Proposed Draft Standard for Drinks based on Fruit Juice(s) or Fruit(s)".

1. SCOPE

This standard applies to fruit (based) drinks as defined in Sections 2.1 and 2.2 below. This standard does not apply to soft drinks not containing fruit juice, concentrated fruit juice and/or fruit pulp and to fruit nectars.

2.. DESCRIPTION

2.1 A "fruit (based) drink" means a product the refreshing quality of which is associated with the taste and natural flavour characteristic of the fruit(s) from which it is made.

2.2 A fruit (based) drink is an unfermented but fermentable product, intended for direct consumption, obtained by blending the fruit juice and/or edible part of sound ripe fruits, single strength or concentrated with water, with or without the addition of sugar(s) or honey. The amount of fruit ingredient is below the minimum fruit ingredient required for a nectar from the fruit(s) concerned. The product is preserved exclusively by physical means.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Minimum Content of Fruit Ingredient

The minimum content of single strength fruit ingredient or the equivalent derived from concentrated fruit ingredient shall be 10% m/m.

3.2 Blends of Fruit Ingredients

The use of a blend of fruit ingredients derived from different species of fruit is permitted.

Please note that: (a) data concerning the work priority criteria established by the Codex Alimentarius Commission and (b) the discussion of the 15th Session of the Commission of this standard will be included in Addendum 2, to be issued in due course.

3.3 Sugars and Honey

3.3.1 One or more of the sugars, as defined by the Codex Alimentarius Commission, may be added.

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

3.4 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

3.5 Organoleptic Properties

The product shall have characteristic aroma and flavour of the fruit(s) from which it is made, taking into consideration the addition of honey in substitution of sugar(s) [1/].

1/ The Group of Experts should consider the suitability of this provision for products made from fruit ingredient derived from more than one fruit.

4. FOOD ADDITIVES (Subject to endorsement by the Codex Committee on Food Additives)

			Maximum Level
4.1	Acids		
4.1.1	Citric acid	)	
4.1.2	Fumaric acid	)	Limited by GMP
4.1.3	Malic acid	)	
4.2	Antioxidants		
4.2.1	Sulphur dioxide		30 mg/kg
4.3	Colours		
	Natural colours of plant origin 2/		Limited by GMP
4.4	Flavours		
4.4.1	Natural flavours derived from the fruit(s) from which the product is made		Limited by GMP
4.4.2	Edible extracts of plant origin		0.5 g/kg
4.5	Carry-over Principle		
	The carry-over principle shall apply.		

2/ CCFA may request the Group of Experts to specify the colours concerned.

5. CONTAMINANTS (Subject to endorsement by the Codex Committee on Food Additives)

5.1	Arsenic (As)	0.1 mg/kg
5.2	Lead (Pb)	0.1 mg/kg
5.3	Iron (Fe)	5 mg/kg
5.4	Copper (Cu)	2 mg/kg
5.5	Zinc (Zn)	2 mg/kg
5.6	Tin (Sn)	150 mg/kg
5.7.	Sum of Copper, Zinc and Iron	20 mg/kg
5.8	Sulphur dioxide 3/	10 mg/kg
5.9	Acid insoluble ash	10 mg/kg

3/ This provision is not valid when sulphur dioxide is used as an antioxidant in accordance with Section 4.2.1.

6. HYGIENE (Subject to endorsement by the Codex Committee on Food Hygiene)

6.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. No. CAC/RCP 2-1969) and the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969, Rev.l) as recommended by the Codex Alimentarius Commission.

6.2 When tested by appropriate methods of sampling and examination, the product:

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

(b) shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

7. WEIGHTS AND MEASURES

7.1 Fill of Container

7.1.1 Minimum Fill

The fruit (based) drink 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 of 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 Codex General Standard for the Labelling of Prepackaged Foods (Ref. No. CODEX STAN 1-1981) the following provisions shall apply:

8.1 Name of the Food

8.1.1 Fruit (based) drinks made from one fruit species.

8.1.1.1 The name of the food shall be "X(based) drink", where "X" is the common name of the fruit used, except that foods which are prepared from fruit juice or concentrated fruit juice only, shall be named "X fruit juice (based) drink" where "X" is the common name of the fruit used.

