

UN ECONOMIC COMMISSION FOR
EUROPE
COMMITTEE ON AGRICULTURAL
PROBLEMS

Working Party on Standardization
of Perishable Produce

JOINT FAO/WHO FOOD STANDARDS
PROGRAMME
CODEX ALIMENTARIUS COMMISSION

CODEX ALIMENTARIUS COMMISSION
Fifteenth Session
Rome, 4-15 July 1983

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

Rome, 8-12 February 1982

INTRODUCTION

1. The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices held its Fifteenth Session in FAO Headquarters, Rome, from 8 to 12 February 1982, under the Chairmanship of Professor Dr. W. Pilnik (Netherlands),
2. The Session was attended by 51 participants including the delegations of: Argentina, Australia, Austria, Brazil, Cuba, Dominican Republic, Finland, France, Fed. Rep. of Germany, Israel, Italy, Kenya, Rep. of Korea, Mexico, The Netherlands, Norway, Spain, Switzerland, Thailand, United Kingdom, United States of America. Observers were present from. Saudi Arabia,- -South Africa, Tunisia and the Association of Official Analytical Chemists (AOAC), the Commission de l'Industrie des Jus de Fruits et Légumes de la CEE, the European Economic Community (EEC), the International Federation of Fruit Juice Producers (IFFJP) and the World Health Organization (WHO),
3. The Session was opened by Mr, G.O. Kermode, Chief of the FAO/WHO Food Standards Programme, who welcomed delegates and noted that a larger number of delegates from developing countries were in attendance than in previous sessions of the Group of Experts. He stated that this reflected an increasing interest by developing countries in the Codex Standards developed for fruit juices, particularly in the work on standards for products from tropical areas of the world and the need to facilitate trade in them.
4. Mr. Kermode also reported on the progress in the acceptance of the Group's Standards by the EEC countries, especially the statement that products conforming to the standards would be allowed free distribution within the EEC, Other Member Countries of Codex had indicated their position regarding acceptances which would be published shortly together with the adopted standards as a volume of the Codex Alimentarius.
5. The Chairman, in welcoming delegates, drew attention to the Ninth International Fruit Juice Congress which will be held in Munich, Fed. Rep. of Germany, from 10 to 15 May 1982,

ADOPTION OF THE AGENDA

6. The Group of Experts adopted the provisional agenda as set out in document CX/FJ 82/1 - AGRI/WP.1/GE.4/11 - as the agenda for the Session, A slight change in the order of the items was made for the convenience of delegates,

MATTERS OF INTEREST AND ACCEPTANCES

7. The Group of Experts had before it CX/FJ 82/2 (AGRI/WP.1/GE.4/R. 53) containing notes on matters of interest arising from Sessions of the Codex Alimentarius Commission and other Codex Committees. The Secretariat reported orally on a number of additional items.

Nutrition and the Work of the Commission

8. At its 1.4th Session, the Commission had considered a paper (ALINORM 81/7) which reviewed in a comprehensive way the nutritional aspects in the activities of the Codex Alimentarius Commission and had concluded that these aspects had not been neglected in the work of the subsidiary bodies and the Commission itself, Therefore, no radical changes were necessary. The Commission agreed to an extension of the terms of reference of the Codex Committee on Foods for Special Dietary Uses, which would permit that Committee to examine provisions for nutritional aspects in draft Codex standards. This would not be an automatic endorsement function, and it was thought that guidelines on nutritional aspects for Codex Committees might facilitate decisions by these Committees as to the cases where nutritional aspects should be taken into account. Furthermore CCFSDU could decide to elaborate general texts (guidelines, etc,) on other nutritional matters, e.g, fortification, CCFSDU has been requested to examine the amended terms of reference, to consider methods of operating within these terms of reference in order to enable the 15th Session of the Commission to finalize the proposed amendments, (paras 115-121 of ALINORM 81/391). The Group of Experts agreed that no action was required

at present and to await further developments.

Revision of the Procedure for the Elaboration of Worldwide and Regional Codex Standards

9. The 7th Session of the Committee on General Principles had given consideration to streamlining the Procedure for the Elaboration of Codex Standards and introduced a number of major amendments; including the following:

(a) Steps 1, 2 and 3 have been combined, whereby subsidiary bodies may agree in the elaboration of a standard and have the first draft sent to Governments at Step 3,

pending the subsequent approval by the Commission. This should eliminate undue delays arising from the timing of sessions,

(b) At Step 8 the Commission adopts the standard as a Codex standard which is published in the Codex Alimentarius. The Procedure previously outlined as Steps 9-11 and 9-12 respectively becomes a subsequent procedure concerning Publication and Acceptance of Codex standards, i.e., it has been taken outside the Procedure. The Codex Alimentarius consists of the Codex standards and related texts and a tabulation of notifications.

The Commission had agreed with the above proposed amendments.

Publication of Codex Standards for Fruit Juices

10. The Group of Experts noted that all Codex Standards for Fruit Juices, Concentrated Fruit Juices and Nectars would be published as one volume of the Codex Alimentarius. For this purpose the amendments made at previous sessions had already been incorporated and the publication should become available during 1982.

Other Matters

11. The Group of Experts noted that matters related to labelling, food additives and contaminants would be taken up under the relevant agenda item or in conjunction with the standards concerned. The Working Group on Methods of Analysis would give further consideration to certain methods of analysis, to the review of methodology and to methods of analysis for metallic contaminants (para. 6 of CX/FJ 82/2). The delegation of Brazil expressed the view that it was not recommendable to use fumaric acid as an acidifying agent since it was not soluble

in water. The Group of Experts decided to discuss this matter in conjunction with the standards concerned (see para, 112).

Acceptance of Codex Standards for Fruit Juices

12. The Committee was informed that the Commission had agreed to an amendment of the acceptance format and in particular to the listing of non-acceptance. It had been agreed to introduce a Section "Other Information" which was divided into two sub-sections (a) "Free Distribution Declaration" and (b) "Non-Acceptance".

13. In the case where a country could not formally accept a standard, notified, however, that products complying with a Codex standard could be freely distributed in a country, this information would not be listed under "Non-acceptance". The publication on acceptances would include also a listing of specific national requirements for a product for free circulation, if these had been notified by the Government concerned. It was expected that this additional information would be very useful to Governments.

14. Norway had informed the Secretariat that nine standards for fruit juices were being considered for formal acceptance by the authorities concerned, Cyprus had given target acceptance to the Standard for Pineapple Juice (aims at full acceptance by 1984) and the delegation of Kenya to the 14th Session of the Commission had indicated that Kenya was considering acceptance of the above standard,

15. The United States had notified that it could not accept any of the Codex Standards for Grape Juices, However, products complying with the standards could freely move in the United States if they met the additional requirements specified (see para. 13 above).

16. The Representative of the EEC indicated that the French translation of para. 7(e) of the working paper should be brought in line with the English text, In addition to the above information, the representative pointed out that a second series of comparisons between Codex standards and the relevant EEC regulations had been carried out and submitted, which brought the number of Codex standards examined to eleven. Since the products concerned could be freely circulated to the extent to which Codex rules corresponded to the EEC directive, this notification would, under the new procedure, not be classified as non-acceptance (see para, 13),

DATE MARKING

17. The Group of Experts had before it working document CX/FJ 82/3 (AGRI/WP. 1/GE.4/R. 54) on date marking. The paper summarized the conclusions reached by the Group of Experts at its 14th Session; namely that date marking provisions should be

included in Codex Standards for Fruit Juices, Concentrated Fruit Juices and Nectars, The Group of Experts had also concluded that the most appropriate form of date marking would be date of minimum durability, to provide suitable information to the consumer. Governments had been requested to comment on the following text (para, 24 of ALINORM 81/14):

"Date Marking and Storage Instructions

1. The date of minimum durability shall be declared in clear and in such a way as to include:
 - (a) for products with a shelf-life of not more than 18 months the declaration of the month and the year in accordance with Section 2 below;
 - (b) for products with a shelf-life of more than 18 months the declaration of the year in accordance with Section 2 below.
2. Instructions specifying the conditions of storage which are required in order to meet the expected shelf-life shall be declared on the label,"
18. Comments had been received from Australia, Canada, Denmark, Egypt, Norway, Poland, Switzerland and Thailand,
19. The delegation of Switzerland proposed that the wording to be used in conjunction with the actual date should be amended to read "will keep at least until .., un-opened will keep perfectly for several weeks" and thought that the additional information, which took into account the specific nature of the product, would be very useful to the consumer.
20. The delegation of Thailand reiterated its statement that in Thailand the declaration of either the date of manufacture or the expiry date were required, since it had not been possible to determine well the shelf-life of fruit juices. The delegation indicated that it might consider the date of minimum durability as and when more data on shelf-life became available,
21. The Group of Experts noted that work was undertaken to establish criteria for the determination of shelf-life, including; (a) organoleptic characteristics and (b) the tin content of canned products. The responsibility for the determination would, however, rest with the producer or packer.
22. The representative of the EEC explained in detail the position of the Community, which had also been submitted in writing to the meeting. The EEC had required the compulsory declaration of the date of minimum durability by month and year for products with a shelf-life up to 18 months (day and month for products keeping up to 3 months). In several countries of the EEC, the declaration of month and year was not yet compulsory for products with a shelf-life between 12 and 18 months, However, this would become obligatory by 1984. For products with a shelf-life of more than 18 months, the declaration of the year was required on an optional basis.
23. The Group of Experts reaffirmed its view regarding a provision on the declaration of minimum durability and agreed with the written comments of the countries mentioned above, that in defining the wording of the provision, the revised Guidelines on Date Marking for the Use of Codex Committees should be taken into account. This revised text had been adopted by the 14th Session of the Commission,
24. The Group of Experts noted that Section 6.1 of the Guidelines recommended that for products with a shelf-life of less than 3 months the date should be declared by day,

month and year and that for products with a longer shelf-life the declaration of month and year would suffice,

25. The Group of Experts was of the opinion that the shelf-life of fruit juices preserved by physical means would not fall below 3 months and therefore no special requirements should be laid down for such products with a very short shelf-life. However, where fruit juices had a shelf-life of more than 18 months, it would be difficult to indicate with precision the months. The Group of Experts therefore concluded that the declaration of the year only would suffice.

26. Where in exceptional cases the shelf-life was below 3 months, producers could make special arrangements for a more detailed declaration of the date,

27. The Group of Experts agreed to the following provisions on 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."

28. The Group of Experts also recognized that it was important to provide for a declaration of specific storage instructions, since the validity of the date of minimum durability was closely linked to storage conditions. The Group of Experts considered Sections 4,1 and 4.2 of the revised guidelines and decided that was appropriate to include these provisions into the standards, whereby the requirements in Section 4,1 should be made mandatory. The Group of Experts agreed to the following text;

"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."