8.1.2 Fruit (based) drinks made from more than one fruit species.

8.1.2.1 The name of the food shall be "Mixed Fruit (based) Drink" or "Mixed Fruit (based) Cocktail", except that foods which are prepared from fruit juice or concentrated fruit juice only shall be named "Mixed Fruit Juice (based) Drink" or "Mixed Fruit Juice (based) Cocktail".

8.1.2.2 The name or names of the fruit(s) from which the food has been prepared shall appear in close proximity to the name of the food:

(a) if their minimum content represents more than 2% m/m of the final product;

(b) in the case where the product contains more than one fruit ingredient below the limit indicated in (a) above, the term "and other fruit" or "and other fruit juice" as appropriate shall be included in the declaration of fruit species as required under (a) above.

8.1.2.3 The actual minimum percentage of fruit ingredient shall be declared on the label either: (a) in close proximity to the name of the food, in which case the pictorial representation of the fruit or fruit ingredient used in the manufacture of the product is permitted; or (b) in the list of ingredients, in which case the pictorial representation of the fruit or fruit ingredient used in the manufacture of the product is not permitted.

8.2 List of Ingredients

A complete list of ingredients including added water shall be declared on the label in descending order of proportion.

8.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems of measurement: Metric ("Systeme International"), United States or British Units, as required by the country in which the product is sold; for British Units, units of capacity measurement shall be used.

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

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

8.6 Lot Identification

Each container shall be embossed or otherwise permanently marked in code or in clear to identify the producing factory and the lot.

8.7 Date Marking [1]/

The "date of minimum durability" (preceded by the words "best before") shall be declared by the month and year in uncoded numerical sequence except-that for products with a shelf-life of more than 18 months, the year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year, and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative

[1] See para. 184 of ALINORM 83/22.

8.8 Storage Instructions

8.8.1 In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date, depends thereon.

8.8.2 Where practicable, storage instructions should be in close proximity to the date-marking.

8.9 Additional Requirements

The following additional specific provisions shall apply:

8.9.1 The term "carbonated" or an equivalent term in other languages shall be declared on the label if the product contains more than 2 g/kg of carbon dioxide.

8.9.2 When the product contains honey the declaration "contains honey" shall be in close proximity to the name of the product.

8.9.3 Where the product is required to be kept under frozen conditions, there shall be information for thawing of the product. [2/]

[2] To consider whether this provision is necessary.

8.10 Non-retail Containers

In the case of the product in non-retail containers, the information required by Sections 8.1 to 8.5 and 8.7 to 8.9, shall either be given on the container or in accompanying documents except that the name of the product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

ALINORM 85/14
APPENDIX IX

REPORT OF AN AD-HOC WORKING GROUP ON CONTAMINANTS

1 A Working Group on Contaminants met under the Chairmanship of Dr. R. Harding (United Kingdom) and consisted of members of the following delegations: Austria, the Netherlands, Spain, Switzerland, Thailand, United Kingdom, United States of America and representatives from the WHO and the ECE Secretariat.

2. The Working Group had been asked to review the contaminant levels prescribed and proposed in the Fruit Juice and Fruit Nectar Standards. A paper commenting on these levels had already been circulated (see CX/FJ 84/2 part II, AGRI/WP.l/GE.4/R.63/Add.II).

The Working Group considered the following topics:

Environmental Contaminants Cadmium and Mercury

2. The Working Group noted that Switzerland had introduced maximum concentration levels for cadmium (0.03 mg/kg) and mercury (0.01 mg/kg) in its legislation (para. 48 of ALINORM 82/14).