29. Several delegations expressed the opinion that provisions should be included in the standard to require that the date mark be easily legible and appear in the same field of vision as other important information such as the name of the food and the net weight. The representative of EEC drew attention to a similar provision in the relevant EEC directive, In the case of a date mark on a stopper or cap, an appropriate indication had to be included in the principal panel.

30. It was pointed out that general requirements for the presentation of mandatory information were contained in Section 4,1 of the General Standard for the Labelling of Prepackaged Foods and that this section was referred to in the preamble of the Labelling Section of all standards. The Group of Experts noted that the above standard was presently under review and that the next Session of the Codex Committee on Food Labelling would consider whether the principle of a principal display panel should be included and agreed to reconsider this matter, if necessary, after the Codex Committee on Food Labelling had finalized the review of the General Standard for the Labelling of Prepackaged Foods,

31. The Group of Experts concluded as follows;

- (a) The appropriate form of date marking in standards for fruit juices, concentrated fruit juices and nectars was the date of minimum durability as defined in the Guidelines on Date Marking, and that appropriate provisions for storage instructions should also be included.
- (b) The provisions set out in paras 27 and 28 above should be included in all standards finalized by this Group,
- (c) The provisions should also be considered in conjunction with the standards at present under elaboration (see also paras 65, 67, 69, 76, 94, 115 and 128),
- (d) The determination of the shelf-life of the products was the responsibility of the producer or packer.

32. In response to some critical remarks by delegations of the text of the guidelines elaborated by the Codex Committee on Food Labelling, it was pointed out that date marking provisions were still under consideration in connection with the present revision of the General Standard for the Labelling of Prepackaged Foods.

DEFINITION OF FRUIT JUICES

33. The Group of Experts had before it document CX/FJ 82/4 (AGRI/WP.1/GE.4/R.55) prepared by the Secretariat and Conference Room Document No. 2, containing the replies of countries to Codex Circular Letter 1980/35 Part B (3).

34. The Chairman noted that the topic under discussion related to the use of extraction processes by which raw material for concentrated fruit juices could be obtained. He recommended that the discussion be limited to concentrated juices. He invited Prof. H.J. Bielig, Chairman of the Scientific and Technical Commission of the International Federation of Fruit Juice Producers to introduce the subject.

35. Professor Bielig suggested that it would be possible in many of the standards for concentrated juices to state that the raw material for the concentrate could be prepared by "physical" processes rather than "mechanical" processes as mentioned at present. This would allow a wider range of processes to be used, including the extraction process mentioned in the discussion paper. He noted that the extraction process was commonly used for certain fruits (e.g. blackcurrants) as a post-crushing process and that the resulting concentrated product would have the essential characteristics of a concentrated product obtained by mechanical means only.

36. The delegation of Switzerland, supported by several other delegations and the representatives of the EEC and IFFJP, stated that it was premature to consider either Prof. Bielig's proposal or the pro-forma paragraph set out in paragraph 5 of CX/FJ 82/4, These delegations pointed to the lack of data showing that the chemical compositions of fruit juice concentrates so obtained were equivalent to the mechanically pressed juice concentrates,

37. The delegations of Australia and Norway stated that the extraction process may not be appropriate for all kinds of fruit but that on a case by case basis, the Group of Experts could consider whether or not the introduction of the paragraph permitting the extraction process in each standard would be appropriate. The delegation of Norway suggested that in any case, the final product should have the same organoleptic characteristics and the Group of Experts should delete the word "essentially" in the paragraph under discussion where it was applied to the organoleptic properties,

38. The delegation of Brazil expressed the view that the extraction process must not be limiting. All processes which assure a product in conformity with the requirements of the Codex standards should be taken into consideration,

39. The delegation of The Netherlands stated that it would prefer to include the diffusion process in appropriate Codex standards. It seemed to be acceptable from a technological point of view. This view was shared by the delegation of the United Kingdom where the process was permitted for certain fruits,

40. It was noted by several delegations that while the final products should be essentially the same, it would not be possible to expect them to be identical in chemical composition, taking into account the natural variation in the fruit and the variation in composition arising when different mechanical processes were used.

41. The delegation of the Fed, Rep, of Germany stated that the quality of the final product should be the same, and that certain conditions should be applied: the process should be used only for the production of concentrated juices; only certain fruits could be submitted to the process; inedible parts of the fruit (core, seeds, etc.) should not be extracted, and the final product (fruit juice made from concentrate) should have the same organoleptic and chemical characteristics as a juice obtained by mechanical process.

42. The Chairman of the Group of Experts, in his analysis of the discussion, stated that opinions were divided. He proposed that no changes should be made to the existing standards, but that an amendment might be made to the definition of concentrated fruit juice which appeared in the Appendix to document CX/FJ 82/4, These definitions, which were primarily intended for the internal guidance of the Group of Experts, would then reflect the view that new technologies were available and would continue to become available,

43. The amendment proposed by the Chairman was as follows;

"For some fruits, products obtained by other physical process than the mechanical one may also be used as raw material for concentrated fruit juice provided that the fruit juice made from the concentrate maintains the essential composition and quality characteristics of the juice,"

44. The Chairman's proposal was supported by the delegations of the Netherlands, the United States and the United Kingdom, the latter stating that the Group would be heavily criticized if it did not make forward-looking provisions of this kind,

45. The delegations of France and Switzerland stated that they could not agree with a change in the definitions and reserved their positions, as did the representative of the EEC. The representative of the IFFJP stated that it would have to be made clear as to which fruits this amendment referred. The delegation of France reserved its position regarding the Chairman's proposal on the grounds that there was not as yet sufficiently precise information on the various extraction processes and on the analytical and organoleptic characteristics of the products obtained. The delegation of France pointed out that to enable it to comment with full knowledge of the facts, the Committee ought to be provided with a specific document on this subject, and that in any event case-by-case examination of the various concentrated juices prepared using this technique was necessary before any amendment was made to the definition of concentrated juices,

46. At the suggestion of the delegation of the Netherlands it was agreed that the Chairman and Professor Bielig of the delegation of the Fed, Rep, of Germany should

prepare a paper on the subject. On the basis of this paper a Circular Letter would be sent to Governments in order to obtain comments on the proposed amendment to the definitions.

47. The delegation of Australia and the representative of the EEC also offered comments on the definition of nectars, but it was agreed to consider these views under Item 11 of the Agenda (see paras 132-152).

MATTERS RELATED TO CONTAMINANTS IN FRUIT JUICES

48. The Group of Experts had before it document CX/FJ 82/5 (AGRI/WP.1/GE.4/R,56) dealing with the consideration of establishing levels for cadmium and mercury for fruit juices, ¹ and CX/FJ 82/2 (AGRI/WP.1/GE.4/R,53) on matters of interest arising from Codex Committees, which referred to the decision of the Codex Committee on Food Additives to postpone the endorsement for lead (Pb) in the draft standards for mango nectar and concentrated pineapple juices.

¹ For statement submitted by Argentina see para. 166.

49. The representative of WHO noted that the FAO/WHO Food Contamination Monitoring Programme was collecting data on cadmium and lead as well, as other contaminants, in a variety of foods. Very few data were available for cadmium in fruit juices, But there were substantial data for lead dating from 1972 to the present. Median levels for lead were in the range 0.2 to 0.3 mg/kg although some individual data were quite high.

50. It was noted that the Group of Experts was the first Commodity Committee to examine proposals to include maximum levels of cadmium and mercury and that any data gathered by the Group should be made available to the Committee on Food Additives so that a general statement might be made on environmental contaminants.

51. The delegation of Switzerland referred to its proposals for the introduction of maximum levels for cadmium (0.03 mg/kg) and mercury (0.01 mg/kg) and stated that these levels had been established in that country following a survey of foodstuffs in which particular attention had been made to the type of packaging used. Other delegations pointed out that the contamination with mercury might be of less importance in these products, while cadmium was contained in some solders.

52. The Group of Experts was informed that the Committee on Processed Fruits and Vegetables was currently undertaking a second survey on the levels of lead, tin and cadmium in commodities of interest to that Committee. The first survey had shown these metals to be of particular interest, and in fact it was from the first survey that some high levels of lead in fruit juices were reported. This led to the postponement by the Committee on Food Additives of the endorsement for lead in the draft standards for Fruit Juices and Nectars.

53. It was agreed to await the outcome of the second survey by the Committee on Processed Fruits and Vegetables and the consideration of the results of the survey by the Committee on Food Additives, It was noted that the latter Committee had on its agenda an item on environmental contaminants, and it was hoped that the Committee would be able to provide clear guidelines to commodity committees, including the Group of Experts, on how to proceed with the collection of data and the establishment of limits for these contaminants,

54. The Group of Experts noted that the maximum levels of tin remained temporarily endorsed and agreed to return to this problem along with the other contaminants when the instructions from the Committee on Food Additives became clear.

55. With regard to the levels of contaminants in concentrated fruit juices, the Group of Experts agreed that in principle it should be possible to reduce the level of tin so that it would be 250 mg/kg in the concentrated product. This needed to be verified, however, as concentrates may be more aggressive in their detinning action than single-strength juices. The delegation of Thailand stated that the level for tropical products should remain at 250 mg/kg in the diluted product.

56. The delegation of Switzerland noted that in that country levels of tin were established according to the type of packaging; 150 mg/kg for plain cans, and 50 mg/kg for types of packaging.

57. Concerning the question of levels of contaminants in concentrated fruit juices the delegation of the Fed. Rep. of Germany pointed out, that it could not agree with the high levels of tin and lead derived from packaging materials, because concentrated fruit juices were sometimes consumed as such.,

58. With regard to lead, the Chairman noted that some lead arose from environmental sources and would be concentrated along with the juice, while some arose from the package. Studies were needed.

CONSIDERATION OF THE DRAFT STANDARD FOR CONCENTRATED PINEAPPLE JUICE PRESERVED EXCLUSIVELY BY PHYSICAL MEANS AT STEP 7

59. The Group of Experts had before it the Draft Standard for Concentrated Pineapple Juice preserved exclusively by Physical Means, ALINORM 81/14, Appendix IV, and the comments of Governments on this text as contained in CX/FJ 82/6 - AGRI/WP.1/GE.4/R.57 - and Conference Room Document No. 2. Comments had been received from Norway, Poland, Switzerland, Thailand and IFFJP.

Description

60. The delegation of Switzerland and the observer from the EEC requested that the prohibition against filtering of the juice contained in Section 1.2.1 be removed. The Group was informed that filtration removed some of the flavour constituents and was prohibited in the Standard for Pineapple Juice. The provision was retained.

61. In view of its earlier decision (see para. 42) the Group of Experts deleted Section 1.2.2 dealing with the use of water extracts. The delegation of the United States stated that in the case of pineapple this was a pulp-washing process and not an extraction.

Food Additives

62. It was noted that the food additive provisions had been endorsed by the Committee on Food Additives.

63. The question was raised concerning the addition of stannous chloride to frozen concentrates. It was pointed out that frozen concentrates were normally packed in plastic or lined paperboard containers but not in tinned steel cans. The addition was necessary for technical reasons and in any case fell well within the limit allowed for tin which might be present as a contaminant derived from tinned steel. The Group of Experts accepted this argument, but the delegations of France, Fed. Republic of Germany, Italy, Netherlands, Norway, Spain, Switzerland and the United Kingdom expressed their reservations on the inclusion of this provision in the standard.

64. Several countries stated that dimethylpolysiloxane was not permitted for use in their countries and also questioned the use of citric and malic acids. The delegation of the Fed. Rep. of Germany reserved its position with regard to the provisions permitting the use of dimethylpolysiloxane and malic acid.

Labelling

65. It was agreed to include the appropriate provisions concerning date-marking in this section (see para. 31 above),

66. In Section 7.2.1 "List of Ingredients" it was agreed to delete the words "water added to adjust the Brix of the concentrate".

67. It was agreed to change the title of Section 7.9 "Bulk packs" to "Non-retail containers" and to exclude the necessity for date-marking on such containers since the repacker or maker of single-strength juice would be the person responsible for the date-marking in such cases. The delegation of Thailand was of the opinion that the date-mark should appear on non-retail containers.

68. It was finally agreed that the Carry-over Principle was not applicable (relevant) to this product, or indeed to other fruit juices or concentrated fruit juices which contained only a single raw material, additives permitted in the final product, and water in some cases.

Status of the Standard

69. The Group of Experts agreed to advance the draft standard to Step 8 of the Procedure. In advancing the draft standard to Step 8, the Group of Experts drew attention to the provisions concerning date-marking which were included in one of its standards for the first time. The Group agreed that following the endorsement of these provisions by the Committee on Food Labelling and their adoption by the Commission, corresponding consequential amendments should be made to all of the previously elaborated standards for fruit juices, and requested the Secretariat to take appropriate action.

CONSIDERATION OF THE DRAFT STANDARD FOR CONCENTRATED PINEAPPLE JUICE WITH PRESERVATIVES, FOR

MANUFACTURING

70. The Group of Experts had for its consideration the draft standard ALINORM 81/14, Appendix V and the comments of Governments on this draft, CX/FJ 82/7 - AGRI/WP.1/GE.4/R.58 - (Australia, Norway, Poland, Switzerland, Thailand and IFFJP).

71. The Chairman of the Group of Experts noted that there had been considerable opposition to the elaboration of this standard, but that the Commission at its fourteenth session having heard all points of view, had decided to advance the proposed draft standard to Step 6 of the Procedure thereby giving the Group of Experts a mandate for its further elaboration.

Description

72. In accordance with its earlier decision the Group of Experts deleted Section 1.2.2 (see para. 42),

Food Additives

73. It was noted that the Committee on Food Additives had only temporarily endorsed the use of calcium benzoate and calcium metabisulphite pending evaluations

by JECFA. The Secretariat was instructed to request JECFA to undertake the evaluations of these two substances.

74. The delegation of the Fed. Rep. of Germany asked whether there was a technological need for the use of sulphur dioxide when sorbates and benzoates were allowed. It was pointed out that this was a product used for manufacturing into other foodstuffs, and that the presence of one or other of these preservative may not be permitted. It was necessary to permit a choice of preservatives. The Group of Experts agreed that in any case the sulphur dioxide compounds should not be used in excess of 500 mg/kg calculated as SO₂, even when used in combination with other preservatives.

Contaminants

75. It was noted that the endorsement of the provision for lead had been postponed, and that the provision for tin had been temporarily endorsed. The Group did not delete the provision for sulphur dioxide as a contaminant (4.8), noting that in cases where sorbates and benzoates were used, some sulphur dioxide might arise through the reducing action of some yeasts, even at the level where they posed no storage or quality problems to the concentrated juice. It was agreed to include a footnote stating that this provision was not valid when the substances listed under Section 3,7 were used as preservatives.

Labelling

76. It was agreed that this product, not being for sale to the consumer, did not require date-marking.

77. The words in square brackets in Section 6.2,2 were deleted, as a quantitative statement in respect of some of the preservatives could not be made,

78. It was agreed that the Carry-over Principle was not applicable to this product.

Status of the Standard

79. The delegation of Switzerland and the representative of the EEC restated their opposition to the standard, stating that the standard seemed to fall outside the terms of reference of the Group of Experts.

80. The delegation of the United Kingdom also opposed the standard and proposed that the following introductory statement be included in any final version of it:

"This standard is intended to assist producers, agents and users of preserved pineapple concentrate. However, any interested parties may manufacture or use pineapple products for manufacturing purposes which are not in accordance with this standard provided they do not claim the products to be to the Codex Alimentarius Standard".

81. The delegation of Finland expressed its concern that there could be confusion in the use of the standard, and that the product might find its way into the normal juice market.

82. The Group of Experts, having heard these objections and recollecting the wish of producer countries to have such a standard developed, advanced the draft standard to Step 8 of the Procedure. The delegation of Switzerland reserved its position in this regard.

83. The revised draft standard appears as Appendix II to this report,

CONSIDERATION OF THE PROPOSED DRAFT STANDARD FOR GUAVA NECTAR PRESERVED EXCLUSIVELY BY PHYSICAL MEANS AT STEP 4

84. The Group of Experts had before it the above proposed draft standard, ALINORM 81/14, Appendix VI, and the comments of Governments as compiled in document CX/FJ 82/9 - AGRI/WP.1/ GE.4/R.60 - (Canada,, Egypt, Norway, Poland, Sweden, Switzerland, Thailand),

Description

85. The delegation of the United Kingdom, supported by the observer from the Rep, of South Africa, noted that there were npn-pulpy guaya nectars in commerce, The Group of Experts amended the Description accordingly, and also made provision for the optional use of homogenisation.

Essential Composition and Quality Factors

86. A number; of delegations spoke in favour of raising the minimum fruit ingredient (Section 2,1) to 25%, and the section was amended accordingly. The delegation of Thailand and the representative of the Rep, of South Africa, stated that at 25% the product would be too pulpy to be palatable and recommended retaining the previous figure of 20%, The revised value was placed in square brackets- in order to attract further comments.

87. The delegations of Norway and the United States, supported By those of Cuba and France, drew attention to the recommendations of the Ad-hoc Working Group on Methods of Analysis in so far as the total sugar content was concerned (para, 5 of Appendix VIII) and recommended that the provision for the total quantity of added sugars be deleted, and that the control of the sugar content be effected by a maximum level of total soluble solids, A maximum figure of 20% m/m was chosen and placed in square brackets, It was noted that this restriction would effectively reduce the maximum addition of sugars to a degree. The minimum figure of 13% was retained, but remained in square brackets, in order to encourage Governments to comment on both aspects.

88. It was agreed to retain the present provision allowing the use of lemon juice as an acidifying agent, and to allow for the use of lime juice as well. Both provisions were included in square brackets. It was noted that lime juice had a pronounced flavour which might affect its use as an acidulant. The Observer from the EEC noted that Community legislation did not currently permit the addition of either lemon or lime juice to guava nectars.

89. The Group of Experts agreed to delete the provision concerning titratable acidity as this was self-limiting in the production of a palatable nectar. The delegation of the United States spoke in favour of a provision linking the total solids content of the juice with the sugar/acid ratio.

Food Additives

90. The observer from the EEC noted that citric acid was not permitted for use in guava nectars in Community countries.

91. It was agreed to delete the provision for the use of L-ascorbic acid as an antioxidant, noting that guava was naturally very rich in Vitamin C.

92. A number of delegations stated that the use of red colour was not permitted in their countries and proposed deletion of this provision. However, the Group of Experts retained the provision in square brackets in order to attract further comments. The

Chairman pointed out that the colour pigments in guava were water-insoluble carotenoids which would be removed by filtration and this would result in filtered guava juice with little colour left.

Labelling

93. In consequence of the change made to the Description of the product in order to accommodate non-pulpy guava nectar, the Group of Experts added the following statement to Section 7.1.1 "Name of the Food";

"except that the non-pulpy product shall be named 'non-pulpy guava nectar'."

The observer from the EEC pointed out that it was superfluous to use the term "non-pulpy" in the designation of this type of products.

94. The Group of Experts agreed that the previously agreed provisions on date marking should be included in this section, and that the Carry-over Principle was not applicable.

Status of the Standard

95. The revised Proposed Draft Standard for Guava Nectar was advanced to Step 5 of the Procedure, and appears as Appendix III to the present report,

AD-HOC WORKING GROUP ON METHODS OF ANALYSIS

96. An Ad-Hoc Working Group on Methods of Analysis met during the session to consider matters concerning methods of analysis related to the work of the Group of Experts. The meeting was chaired by Prof. Dr. H.J. Bielig (Fed, Rep, of Germany). The report of the Working Group is contained in Appendix VIII to this report. The Chairman of the Group of Experts thanked the Working Group for its valuable work.

97. The Chairman of the Working Group drew attention to some matters which required further consideration by the Group of Experts;

(a) The Working Group proposed to introduce provisions for the maximum level of the total soluble solids content into the standards for products to which sugars were *or* could be added instead of a limit for sugar addition, It was pointed out that the latter could not be determined and was therefore not enforceable (para. 5 of Appendix VIII).

(b) The Working Group further proposed that a paper should be prepared for the review of the methods of analysis included in Codex Standards for Fruit Juices, Concentrated Fruit Juices and Nectars, It had been agreed that the document in the format of a tabulation would be prepared by the International Federation of Fruit Juices Producers (Prof, Dr. Woidich) and the UN Economic Commission for Europe Secretariat,

98. The Group of Experts agreed with the above proposals and accepted also the other recommendations by the Group relating to: (a) IFJU methods; (b) classification of methods of analysis; (c) consideration of applicability of general codex methods for heavy metals; and (d) determination of fruit juice/ingredient content in nectars.