Cadmium

4. The Working Group had the data from the JFCMP Monitoring Programme received from 1977 - 1981, and the summary prepared by GEMS. Levels of cadmium in fruit juices were very low compared to other foods. Data on cadmium in processed fruit and vegetables were also generated by the survey on contaminants in canned fruits and vegetables undertaken by the CCPFV. The Working Group on Contaminants in that Committee concluded that only very occasionally did cadmium contamination occur during processing (ALINORM 83/20 Appendix X, paragraph 12). The Working Group concluded that the available data provided no justification for a level of cadmium in fruit juices or nectars.

Mercury

5. Neither the JFCMP Monitoring Programme nor the CCPFV Contaminants Survey generated any data on mercury levels in fruit juices or indeed on any other foods. In the absence of such data or evidence that there was cause for concern about mercury in fruit juices and nectars, the Working Group recommended that no limit should be set.

Lead

6. The Working Group set out to establish levels for lead in Codex Fruit Juice and Fruit Nectar Standards at levels as low as practicable on the available data in accordance with GMP. Extensive data on fruit juices in summarized form were available from the JFCMP Monitoring Programme Additional information on the contribution of contaminants from fruib iuices to their respective tolerable daily intakes was tabled by the WHO representative.

7 In recommending a lead limit, the Working Group felt compelled to respect the General Principles for the Selection of Codex Sampling Plans which were adopted by the Codex Alimentarius Commission in 1983. These General Principles indicate that the values of criteria in Standards are to be developed in conjunction with acceptance sampling plans (i.e. the values are to be given in terms of a "statistical average" and will, therefore, allow some items in a lot to have values in excess of the value prescribed in

the Standard). The Working Group was informed that the Notes for Guidance on the Application of the General Principles for the Selection of Codex Sampling Plans were being developed and should be available in their finalized form at the end of 1984.

8. On examination of the available data, it became clear that they were insufficient to recommend a comprehensive acceptance sampling plan because the results of individual analyses were not available and could not be obtained. Sufficient data were available to make a recommendation on the same basis which had been used in standards already adopted (simple maximum levels), although the delegation of Thailand pointed out that there were insufficient data from tropical countries.

9. Nevertheless there was a consensus of opinion in the Working Group, that an "average approach" to any future limit for lead should be recommended, as required by the "General Principles". Furthermore, such an approach would reflect more accurately the available data. It therefore recommended that the sampling method should be the random selection of ten individual items from one lot, and to bulk these items to form a composite sample. This was considered to be a pragmatic approach under the circumstances. The Working Group was informed that it is similar to a procedure already adopted by the Codex Committee on Pesticide Residues and had been endorsed by the Committee on Methods of Analysis and Sampling.

10. On assessment of the whole of the available data, the Working Group recommended that the result of the analysis of such a composite sample should not exceed 0.2 mg/kg. The representative of the WHO expressed the view that this figure was too high when considered on health grounds, and in particular did not provide adequate protection for children.

Tin

11. The Working Group noted that all the tin levels in existing standards had only been temporarily endorsed by the CCFA. Further, JECFA had indicated that acute gastric irritation could occur at levels of about 200 mg/kg. The CCFA had pointed out that this did not represent a recommendation by JECFA for a legal maximum in food (ALINORM 81/12A, para. 115). Also the limit of 250 mg/kg adopted by the CCPFV had only been temporarily endorsed by the CCFA. At its 17th session, the CCFA supported the suggestion of the Working Group, that since it wished to lower the level of tin, the general level of 250 mg/kg should be replaced as far as possible with levels that reflect GMP. While recognizing the difficulties some countries had at present in meeting a limit of 250 mg/kg especially in canned acidic foods, the Committee agreed that a target of 200 mg/kg should be aimed for (ALINORM 85/12 para. 45).

12. There was no information on actual levels of tin in fruit juices and nectars available to the Working Group on which it could recommend any levels based on GMP. It was agreed that the FAO Secretariat should be requested to ask Governments in a circular letter to submit individual levels of tin routinely found in these products in their countries.

Concentrated Products

13. The point raised by the delegation of the Federal Republic of Germany that the levels of lead and tin in concentrated fruit juices should not be higher than those in the single strength juice (paras. 57 and 58 of ALINORM 83/14) was considered. The Working Group was informed that the higher levels of nitrate and acidity in concentrated juices caused faster removal of lead and tin from the iside of cans. This was regarded as

adequate justification for correspondingly higher limits in standards for concentrated juices.