CONSIDERATION OF DRAFT STANDARD FOR MANGO JUICE AT STEP 4

99. The Group of Experts had before it the above draft standard as contained in Appendix II to ALINORM 81/14 and comments thereon in documents CX/FJ 82/8 (AGRI/WP.1/GE.4/ R,59), and Addendum 1, Conference Room Document No, 2 and a

telex message from the 3rd Session of the Coordinating Committee for Asia (Conference Room Document No. 5).

100. Comments had been received from Norway, Poland, Switzerland, Thailand and IFFJP,

101. The Group of Experts recalled that it had not been able, at its previous session, to decide whether a product which in fact was prepared from pulp and added water could be named a juice in regions where it was traditionally known as such. The Group had therefore requested the Coordinating Committees of Africa, Asia and Latin America, to express their views on this matter. All three Committees had replied in the affirmative and the Coordinating Committee for Asia had confirmed its view at its recent session (Conference Room Document No, 5),

102. The 14th Session of the Commission would not advise on whether this product should be subject to a separate standard or whether appropriate specific provisions should be included in the standard for mango nectars which had been submitted at Step 5. The Commission had decided that the Group of Experts was the technically competent body to resolve this problem and that both standards should be considered again at Step 3,

103. The delegation of Brazil informed the Group of Experts that mango juice was an important product in Brazil and that in fact, the product had been standardized. The product was obtained from mango pulp without the addition of water. The product description of the Brazilian standard contains the following sentence; "Excess insoluble solids are eliminated by physical process such as sieving, centrifugation, etc.",

104. Several delegations, including the delegations from Australia, Brazil, Cuba, Thailand and the observer from South Africa provided the Group of Experts with valuable technological data which enabled the Group of Experts to proceed with the elaboration of a Codex standard for mango juice,

105. The Group of Experts decided to discuss the standard as contained in Appendix II to ALINORM 81/14, section by section;

Section 1 - Description

106. The Group of Experts decided to include reference to processes whereby the excess of insoluble solids was eliminated and to delete the words "with the addition of water". The secretariat was instructed to amend the section editorially, to bring it into line with Other fruit juice standards (new Section 1,1),

Section 2 - Essential Composition and Quality Factors

107. The Group of Experts agreed to delete the section dealing with Minimum Content of Fruit Ingredient, which was applicable to nectars only,

Sugars

108. It was decided to maintain Section 2.1.2 of the draft standard which permitted the addition of solid sugars, However, the Group of Experts agreed that the addition of sugars should exclude the addition of acids and vice versa, therefore the following sentence was added; "The addition of sugars is not permitted when the juice has been acidified in accordance with Section 3,1",

Total Soluble Solids

109. The Group of Experts decided to bring this section into line with the other juice standards and to limit it to soluble mango solids. The Group of Experts agreed on a figure of 11% m/m for minimum soluble mango solids. This figure, however, was placed in square brackets to indicate that more information was needed for Governments.

Insoluble Solids

110. Taking into account the specific processing of the product which included sieving or centrifugation to eliminate excess insoluble solids in order to make the product palatable, the Group of Experts decided to include into the standard the following provision for insoluble solids? "The product shall contain a maximum of 50% m/m of insoluble solids as determined by centrifugation". An appropriate method should be provided.

Organoleptic Properties

111. Several delegations proposed to delete the term colour from Section 2,3 of the draft standard since the standard permitted the addition of β -carotene, Some other delegations pointed out that in their countries the addition of colours was either not permitted or not desirable and should not be permitted in the standard. The provision for colour in the section on organoleptic properties was indeed important since it was characteristic for the varieties of mangoes which did include pink and white varieties, The Group of Experts agreed that more information was needed on the use of colours (β -carotene) in mango juice and decided to place the term colour into square brackets until the matter of colour additives. had been resolved.

Section 3 - Food Additives

112. The representative of the EEC pointed out that acidifying agents were not permitted in the Community, The delegation of Brazil drew attention to the fact that fumaric acid was only slightly soluble in water and required the additional use of an humectant, and recommended that this substance should not be used. Its low solubility was confirmed by other delegations, Several delegations, including Switzerland, Norway, Poland (written comments) and the EEC also opposed the use of fumaric acid. The delegation of Australia felt that technological justification had to be provided, Others noted the increasing importance of fumaric acid as a food acid and it was agreed to retain the provision in square brackets in order to request more comments on this matter, As indicated in para,111 above the Group of Experts considered the use of β -carotene, The delegation of Cuba Stated that in Cuba the use, of β -carotene was not permitted since it could be used to mask inferior quality, However, if introduced in the standard a maximum level should be given. The Group of Experts- felt that not enough information was available on the actual use of β -carotene in mango juice and placed the provision in square brackets,

113. The Group of Experts decided that the Carry-over Principle was not applicable to this standard.

Section 7 - Labelling List of Ingredients

114. The Group of Experts- agreed that this section had to be amended by deleting reference to water in the light of the new product description.

115. The Secretariat was instructed to amend the standard, where necessary, to introduce the appropriate provisions for date marking and other agreed changes, e.g, bulk packs (see paras 31 and 67).

Status of the Standard

116. The Group of Experts recalled that the Commission had advised this Group to develop the two standards. for mango juice and mango nectars in tandem, The Group of Experts was satisfied with the draft standard, which, as amended at the present session, covered all the provisions for a mango juice as defined in Section 1,1 and agreed to advance the standard to Step 5 of the Procedure, The Draft Standard for Mango Juice Preserved exclusively by Physical Means is contained in Appendix IV to this report,

117. The Group of Experts recognized, however, that the delegation of India to the Coordinating Committee for Asia, had referred to a different product, i.e, 50% mango pulp plus added water, which was marketed as mango juice, The Group of Experts decided to give further consideration to the requirements of this product in conjunction with the standard for mango nectar, (See paras 129-130).

CONSIDERATION OF DRAFT STANDARD FOR PULPY MANGO NECTAR

118. The Group of Experts had before it the above draft standard as contained in Appendix III to ALINORM 81/14 and comments thereon in documents CX/FJ 82/8 (AGRI/WP.1/GE.4/ R,59) and Addendum 1 and a telex message from the 3rd Session of the Coordinating Committee for Asia (Conference Room Document No, 5).

119. Comments had been received from Australia, Poland, Switzerland and Thailand.

120. In view of the decisions taken on the draft standard for mango juice, the Group of Experts decided to continue with the elaboration of a standard for pulpy mango nectar and considered the draft contained in Appendix III to ALINORM 81/14 section by section,

Section 1 - Description

121. The Group of Experts decided that the process of homogenization should be listed as an alternative, and amended Section 1,1 accordingly,

Section 2 - Essential Composition and Quality Factory Minimum Content of Fruit Ingredient

122. The Group of Experts fully discussed the figure for minimum fruit ingredient of 30% m/m in square brackets. The observers- from the EEC held the view that this figure be raised to 50% (same written comments- from Poland). The representative of the EEC pointed out that under the EEC regulation a product with 30% mango fruit ingredient would be classified as a soft drink., The delegation of Thailand did not agree with a minimum fruit content of 50% m/m, The Group of Experts decided to leave the provision unchanged and request more comments,

Sugars

123. The Group of Experts decided to delete the second sentence of Section 2.2 of the draft for reasons explained in the standard for guava nectar (see para, 87) and to introduce a. maximum level for soluble solids of 20% m/m in square brackets into Section 2.5.

Lemon Juice

124. As indicated in the standard for guava nectar a provision for lime juice was included into Section 2,4 of the draft (see para, 88),

Organoleptic Properties

125. Concerning colour the Group of Experts made the same changes as in the standard for mango juice (see para- 111).

Section 3 - Food Additives

126. The Group of Experts agreed to make the same changes as in the standard for mango juice and to request Government comments on the provisions in square brackets, The Group noted a statement of the observer from EEC that the addition of colours and fumaric acid to nectars was not permitted under EEC regulations. The Group of Experts was also informed that the Codex Committee on Food Additives had endorsed the provisions for fumaric acid and β -carotenes in the draft standard for canned mangoes.

Section 4 - Contaminants

127. The Group of Experts noted that the Codex Committee on Food Additives had endorsed the provisions for contaminants- in this- standard,

Section 7 - Labelling

128. The Group of Experts instructed the Secretariat to amend this section as agreed to for the draft standard for guava nectar,

129. The Group of Experts recalled that it had decided to make, in the labelling section of this standard, specific provisions for a product which consisted of at least 50% mango pulp and added water with or without sugar, The Group of Experts noted that the delegation of India to the 3rd Session of the Coordinating Committee for Asia had agreed to provide the Secretariat, as soon as possible, with data, on the production of the above product without sugars.

130. For the present time the Group of Experts agreed that Section 7,1,1 should be amended to read as follows; "The name of the product shall be "mango nectar" or "pulpy mango nectar" [provided that when the mango pulp content is not less than 50%, the name be "pulpy mango juice" in those countries where such description will not deceive or mislead the consumer]", Governments were requested to give further consideration to this matter,

Status of the Standard

131. The Group of Experts decided to advance the draft standard, as contained in Appendix V, to Step 5 of the Procedure,

CONSIDERATION OF DRAFT GUIDELINES ON MIXED FRUIT JUICES AND MIXED FRUIT NECTARS

132. The Group of Experts had before it working document CX/FJ 82/10 (AGRI/WP.1/GE,4/R,61) containing a redraft of the above guidelines prepared by the delegation of the Netherlands, No written comments had yet Been received,

133. The delegation of the Netherlands recalled that guidelines on mixed fruit juices and mixed fruit nectars had been discussed extensively by the previous session of the Group of Experts (paras 118-135 of ALINORM 81/141, The amended version took into account the comments and recommendations made at that time, The delegation of Australia expressed the opinion that the draft guidelines should be transformed into a general standard,

134. The Group of Experts thanked the delegation of the Netherlands for the excellent paper and decided to discuss it section By section.

Scope and Definitions

135. The Group of Experts agreed with a proposal of the delegation of Australia to delete those sections from the scope which actually were part of the definition and to introduce the definitions of fruit juices, concentrated fruit juices and nectars into these guidelines.

Section A - Mixed Fruit Juices

136. The Group of Experts discussed whether the fruit juices used in mixtures would have to comply always with all provisions of the relevant standard for the individual juice. The observer of South Africa drew attention to high quality products in which decoloured and de flavoured fruit juices were used. He pointed out that these products had to be appropriately identified in the list of ingredients. It was also pointed out that, in some instances, consumer preference might justify not to restore or only partly to restore volatiles lost in the processing. The delegation of Switzerland informed the Group that fruit juices used in mixed products should always have the essential quality characteristics of the individual juices,

137. The Group of Experts agreed that the juices used in mixed products should also comply with the requirements for the organoleptic properties in standards for individual juices. The delegation of the Fed, Rep, of Germany expressed the view that there might be a market for products not complying with the above provision; however, these products should be marketed under a different name,

138. The Group of Experts agreed that there should also Be a provision for fruit juices for which no individual standards had been elaborated and considered that the following wording should be added to Section A (2); "A fruit juice, for which no such standard exists, should be prepared in accordance with the definition of fruit juice in Section 2.1 above and should have the essential composition and quality factors appropriate for the fruit concerned". The delegation of Spain stated that in mixing juices, colours and flavours developed, which were different from the characteristics of the single juices.

139, In considering Section A (3) concerning the quantity of single fruit juices, proposals were made. to. introduce numerical minimum levels. The Group of Experts considered this to be impractical in view of the nature of different fruit juices. The Group of Experts agreed that the provision based on the sensoric evaluation was subject to individual differences and not suitable for these guidelines, The Group of Experts decided to delete Section A (3),

140. Several delegations held the view that addition of sugars, at least in the quantity proposed, was not desirable. It was pointed out that such a provision was also in conflict with the relevant provisions in individual juice standards. The delegation of the Netherlands explained that the maximum of 1Q0 g/kg had been proposed to distinguish mixed fruit juices from syrups,

141. The delegation of the United States expressed the view that the most important juices had indeed already been standardized and therefore no additional provision was needed for sugars in these guidelines, The Group of Experts left the provision unchanged pending further Government comments,

Labelling Requirements

142. The Group of Experts considered whether a minimum content of e.g, 5% for a single juice should be required to justify the inclusion of the specific name into the name

of the mixed nectar. The Group of Experts agreed with the view of the delegation of Tunisia, that such a provision would be difficult to control and therefore impracticable.

143. It was also pointed out that certain fruit juices imparted on the mixture a very characteristic flavour even when used in small quantity (e.g. granadilla - orange). In these cases, the consumer would be better informed if the sequence of the single juices did not follow their quantitative predominance in the product. Nevertheless the Group of Experts did not amend Section A 5(a),

144. The Group of Experts agreed in accordance with an earlier decision to include a provision for lime juice in square brackets into 5(b),

145. The delegation of the United Kingdom proposed to delete the second sentence of 5(c) which limited the possibility of pictorial representation to the three predominant juices. While recognizing that there may be limit space on the label only, the Group of Experts agreed to delete this provision. The delegation of France proposed to delete provision 5(c) altogether; the Group of Experts did not agree to this since this provision had been included in all standards for fruit juices developed by this Group.

146. The indication of "sweetened" as part of the name of the food as required in Section 5(d) did not take into account the provisions in individual standards concerning sugar addition to adjust the acid/Brix ratio. It was proposed that it might be less difficult to require the declaration of total sugar. However, the opinion was also expressed that such a requirement could mislead the consumer who was interested in the added sugar. The Chairman also pointed out that the provision did not take into account the different types of declaration for sweetened products, i.e. "sugar added" and "sweetened". It was agreed that further comments were needed on this provision,

147. The delegation of the United States requested that the Circular Letter which would accompany this report should be very detailed and should also contain a request for comments concerning the interpretation of any minimum percentage declaration for regulatory purposes. It was pointed out that these values normally represented a range and that different tolerances levels might have to be established. The Group of Experts agreed with this proposal,

148. The Group of Experts agreed also that the guidelines should be a complete text in itself and that the Secretariat should include the full text of the provisions mentioned under 5(e).

Part B - Mixed Fruit Nectars

149. The Group of Experts instructed the Secretariat to amend this section in accordance with the amendments agreed to under Part A above and the amendments made to the definition of nectars.

150. In accordance with earlier decisions, it was also agreed to introduce a maximum level for the soluble solid content of 20% m/m in square brackets.

Appendix I

151. Appendix I contained a list of the proposed total minimum content of fruit juice and/or fruit ingredient of fruit nectars for which no Codex standards existed. The Group of Experts noted that this list might not yet be complete, that the figures included should be placed in square brackets and that more information on this matter should be requested. It was agreed that this table would also have to be considered in conjunction with the General Standard in CRD No. 1 (see para, 155).

Status, of the Guidelines

152. The Group of Experts decided that the amended guidelines should be sent to Governments for a further round of comments. It was noted that it would be possible to develop these guidelines within the Step Procedure, which prescribed a more formal sequence of Steps to follow. The Group of Experts did not propose to request application of the Procedure at this time. The Guidelines are contained in Appendix VII.

FUTURE WORK PROGRAMME - CONSIDERATION OF PROPOSALS BY MEXICO FOR ADDITIONAL STANDARDS FOR NECTARS

153. The Group of Experts had before it a brief note prepared by the Secretariat, CX/FJ 82/11 (AGRI/WP,1/GE,4/R,62) outlining proposals made by Mexico for standards for nectars of durazno, chabacano and apple, and a mixed nectar of papaya and pineapple.

154. The Group agreed that this request could be largely met by amending the section on "Name of the Food" in the Standard for Apricot, Peach and Pear Nectars to allow the use of the names of particular varieties of fruit, and by extending the Standard for Pear Nectars to cover apples. The mixed nectar of papaya and pineapple would be covered by the Guidelines for Mixed Fruit Juices and Mixed Nectars.

155. However, the Group of Experts also noted and accepted the proposal contained in the Secretariat's paper to consider the elaboration of a General Standard for Nectars which would cover future requests for standards for nectars not widely traded at the present time. To this end the Secretariat had prepared a Proposed Draft General Standard for Fruit Nectars Preserved Exclusively by Physical Means (Conference Room Document No. 1), which was now placed before the Group of Experts.

156. The Group made a number of changes in this proposed draft text, mainly to reflect decisions taken earlier during the session on other standards for nectars. The revised Proposed Draft Standard appears as Appendix VI to the present report.

Status of the Standard

157. The Group of Experts agreed that the revised Proposed Draft General Standard for Nectars Preserved Exclusively by Physical Means should be circulated for Government comments at Step 3 of the Revised Procedure for the Elaboration of World-wide Codex Standards, and that the attention of the Commission should be drawn to this new area of work as would have been the case under Steps 1 and 2 of the old Procedure.

158. Some delegations expressed concern that the General Standard when finalized would mean that the individual standards already prepared would have to be withdrawn. They asked that consideration should be given to the elaboration of a General Standard for Nectars not otherwise standardized, and that Governments should Be specifically asked to comment on this point.

General Standard for Fruit Juices

159. The delegations of Australia and the Netherlands proposed that a parallel general standard should be elaborated for fruit juices. The Group of Experts instructed the Secretariat to prepare a proposed draft general standard based on the existing standards for fruit juices (as had been done in the case of nectars) and to circulate this draft for comments so that it could be considered at the next session,

FUTURE WORK

160. The Group of Experts re-examined its work programme and noted with satisfaction the considerable progress made since its last session. The current future work programme of the Group of Experts would include:

- (1) Concentrated Pineapple Juice Preserved Exclusively by Physical Means, at Step 8.
- (2) Concentrated Pineapple Juice with Preservatives, for Manufacturing, at Step 8,
- (3) Guava Nectar Preserved Exclusively by Physical Means, at Step 5.
- (4) Mango Juice Preserved Exclusively by Physical Means, at Step 5.
- (5) Pulpy Mango Nectar Preserved Exclusively by Physical Means, at Step 5.
- (6) General Standard for Nectars Preserved Exclusively by Physical Means, at Step 3,
- (7) General Standard for Fruit Juices Preserved Exclusively by Physical Means.
- (8) General Guidelines on Mixed Fruit Juices and Mixed Fruit Nectars,
- (9) Bulk Sampling and Sampling Plans for Prepackaged Products,
- (10) Review of Methods of Analysis,
- (11) Fill of Containers,
- (12) Further Information on Physical Processes (see para, 46),

ELECTION OF OFFICERS

161. The Group of Experts re-elected Professor Dr. W. Pilnik (Netherlands) as its Chairman, and Mr. W. Orłowski (Poland) and Professor A. Bhumiratana (Thailand) as its Vice-Chairmen to serve to the end of the Sixteenth Session, In electing the two Vice-Chairmen the Group had recalled the opinion of the Committee on Agricultural Problems of the United Nations Economic Commission for Europe that it was generally useful for technical bodies such as the Group of Experts to enjoy the continuity in office of these elected officers, The Secretariat was requested to write to the two Vice-Chairmen asking them to confirm their acceptance of the office.

OTHER BUSINESS

Amendments to Certain Step 9 Standards for Fruit Juices

162. The Group of Experts had received by telex extracts from the adopted report of the Third Session of the Codex Coordinating Committee for Asia which had been meeting in Colombo (Sri Lanka) from 2 to 8 February 1982, The Coordinating Committee had recommended that amendments be made to certain sections of the Recommended International Standards for Pineapple Juice, Apple Juice and Grape Juice. The proposals appear as Appendix IX to this report,

163. The Group of Experts took no immediate action on these proposals not knowing the procedure envisaged by the Coordinating Committee and expressing concern that the extracts may have been taken out of context with the overall report, and agreed to await advice from the Commission on the procedure to be taken for considering these proposals,

164. The delegation of the Netherlands expressed its general dissatisfaction that the timing of Codex sessions was such that two important meetings- overlapped, and requested the Secretariat to take such measures in the future which would prevent the recurrence of this situation. The Chairman noted that the Group of Experts shared the above views.

DATE AND PLACE OF NEXT SESSION

165. The Group of Experts was informed that the next session would be held during the next biennium and additional information would be made available in due course.

Statement Submitted by Argentina (See para. 48)

166. In Argentina, the presence of metals and other elements in foods in general is accepted provided they remain into the following maximum limits in mg/kg:

<u>Contaminant</u>	<u>Maximum Limit</u>
Arsenic in liquids	0,1 mg/kg
Antimony	2 mg/kg
Boron	80 mg/kg
Zinc	100 mg/kg
Copper	10 mg/kg
Tin	100 mg/kg
Fluorine	1,5 mg/kg
Silver	1 mg/kg
Lead in liquids	2 mg/kg
Lead in solids-	20 mg/kg

For lemon, mandarin, orange and grapefruit juices, the maximum permitted limits are:

<u>Contaminant</u>	<u>Maximum Limit</u>
Lead	0,3 mg/kg
Arsenic	0,1 mg/kg
Copper	5 mg/kg

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DRAFT STANDARD FOR CONCENTRATED PINEAPPLE JUICE
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS
(At Step 8 of the Procedure)

1, DESCRIPTION

1.1 Product Definition

Concentrated Pineapple Juice (Pineapple Juice Concentrate) is the unfermented product, which is capable of fermentation after reconstitution, obtained from the raw material described in 1.2, through the process of concentration defined in 1.3, and preserved exclusively by physical means.¹

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

1.2 Raw Material

1.2.1 The raw material from which this product is prepared is unfermented but fermentable pineapple juice obtained by a mechanical process, which may include centrifuging but not filtering, from the flesh or parts thereof, with or without core material, from sound ripe pineapple (*Ananas comosus* L, Merrill = *Ananas-sativus* L, Lindl).