Other contaminants

14. The need for provisions for "non-toxic" contaminants questioned by the Australian delegation at the 16th session of the CCFA (ALINORM 83/12A paras 120) was considered. The Working Group was informed that all contaminants in fruit juice and nectar standards were subject to maximum intakes recommended by JECFA. This was regarded as adequate justification for inserting maximum levels for these contaminants in fruit juice and nectar standards.

REVISION OF METHODS OF ANALYSIS AND SAMPLING FOR FRUIT JUICES

Report of ad hoc Working Group)

The Working Group on Methods of Analysis met under the Chairmanship of Prof. Dr. Woidich (Austria), consisted of members of the delegations of Norway, Spain, Switzerland, Thailand, United States and the ECE Secretariat, with Dr. R. Wood (United Kingdom) acting as Rapporteur.

The Working Group considered a number of items arising from the Report of the Codex Committee on Methods of Analysis (ALINORM 83/23) and the Revision of Methods of Analysis and Sampling for Fruit Juices prepared by the ECE/FAO Secretariat (CX/FJ 84/11, AGRI/WP.1/GE.4/R.72).

The Working Group reviewed all the methods of analysis given in, or required by, the Codex Fruit Juice and Nectar Standards. The Group therefore considered that all the methods given below should apply retrospectively to all the Fruit Juice and Nectar Standards. In addition the Working Group noted that a number of methods had been proposed by the Committee for which there was not a quantitative limit prescribed in any Standard and that considerable information on collaborative trial results needed to be made available before some specific methods could be given type I, II or III status.

Comments on the individual methods are given below:

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1. Taking of the Sample and Expression of Results as m/m

According to the IFJU method No. 1, 1968, Determination of relative density and the IFJU General Sheet, 1971, Conversion of analytical results from m/v (g/1, mg/1) to m/m (g/kg, mg/kg) and the reverse.

Status of endorsement: E (1982)

Comments of CCMAS:

Comments of the Working Group:
If a more recent reference is available it should be used.

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2. Test of Fermentability

According to IFJU Method No.18, 1974, Fermentation test. Results are expressed as "positive" or "negative".

Type I Method

Status of endorsement: E (1982), (1977)

Comments of CCMAS:
Where the fermentation test is not valid for certain small fruits, the Commodity Committee should specify which small fruits are involved. The method is not suitable for citrus juices because of the presence of ethereal oils which inhibit fermentation (ALINORM 71/23, para. 35).

Comments of the Working Group:
For some small fruits which naturally contain benzoic or sorbic acids a negative test may result. In such cases, the natural presence of these acids should be confirmed.

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3. Determination of Apparent Viscosity

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Apparent viscosity (consistency): 22.009, 22.010, 22.011. Results are expressed in seconds.

Type I Method

Status of endorsement: E (1969)

Comments of CCMAS:

Comments of the Working Group:

The reference given above is the most recent one, and appears in the Proposed Draft General Standard for Fruit Juices (CX/FJ 84/8, AGRI/WP./GE.4/R.69). The reference in the Codex Alimentarius should be up-dated.

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4. Determination of L-Ascorbic Acid

According to the IFJU Method No. 17, 1964, Determination of L-Ascorbic Acid, or according to AOAC Official Methods of Analysis - 13th Ed., 1980, Microfluorometric Method (13): 43.061 - 43.067. Results are expressed as mg L-ascorbic acid/kg

Type II Method - micro fluorometric method
Type IV Method - IFJU method

Status of endorsement: TE (1977) (IFJU method)

Comments of CCMAS:
The Committee was informed that collaborative studies were in progress by IFJU on an enzymatic method and that a direct titration method using iodine was available for use as a routine method (ALIN0RM"81/23, para. 63 (d) ii).

Comments of the Working Group:
The Working Group noted that there were some questions of applicablity of the above two methods and that the IFJU were currently developing an enzymic method for the determination of L-ascorbic acids.