1.3 Process Definition

The process of concentration consists of the physical removal of water until the product has a soluble pineapple solids content of not less than 27% m/m as determined by refractometer at 20°C, corrected for acidity in accordance with method set forth in 8, and read as Brix on the International Sucrose Scales, and may include the addition of; (1) juice or concentrate or water suitable for the purpose of maintaining the essential composition and quality factors of the concentrate; and (2) natural volatile pineapple juice components where these have been removed.

2, ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Requirements for the Juice after Reconstitution

The product obtained by reconstituting the concentrated pineapple juice in accordance with Section 7,8 shall comply with the provisions of the Codex Standard for Pineapple Juice Preserved Exclusively by Physical Means (Ref, No, CODEX STAN 85-1981), except that it may contain L-ascorbic acid and stannous chloride as provided for in Section 3 of this standard,

3. FOOD ADDITIVES

	<u>Maximum Level in the reconstituted juice</u>
3.1 Dimethylpolysiloxane (as an antifoaming agent)	10 mg/kg
3.2 Citric acid	Limited by GMP
3.3 Malic acid	“ “
3.4 L-ascorbic acid (as an antioxidant)	“ “
3.5 Stannous chloride	8 mg/kg (in juice from frozen concentrate)

4. CONTAMINANTS

When pineapple juice concentrate is reconstituted in accordance with Section 7.8 of this standard the presence of contaminants shall not exceed those limits laid down in Section 4 of the Codex Standard for Pineapple Juice Preserved Exclusively by Physical Means (Ref. No. CODEX STAN 85-1981).

5. 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/RCP 2-1969) and the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969, Rev. 1) as recommended by the Codex Alimentarius Commission.

5.2 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.

6. WEIGHTS AND MEASURES 6.1 Fill of Container

6.1.1 Minimum Fill (exclusive of non-retail containers)

The concentrated pineapple 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. When the product is preserved by freezing the minimum fill requirement applies to the product in the frozen state.

7. 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 Pre-packaged Foods (Ref. No. CODEX STAN 1-1981) the following provisions apply:

7.1 The Name of the Food

7.1.1 The name of the product shall be "Concentrated Pineapple Juice", "Pineapple Juice Concentrate", "Frozen Concentrated Pineapple Juice", or "Frozen Pineapple Juice Concentrate" as appropriate.

7.1.2 The name of the food may be accompanied by the term "X Brix" where "X" represents the percentage of soluble pineapple solids by weight as determined by refractometer at 20 C, corrected for acidity in accordance with method set forth in 8, and read as degrees Brix on the International Sucrose Scales.

7.2 List of Ingredients

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion except that the components identified in 1.3 need not be declared.

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

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

7.3 Net Contents

The net contents shall be declared by volume on packages intended for retail sale. On packages intended for non-retail sale, the net contents shall be declared by weight. The systems of measurement shall be: Metric (Système International), United States or British units as required by the country in which the product is sold,

7.4 Name and Address

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

7.5 Country of Origin

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 product 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 data 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 juice may be represented pictorially on the label except pineapple or pineapple juice.

7.9.2 No claims shall be made in respect of "Vitamin C" nor shall the term "Vitamin C" appear on the label unless the product contains such quantity of "Vitamin C" as would be accepted by national authorities in the country in which the product is sold, as warranting such claim or the use of such term.

7.9.3 Where concentrated pineapple juice requires being kept under frozen conditions, there shall be information on the label, for thawing of the product.

7.10 Degree of Concentration

Instructions for dilution shall be given on the container by stating the percentage of soluble pineapple solids, by weight, as determined by refractometer at 20°C, corrected for acidity in accordance with method set forth in 8, and read as Brix on the International Sucrose Scales or in the case of products intended for retail sale by stating the number of parts by volume of water which are required to be added to one part by

volume of the concentrated juice to obtain juice which complies at least with the minimum requirements of the Codex Standard for Pineapple Juice Preserved Exclusively by Physical Means (Ref. No. CODEX STAN 85-1981).

7.11 Non-Retail Containers

In the case of concentrated pineapple juice (at any degree Brix) in non -retail containers the information required by Sections 7.1 to 7.6 and 7.9.1 to 7.9.3 shall either be given on the container or in the 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

8.1 Taking of 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.

8.2 Test for Fermentability (Type I)

According to the IFJU method No. 18, 1974, Fermentation Test. Results are expressed as "positive" or "negative",

8.3 Soluble Solids (Type I)

Degree Brix in concentrated pineapple juice is the refractosucre value determined in accordance with the "International Scale of Refractive Indices of Sucrose Solutions" and to which the applicable correction for acid is added (see Table I for corrections). The measurement of Brix value is determined on the concentrate in accordance with the refractometric method for sugars and sugar products, outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists".

8.4 Acid (Type I)

Acid means the per cent by weight of total acidity, calculated as anhydrous citric acid. Total acidity is determined by titration with standard sodium hydroxide solution, using phenolphthalen as indicator.

TABLE I¹

¹ Source: "Refractometric Determination of Soluble Solids in Citrus Juices" by J.W. Stevens and W.B. Baier, from Analytical Edition of Industrial and Engineering Chemistry, Vol II, p. 447, 15 August 1939

CORRECTIONS FOR OBTAINING BRIX VALUE

<u>Citric acid, anhydrous</u> <u>(% by weight)</u>	<u>Correction to be added to refractometer</u> <u>sucrose value to obtain Brix value</u>
2.0	0.39
2.2	.43
2.4	.47
2.6	.51
2.8	.54
3.0	.58
3.2	.62
3.4	0.66
3.6	.70

3.8	.74
4.0	.78
4.2	.81
4.4	.85
4.6	.89
4.8	.93
5.0	.97

8.5 Determination of Water Capacity and Fill of Containers (Type II)

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th Edition, 1970, p. 131-132, E.E. Judge and Sons, Westminster MD (USA). 2/

² Reproduced in ALINORM 71/23, Appendix V. Endorsement suspended pending review of Codex methods. New reference to be provided.

APPENDIX II

DRAFT STANDARD FOR CONCENTRATED PINEAPPLE JUICE WITH PRESERVATIVES, FOR MANUFACTURING

(At Step 8 of the Procedure)

1. DESCRIPTION

1.1 Product Definition

Concentrated Pineapple Juice with Preservatives, for Manufacturing (Pineapple Juice Concentrate with Preservative, for Manufacturing) is the unfermented product obtained from the raw material described in 1.2, through the process of concentration defined in 1.3 and preserved exclusively by, or with the assistance of, chemical preservatives. It is not intended for direct consumption nor for the manufacture of fruit juices or nectars intended for direct consumption.

1.2 Raw Material

1.2.1 The raw material from which this product is prepared is unfermented but fermentable pineapple juice obtained by a mechanical process, which may include centrifuging but not filtering, from the flesh or parts thereof, with or without core material, from sound ripe pineapple (*Ananas comosus* L. Merrill - *Ananas sativus* L. Lindl).

1.3 Process Definition

The process of concentration consists of the physical removal of water and may include the addition of (1) juice or concentrate or water suitable for the purpose of maintaining the essential composition and quality factors of the concentrate, and (2) natural volatile pineapple juice components where these have been removed,

1.4 Means of Preservation

The concentrated product is preserved exclusively by, or with the assistance of, the preservatives listed in 3.5, 3.6 or 3.7.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Organoleptic Properties

There shall be no off-flavours nor discolouration, taking into account the nature of the product.

2.2 Lemon Juice

Lemon juice may be added as an acidifying agent.

3. FOOD ADDITIVES

	<u>Maximum Level</u>
3.1 Dimethylpolysiloxane (as an antifoaming agent)	10 mg/kg calculated on the basis of equivalent reconstituted pineapple juice
3.2 Citric Acid	Limited by GMP
3.3 Malic Acid	“ “ “
3.4 L-Ascorbic Acid (as an antioxidant)	“ “ “
3.5 Benzoic acid or its sodium, potassium or calcium salts	1000 mg/kg calculated as benzoic acid
3.6 Sorbic acid or its sodium, potassium or calcium salts	1000 mg/kg calculated as sorbic acid

- | | | | |
|-----|------------------------|---|--------------------|
| 3.7 | Sulphur dioxide |) | |
| | Sodium sulphite |) | |
| | Potassium sulphite |) | 500 mg/kg |
| | Sodium bisulphite |) | calculated |
| | Potassium bisulphite |) | as sulphur dioxide |
| | Calcium metabisulphite |) | |
| | (Pyrosulphite) |) | |

The preservatives named in 3.5, 3.6 and 3.7 may be used in combination up to 1000 mg/kg, except that those listed in 3,7 may not be used in excess of 500 mg/kg expressed as SO₂.

4. CONTAMINANTS

The content of contaminants listed hereunder shall not exceed the maximum levels when the product is reconstituted to the strength (in terms of soluble solids) of the original raw material:

		<u>Maximum Level</u>
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 ²
4.7	Sum of copper, zinc and iron	20.0 mg/kg
4.8	Sulphur dioxide	10.0 mg/kg ³

¹ Endorsement postponed.

² Temporarily endorsed, remains under review.

³ This provision is not valid when one or more of the preservatives named in 3.7 are used.

5. 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/RCP 2-1969) and the International Code of Practice - General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969, Rev. 1) as recommended by the Codex Alimentarius Commission.

5.2 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.

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

The product shall be labelled in accordance with the Guidelines for Labelling of Non-retail Containers of Food. ¹ In addition to Sections 1, 2, 3, 4 and 6 of these Guidelines, the following special provisions shall apply:

1 Under elaboration by the Codex Committee on Food Labelling.

The following information shall be given on the label.

6.1 The Name of the Food

6.1.1 The name of the product shall be "Concentrated Pineapple Juice with Preservative, for Manufacturing," or "Pineapple Juice Concentrate with Preservative, for Manufacturing".

6.1.2 The name of the food shall be accompanied by the term "X Brix" where "X" represents the percentage of soluble pineapple solids by weight as determined by refractometer at

20 C, corrected for acidity in accordance with method set forth in Section 7.3, and read as degrees Brix on the International Sucrose Scales,

6.2 List of Ingredients

6.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion by weight, except that the components identified in 1.3 need not be declared.

6.2.2 For the declaration of preservatives the specific name shall be used.

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

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

6.3 Net Contents

The net contents shall be expressed by weight, declared in either the Metric (Systeme International), or avoirdupois or both systems of measurement as required by the country in which the product is sold.

6.4 Name and Address

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

6.5 Country of Origin

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

6.6 Lot Identification

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

6.7 Exemptions

The information required by Sections 6.2 to 6.6 may be replaced by an identification mark, and given only in accompanying documents provided that such a mark is clearly identifiable with the accompanying documents.

7. METHODS OF ANALYSIS AND SAMPLING

7.1 Taking of 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.

7.2 Soluble Solids (Type I)

Degree Brix in concentrated pineapple juice is the refracto-sucrose value determined in accordance with the "International Scale of Refractive Indices of Sucrose Solutions" and to which the applicable correction for acid is added (see Table I for corrections). The measurement of Brix value is determined on the concentrate in accordance with the refractometric method for sugars and sugar products, outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists".

7.3 Acid (Type I)

Acid means the per cent by weight of total acidity, calculated as anhydrous citric acid. Total acidity is determined by titration with standard sodium hydroxide solution, using phenolphthalen as indicator.

TABLE I¹

¹ Source: "Refractometric Determination of Soluble Solids in Citrus Juices" by J.W. Stevens and W.B. Baier, from Analytical Edition of Industrial and Engineering Chemistry, Vol. II, p. 447, 15 August 1939

CORRECTIONS FOR OBTAINING BRIX VALUE

<u>Citric acid, anhydrous</u> <u>(% by weight)</u>	<u>Correction to be added to refractometer</u> <u>sucrose value to obtain Brix value</u>
2.0	0.39
2.2	.43
2.4	.47
2.6	.51
2.8	.54
3.0	.58
3.2	.62
3.4	.66
3.6	.70
3.8	.74
4.0	.78
4.2	.81
4.4	.85
4.6	.89
4.8	.93
5.0	.97

7.4 Determination of Arsenic

According to:

Colourimetric (Silver diethyl dithiocarbamate) method of AOAC (1980) XIII 25.012-25.013. (Type II).

IFJU method No. 47, 1973, Determination of Arsenic (Method No. A.34/F of the "Office International de la Vigne et du Vin"). Results are expressed as mg arsenic/kg. (Type III).

7.5 Determination of Lead

According to:

AOAC (1980) XIII 25.061-25.067 (Type II)¹

¹ Under elaboration by the Codex Committee on Methods of Analysis.

IFJU method No. 14, 1964, Determination of lead (photometric method). Results are expressed as mg lead/kg. (Type III).

7.6 Determination of Copper

According to:

AOAC (1980) XIII, 25.044-25,048 atomic absorption method (Type II).

7.7 Determination of Zinc

According to:

AOAC (1980) XIII, 25.150-25.153 atomic absorption method (Type II).

7.8 Determination of Iron (Type II)

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

7.9 Determination of Tin

According to:

AOAC (1980) XIII, 25.150-25.153, atomic absorption method. (Type II).

7.10 Determination of Sulphur Dioxide (Type II)

According to the IFJU method No. 7, 1968, Determination of total sulphur dioxide. Results are expressed as mg SO /kg.

7.11 Determination of Water Capacity and Fill of Containers (Type II)

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th Edition, 1970, p. 131-132, E.E. Judge and Sons, Westminster MD (USA). 2/

² Reproduced in ALINORM 71/23, Appendix V. Endorsement suspended pending review of Codex methods. New reference to be provided.

PROPOSED DRAFT STANDARD FOR GUAVA NECTAR PRESERVED
EXCLUSIVELY BY PHYSICAL MEANS¹
(At step 5 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 not be less than [13.0%] m/m and not more than [20.0%] 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 and/or Lime Juice

Lemon juice and/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 (Subject to endorsement by the Codex Committee on Food Additives)

	<u>Maximum Level</u>
3.1 Citric acid	Limited by GMP
3.2 Malic acid	
[3.3 Red Colour]*

* Governments are requested to indicate which colours, approved by the Codex Alimentarius Commission, should be used and to propose related maximum levels as appropriate. (See para.92).

4. CONTAMINANTS

	<u>Contaminant</u>	<u>Maximum Level</u>
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 ²
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, remains under review.

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/RCP 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% 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 ("Système 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 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

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 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 (To be endorsed by the Codex Committee on Methods of Analysis)

8.1 Taking of 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/l, mg/l) to m/m (g/kg, mg/kg) and the reverse.

8.2 Test for Fermentability (Type I)

According to the IFJU method No. 18, 1974, Fermentation Test. Results are expressed as "positive" or "negative".

8.3 Determination of Minimum Content of Fruit Ingredient

(To be elaborated).

8.4 Determination of Sugars (Type I)

According to the IFJU method No. 4, 1968, Determination of Sugar (Luft-School Method). Results are expressed as % m/m.

8.5 Determination of Honey (To be elaborated).

8.6 Determination of Soluble Solids (Type I)

According to the IFJU method No. 8B, 1968, Estimation of soluble solids, indirect determination (see Official Methods of Analysis of the AOAC, 1975, 22.019, 31.009 and 52.010). Results are expressed as % m/m sucrose ("Brix") with correction for temperature to the equivalent at 20°C.

8.7 Determination of Ethanol

According to the IFJU method No. 2, 1968, Determination of alcohol (Ethyl alcohol).¹ Results are expressed as g ethanol/kg.

¹ To be amended by IFJU to take into account operating temperatures higher than 20°C.

8.8 Determination of Arsenic

According to:

Colourimetric (Silver diethyl dithiocarbamate) method of AOAC (1980) XIII 25 012-25.013. (Type II).

IFJU method No. 47, 1973, Determination of Arsenic (Method No. A.34/F of the "Office International de la Vigne et du Vin"). Results are expressed as mg arsenic/kg. (Type III).

8.9 Determination of Lead

According to:
AOAC (1980) XIII 25.061-25.067 (Type II) ²

² Under elaboration by the Codex Committee on Methods of Analysis.

IFJU method No. 14, 1964, Determination of lead (photometric method). Results are expressed as mg lead/kg. (Type III).

8.10 Determination of Copper

According to:
AOAC (1980) XIII, 25.044-25.048 atomic absorption method (Type II).

8.11 Determination of Zinc

According to:
AOAC (1980) XIII, 25.150-25.153 atomic absorption method (Type II).

8.12 Determination of Iron (Type II)

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

8.13 Determination of Tin

According to:
AOAC (1980) XIII, 25.150-25.153, atomic absorption method. (Type II).

8.14 Determination of Sulphur Dioxide (Type II)

According to the IFJU method No. 7, 1968, Determination of total sulphur dioxide. Results are expressed as mg SO₂/kg.

8.15 Determination of Water Capacity and Fill of Containers (Type II)

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th Edition, 1970, p. 131-132, E.E. Judge and Sons, Westminster MD (USA). ¹

¹ Reproduced in ALTNORM 71/23, Appendix V. Endorsement suspended pending review of Codex methods. New reference to be provided.

PROPOSED DRAFT STANDARD FOR MANGO JUICE
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS
(Advanced to Step 5)

1. DESCRIPTION

Unfermented but fermentable juice, intended for direct consumption, obtained by a mechanical process from sound, ripe mangoes (*Mangifera Indica* L.) preserved exclusively by physical means,¹ The juice shall be prepared from fresh sieved mango pulp or sieved mango pulp preserved without any chemical preservative, with or without the addition of sugars and the substances listed in Section 3, while maintaining the essential composition and quality factors of the juice.

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

1.1 Varietal Types

Any commercially cultivated variety/varieties of mango suitable for manufacture of juice may be used,

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Sugars

One or more solid sugars, as defined by the Codex Alimentarius Commission may be added. The addition of sugar (s) is not permitted when the juice has been acidified in accordance with Sections 3,1,1 to 3.1.3.

2.2 Soluble Solids

The soluble mango juice solids shall be not less than [11%] m/m as determined by refractometer at 20°C uncorrected for aridity and read as Brix on the International Sucrose Scales.

2.3 Ethanol Content

The ethanol content shall not exceed 3 g/kg,

2.4 Quality Factors

2.4.1 The product, when packed, shall be free from burnt or objectionable taints and flavours and shall have a good consistency. The product shall contain a maximum of 50% m/m of insoluble solids as determined by centrifugation,

2.4.2 Fruit skin, stem residue, fibrous matter, larvae, insect fragments or any other foreign matter shall not be present in the juice,

2.4.3 The product shall be free or practically free from black specks,

2.5 Organoleptic Properties

The product shall have the characteristic [colour] aroma and flavour of the variety/varieties of mango used,

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

3.1 Acidifying Agents

3.1.1	Citric acid)	<u>Maximum Level</u>
2.1.2	Malic acid)	Limited by GMP
3.1.3	Fumaric acid)	“ “
			“ “]
3.2	Natural Colour		
3.2.1	Beta Carotene	Limited by GMP]	

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

	<u>Contaminant</u>	<u>Maximum Level</u>
4.1	Arsenic (As)	0.2 mg/kg
4.2	Lead (Pb)	0.3 mg/kg
4.3	Copper (Cu)	5.0 mg/kg
4.4	Zinc (Zn)	5.0 mg/kg
4.5	Iron (Fe)	15 mg/kg
4.6	Tin (Sn)	250 mg/kg ¹
4.7	Sum of copper, zinc and iron	20 mg/kg
4.8	Sulphur dioxide	10 mg/kg

¹ Remains under review.

5. HYGIENE (Subject to endorsement by the Codex Committee on Food 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. 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; and
- (b) Chi 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 mango juice shall occupy not less than 90 per cent y/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 Recommended International General Standard for the Labelling of Prepackaged Foods (Ref. No, CODEX STAN 1-1981) the following provisions apply;

7.1 The Name of the Food

7.1.1 The name of the food shall be "Pulpy Mango Juice" or "Pulpy Juice of Mango".

7.1.2 In the case where sugar has been added, the name of the food shall be "Sweetened I [pulpy mango juice" or "Sweetened Pulpy Juice of Mango".

7.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order or proportion,

7.3 Net Contents

The net contents shall be declared by volume in one or more of the following systems, of measurement; Metric ("Système International"), 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 the omission would mislead or deceive the consumer.

7.6 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.

7.7 Storage Instructions

7.7.1 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,

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

7.8 Lot Identification

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

7.9 Additional Requirements.

The following additional specific provisions shall apply;

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

7.9.2 Where mango juice requires- to be kept under frozen conditions, there shall be information for thawing of the product.