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5. Determination of Carbon Dioxide
According to IFJU Method No. 42, 1966, Determination of Carbon Dioxide. Results are expressed as g CO_2/kg, to one decimal place.

Type IV Method
Status of endorsement: E (1977)

Comments of CCMAS:
None

Comments of the Working Group:
The Working Group noted that this was one of a number of "classical" or "historical" methods for which collaborative data would not be readily available, which

should therefore be classified as Type IV methods but which are recognised as being the most appropriate methods. This consideration also applies to the methods given at 14 and 15. It was hoped that the necessary collaborative data would, in this instance, be provided by the delegation of Switzerland.

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6. Determination of Essential Oils

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Essential Oils: 22.088, 22.089 and 19.127. Results are expressed as ml essential oils/kg.

Type I Method

Status of endorsement: E (1969)

Comments of CCMAS:

Comments of the Working Group:

The Working Group considered the method to be identical to that given in IFJU method No. 45A, 1972, Determination of Essential Oils. The method of W.C. Scott and M.K. Veldhuis Bromate Method, JAOAC, 1966, 49(3), 628, results expressed as mg essential oils/lOOml or lOOg (method identical to that given in IFJU Method No. 45B, 1972, Determination of Essential Oils) may be used as a Type IV method.

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7. Determination of Ethanol

According to IFJU Method No.2, 1968, Determination of Alcohol (ethyl alcohol). Results are expressed in g ethanol/kg.

Type II Method

Status of endorsement: Endorsement of standards submitted to the 13th session of CCMAS postponed (1982)

Comments of CCMAS:

CCMAS noted that this method is being amended by IFJU to take into account operating temperatures higher than 20°C (ALINORM"83/23, note no. 6, Annex II to Appendix III).

The question of alternative methods and the use of OIMC alcohol tables was raised. In view of the levels of alcohol to be found in these products it was agreed that further study of methods was justified. However, in the light of endorsement in other standards, the Committee agreed to the endorsement of the provision in the present standards under review at the present time (ALINORM 78/23, para. 51).

Comments of the Working Group:

The Working Group decided that the present method is not applicable as the detection limit of the method is of the same order as the value of the maximum ethanol concentrations laid down in the Codex Fruit Juice and Nectar Standards (3-5g ethanol /kg). It was hoped that a collaboratively tested specific g.l.c. or enzymic method could be recommended in the future

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8. Determination of Added Salt

According to IFJU Method No. 37, 1968, Determination of Chloride (potentiometric micro-method). The determination of sodium is not necessary. Results are expressed as % m/m NaCl.

Type IV Method

Status of endorsement: E (1969)

Comments of CCMAS:

Comments of the Working Group:

The Working Group suggested that the present method should be deleted as there are no quantitative requirements given for the addition of salt in the Standards. However, it was recognized that the method may be required when soluble solids are determined by refractometer, e.g. as in the Tomato Juice Standard (CAC/RS 49-1971). The Group noted that a general Codex Reference Method would be available for the determination of total chloride expressed as sodium chloride (ALINORM 79/23, Appendix IV) and should be used as the Type II method if a method is to be maintained.

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9. Determination of Hvdroxymethyl furfural (HMF)

According to the IFJU Method No. 12, 1968, Determination of Hydroxymethyl furfural (HMF) as amended according to Postel (Deutsch. Lebensm. Rundsch., 1968, 64, 318). Results are expressed as mg HMF/kg, rounded off to the nearest whole number.

Type IV Method

Status of endorsement: E (1969)

Comments of CCMAS:

Comments of the Working; Group:

The Working Group queried whether the Standard was still required in the light of recent advances in the production of honey used in fruit nectars and of fruit nectars.

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10. Determination of Minimum Content of Fruit Ingredient

Method to be elaborated.

Comments of the Working Group:

The Working Group decided that no method could be agreed at this time. However, it noted that a considerable amount of research work is being carried out in various countries and that any method eventually developed would be based on multivariate analysis procedures.