7.10 Non-retail Containers

In the case of mango juice in non-retail containers, the information required by Sections 7.1 to 7.5 and 7.8 to 7.9.2, 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 SAMPLING (To be endorsed by the Codex AND Committee on Methods of Analysis)

8.1 Taking of 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/l, mg/l) to m/m (g/kg, mg/kg) and the reverse.

8.2 Test for Fermentability (Type I)

According to the IFJU method No. 18, 1974, Fermentation Test. Results are expressed as "positive" or "negative".

8.3 Determination of Soluble Solids (Type I)

According to the IFJU method No. 8B, 1968, Estimation of soluble solids, indirect determination (see Official Methods of Analysis of the AOAC, 1975, 22.019, 31.009 and 52.010). Results are expressed as % m/m sucrose ("Brix") with correction for temperature to the equivalent at 20°C.

8.4 Determination of Sugars (Type I)

According to the IFJU method No. 4, 1968, Determination of Sugar (Luft-School Method). Results are expressed as % m/m.

8.5 Determination of Ethanol

According to the IFJU method No. 2, 1968, Determination of Alcohol (Ethyl alcohol).¹ Results are expressed as g ethanol/kg.

¹ To be amended by IFJU to take into account operating temperatures higher than 20°C.

(To be elaborated)

8.7 Determination of Arsenic

According to:

Colourimetric (Silver diethyl dithiocarbamate) method of AOAC (1980) XIII

IFJU method No. 47, 1973, Determination of Arsenic (Method No. A.34/F of the "Office International de la Vigne et du Vin"). Results are expressed as mg arsenic/kg. (Type III).

8.8 Determination of Lead

According to:

AOAC (1980) XIII 25.061-25.067 (Type II)²

² Under elaboration by the Codex Committee on Methods of Analysis.

IFJU method No. 14, 1964, Determination of lead (photometric method). Results are expressed as mg lead/kg. (Type XII).

8.9 Determination of Copper

According to:

AOAC (1980) XIII, 25.044-25048 atomic absorption method (Type II).

8.10 Determination of Zinc

According to:

AOAC (1980) XIII, 25.150-25.153 atomic absorption method (Type II).

8.11 Determination of Iron (Type II)

According to the IFJU method No. 15, 1964, determination of Iron (photometric method). The determination shall be *made* after dry ashing as described in Section 5 - Remark (b). Results are expressed as mg iron/kg.

8.12 Determination of Tin

According to:

AOAC (1980) XIII, 25.150-25.153, atomic absorption method. (Type II).

8.13 Determination of Sulphur Dioxide (Type II)

According to the IFJU method No. 7, 1968, Determination of total sulphur dioxide. Results are expressed as mg SO /kg.

8.14 Determination of Water Capacity and Fill of Containers (Type II)

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th Edition, 1970, p. 131-132, E.E, Judge and Sons, Westminster MD (USA).¹

¹ Reproduced in ALINORM 71/23, Appendix V. Endorsement suspended pending review of Codex methods. New reference to be provided.

PROPOSED DRAFT STANDARD FOR PULPY MANGO NECTAR
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

(at Step 5 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.

1.2 Varietal Types

Any commercially cultivated variety or varieties of mango suitable for the manufacture of the nectar may be used.

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/n.

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 less than 15% m/m and 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 [and/or Lime Juice]

Lemon juice [and/or lime juice] may be added as an acidifying agent.

2.7 Organoleptic Properties

The product shall have the characteristic [colour] a aroma and flavour of the variety or varieties of mango from which it is made, taking into consideration the addition of honey in substitution for sugars.

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

3.1	Citric Acid)	<u>Maximum Level</u>
3.2	Malic Acid)	Limited by GMP
3.3	Fumaric Acid	“ “ “
3.4	Beta-carotene	“ “ “
4.	CONTAMINANTS (Subject to endorsement by the Codex Committee on Food Additives)	

	<u>Contaminant</u>	<u>Maximum Level</u>
4.1	Arsenic (As)	0.2 rag/kg
4.2	Lead (Pb)	0.3 mg/kg
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.

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. So. CAC/RCP 2-1969) and the General Principles of Food Hygiene (Kef. No. CAC/RCP 1-1969, Rev. I), recommended by the Codex Alimentarius Commission

- 5.2 When tested by appropriate methods of sampling and examination the products
- (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", /provided that when the mango pulp content is not less than 50%, the name be "mango

juice" in those countries where such description will not deceive or mislead the consumer].

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 measurements 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 nectar may be represented pictorially on the label except mangoes or mango nectar.

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

7.9.2 Where mango 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 mango nectar 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

(To be endorsed by the Codex Committee on Methods of Analysis)

8.1 Taking of 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/l, mg/l) to m/m (g/mg, mg/mg) and the reverse.

8.2 Test for Fermentability (Type I)

According to the IFJU method No. 18, 1974, Fermentation Test. Results are expressed as "positive" or "negative".

8.3 Determination of Minimum Content of Fruit Ingredient (To be elaborated)

8.4 Determination of Sugars (Type I)

According to the IFJU method No. 4, 1968, Determination of sugar (Luft-Schoorl method). Results are expressed as % m/m.

8.5 Determination of Honey (To be elaborated)

8.6 Determination of Soluble Solids (Type II)

According to the IFJU method No. 8B, 1968, Estimation of soluble solids, indirect determination (see Official Methods of Analysis of the AOAC, 1975. 22.019, 31.009 and 52.010). Results are expressed as % m/m sucrose ("degrees Brix") with correction for temperature to the equivalent at 20°C

8.7 Determination of Ethanol

According to the IFJU method No. 2, 1968, Determination of alcohol (Ethyl alcohol)

¹ Results are expressed as g ethanol/kg.

8.8 Determination of Arsenic

According to:

Colourimetric (Silvar diethyl dithiocarbamate) method of AOAC (1980) XIII 25.012-25.013. (Type II).

IFJU method No. 47, 1973, Determination of Arsenic (Method No. A.34/F of the "Office International de la Vigne et du Vin"). Results are expressed as mg arsenic/kg. (Typo III).

8.9 Determination of Lead

According to:

AOAC (1980) XIII 25.061-25.067 (Type II) ¹

¹ Under elaboration by the Codex Committee on Methods of Analysis.

IFJU method No. 14, 1964, Determination of lead (photometric method). Results are expressed as mg lead/kg. (Type III).

8.10 Determination of Copper

According to:

AOAC (1980) XIII, 25.044-25.048 atomic absorption method (Type II).

8.11 Determination of Zinc

According to:

AOAC (1980) XIII, 25.150-25.153 atomic absorption method (Type II).

8.12 Determination of Iron (Type II)

According to the IFJU method No. 15, 1964, determination of Iron (photometric method). The determination shall be made after dry ashing as described in Section 5 - Remark.(b). Results are expressed as mg iron/kg.

8.13 Determination of Tin

According to:

AOAC (1980) XIII, 25.150-25.153, atomic absorption method. (Type II).

8.14 Determination of Sulphur Dioxide (Type II)

According to the IFJU method No. 7, 1968, Determination of total sulphur dioxide. Results are expressed as mg SO₂/kg.

8.15 Determination of Water Capacity and Fill of Containers (Type II)

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th Edition, 1970, p. 131-132, E.E. Judge and Sons, Westminister MD (USA). ²

² Reproduced in ALINORM 71/23, Appendix V. Endorsement suspended pending review of Codex methods. New reference to be provided.

PROPOSED DRAFT
GENERAL STANDARD FOR FRUIT NECTARS PRESERVED EXCLUSIVELY
BY PHYSICAL MEANS¹
(At Step 3 of the Procedure)

1. SCOPE

1.1 This standard applies to pulpy and non-pulpy nectars obtained individually from species of fruit listed in Table 1 below.

1.2 Appendix I to this standard contains guidelines on mixed nectars.²

² To be elaborated. (See also Appendix VII)

2. DESCRIPTION

A nectar is an unfermented but fermentable non-pulpy or pulpy product, intended for direct consumption, obtained by blending the fruit juice and/or total edible part of sound ripe fruits, single strength or concentrated, with water and sugars or honey and preserved exclusively by physical means.¹

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

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 conform to the requirements laid down in Column III of Table 1.

3.2 Sugars and Honey

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 agent.

3.3 Soluble Solids

The minimum soluble solids content of each product shall conform to the requirements laid down in Column IV of Table 1. (As determined by refractometer at 20°C, uncorrected for acidity and read as Brix on the International Sucrose Scales). The soluble solids content shall not exceed [20%] m/m.

3.4 Lemon [and/or Lime] Juice

Lemon [and/or lime] juice may be added as an acidifying agent in conformity with the requirements laid down in Column V of Table 1.

3.5 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

TABLE 1

COLUMN I Species	COLUMN II Botanical Name	COLUMN III Minimum Fruit Content	COLUMN IV Soluble Solids Content	COLUMN V Lemon Juice and Food Additives
[Apple	Prunus malus L.	40% m/m]	[[4.1,4.2, 4.4]
Apricots, cultivars from	Prunus armeniaca L.	35% m/m	13% m/m	3.4,4.1,4.2,4.4
Bilberries	Vaccinium myrtillus L.	40% m/m	13% m/m	4.1,4.2,4.4
Blackberries	Rubus procerus P.J. Muell	30% m/m	13% m/m	4.1,4.2,4.4
Blackcurrants	Ribes nigrum L.	30% m/m 1/	13% m/m	4.1,4.2,4.4 3]
Cloudberries	Rubus chamaemorus L.	30% m/m	13% m/m	4.1,4.2,4.4
Cranberries	Vaccinium oxycoccus L. V. macrocarpon Ait.	30% m/m	13% m/m	4.1,4.2,4.4
Currants, red and white cultivars from	Ribes rubrum L., R. pallidum Otto Dietr., R. Sylvestre (Lam) Mert and W.D.J. Kock, etc.	30% m/m	13% m/m	4.1,4.2,4.4
Elderberries	Sambucus nigra	50% m/m	13% m/m	4.1,4.2,4.4
Gooseberries	Ribes uva-crispa L. and hybrids	30% m/m	13% m/m	4.1,4.2,4.4
Grapefruit	Citrus paradisi Macfadyen	50% m/m	12% m/m	3.4
Guava	Psidium guajava	[20% m/m]	[13% m/m]	3.4,4.1,4.2,4.3,4.6
Mandarine	Citrus reticulata	50% m/m	12% m/m	3.4
Mango	Mangifera indica	[30% m/m] ²	15% m/m	3.4,4.1,4.2,4.3,4.4,4.5
Orange	Citrus sinensis L. Osbeck	50% m/m	12% m