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11. Determination of Soluble Solids

According to the IFJU Method No. 8B, 1968, Estimation of Soluble Solids (indirect determination). Results are expressed in weight percent to two decimals and "Refractometric determination" is to be quoted in brackets.

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Soluble Solids by Refractometer: 22.024, 31.011, 52.012, 52.016. Results are expressed as % m/m sucrose ("Brix") with temperature correction to 20°C.

Type I Methods

Status of endorsement: E (1982), previously endorsed 1977 and 1978.

Comments of CCMAS:
Equivalent methods ISO 2172 and 2173 are available.<ALIN0RM[v]83/23, note no."5, Annex II to Appendix III)

The Committee considered that the IFJU Method No. 8B should be commented on by Governments and that IFJU should review this method in the light of comments. (ALINORM[v]81/23 para. 63 (c) ii)

Comments of the Working Group:
The Working Group noted that these two methods are "equivalent" even though both classified as Type I methods. It also noted that the ISO 2172 and 2173 methods were also available and may be considered to be equivalent to the two methods given above.

ISO Method 2172 is pyknometric method applicable to fruit juice containing no suspended matter and to clear concentrated juice. ISO Method 2173 is a refracto metric method.

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12. Determination of Sugars
According to IFJU Method No.4, 1968, Determination of Sugar (Luft-Schoorl Method) Results are expressed as % m/m.

Type I Method

Status of endorsement: E (1982), TE for Nectars of Certain Citrus Fruits (ALIN0RM 81/23, para. 25).

Comments of CCMAS:
Attention is drawn to the fact that the method determines "total sugars" and not "added sugars".

The delegation of the United Kingdom expressed the opinion that the same method should be used for sugar determination in fruit juices as for sugar products. The Committee questioned whether the IFJU Method No. 4 had been collaboratively tested and was informed that this was so and that the results of the collaborative test would be made available by the Federal Republic of Germany. The Committee noted that the method measured total sugars rather than added sugars. The Commodity Committee was asked to clarify this matter. The delegation of the United States of America indicated that AOAC GLC methods, which were specified for a number of sugars were available. (ALINORM"81/23 para. 63 (b) ii)

Comments of the Working Group:
The Working Group agreed to maintain the present method until a collaboratively tested specific sugars method based on a glc, hplc or enzymic ; procedure becomes available.

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13 Determination of Honey

Method to be elaborated.

Comments of the Working Group:

The Working Group considered it was not appropriate to include any method for honey at this time in view of the difficulty of characterizing different honeys.

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14. Determination of Total Titratable Acids

According to IFJU Method No, 3, 1968, Determination of Titratable Acid (total acid). Results are expressed in g anhydrous citric acid/kg.

Type IV Method

Status of endorsement: E (1969)

Comments of CCMAS:

Comments of the Working Group:

The Working Group noted that this was one of a number of "classical" or "historical" methods for which collaborative data would not be readily available, which should therefore be classified as Type IV methods but which are recognised as being the most appropriate methods.

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15. Determination of Volatile Acids

According to IFJU Method No. 5, 1968, Determination of Volatile Acids. Results are expressed as g acetic acid/kg.

Type IV Method

Status of endorsement: E (1977)

Comments of CCMAS:

Comments of the Working Group:

The Working Group noted that this was one of a number of "classical" or "historical" methods for which collaborative data would not be readily available, which should therefore be classified as Type IV methods but which are recognised as being the most appropriate methods.

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16. Determination of Water Capacity and Fill of Containers

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th ed., 1970, pp. 131-132, E.E. Judge and Sons, West minster MD, USA (Reproduced in ALINORM 71/23, Appendix V).

Type I Method

Status of endorsement: E (1982). The method given in CAC/RM 46-1972 was endorsed in preference to the above method in 1977.

Comments of CCMAS:

None

Comments of the Working Group:

The Working Group noted that the method given in the Codex Alimentarius CAC/RM 46-1972 has also been endorsed in 1977.

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17. Determination of Arsenic

a. According to AOAC Official Methods of Analysis - 13th Ed., 1980, Arsenic: Silver Diethyldithiocarbamate Method: 25.012, 25.013. Results are expressed as mg As/kg.

Type II Method

Status of Endorsement: E (1982) (Codex general method) or

b According to AOAC official methods of analysis - 13th Ed., 1980, Arsenic: Molybdenum Blue Method: 25.010, 25.011. Results are expressed as mg As/kg.

Type III Method

Status of endorsement: Not yet endorsed but Codex General method or

c. According to AOAC Official Methods of Analysis - 13th Ed., first supplement, 1980, Arsenic: Hydride Generator - Atomic Absorption Method: 25.AO1 - 25.AO5. Results are expressed as mg As/kg.

Type III Method

Status of endorsement: Not yet endorsed but Codex General method or

d. According to IFJU method No. 47, 1973, the Determination of Arsenic (Method No. A34/f of the Office International de la Vigne et du Vin).

Type IV Method

Status of endorsement: Temporarily endorsed 1982

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18. Determination of Lead

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Lead: , 25.016 - 25.067. Results are expressed as mg Pb/kg.

Type II Method

According to the IFJU Method No, 14, 1964 Determination of Lead or (photometric method). Results are expressed as mg Pb/kg.

Type IV Method

Status of endorsement: E (1982)

Comments of CCMAS:
Position will be reviewed when results of collaborative studies are available (ALIN0RM"83/23, note no. 3, Annex II to Appendix III).

Comments of the Working Group:
The Working Group recognized that the limits of detection of the above methods are close to the values of the maximum level concentrations prescribed in the Standards, The type II method is a Codex general method.

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19. Determination of Copper
According to AOAC Official Methods of Analysis - 13th Ed., 1980, Copper: Atomic Absorption Method: 25.044-25.048. Results are expressed as mg of Cu/kg.

Type II Method

Status of endorsement: E (1982)

Comments of CCMAS:

Comments of the Working Grou

Codex general method.

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20. Determination of Zinc

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Zinc: Atomic Absorption Method: 25.150-25.153. Results are expressed as mg Zn/kg.

Type II Method

Status of endorsement: E (1982)

Comments of CCMAS:

Comments of the Working Group:

A Codex alternative (Type III) method was adopted by the Commission at its fifteenth session: AOAC 13th Ed., 1980 - 1st supplement 25.AO3 - 25.AO5 closed system digestion AA method and may also be used

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21. Determination of Iron

According to the IFJU Method No. 15, 1964, Determination of Iron (photo metric method). The determination shall be made after dry ashing as described in Section 5b. Results are expressed as mg of Fe/kg.

Type II Method

Status of endorsement: E (1982), previously only TE.

Comments of CCMAS:

An equivalent ISO method, ISO 5517, is available. The Commodity Committee should provide CCMAS with the results of collaborative studies where available (ALIN0RM^{v}83/23, note no. 7, Annex II to Appendix III).

Comments of the Working Group:

The Working Group noted that an equivalent method, ISO 5517, is available and that the IFJU will be providing the results of collaborative trials on which the IFJU method was validated.

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22. Determination of Tin

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Tin: Atomic Absorption Method: 25.136-25.183. Results are expressed as mg Sn/kg.

Type II Method

Status of endorsement: E (1982)

Comments of CCMAS:

Comments of the Working Group:

None.

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23. Determination of Sulphur Dioxide

According to the IFJU Method No. 7, 1968, Determination of Total Sulphur Dioxide. Results are expressed as mg SO_2/kg.

Type II Method

Status of endorsement: E (1982)

Comments of CCMAS:

Comments of the Working Group:

The Working Group noted that although the method could be considered "classical" (see comment for item 5), the IFJU will be providing the collaborative trial results on which the method was validated.

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24. Determination of Mineral Impurities Insoluble in Hydrochloric Acid

According to AOAC Official Methods of Analysis - 13th Ed., 1980, Ash Insoluble in Acid: 30.008. Results are expressed as mg mineral impurities insoluble in HCl/kg.

Type I Method

Status of endorsement: E (1977)

Comments of CCMAS:

Comments of the Working Group: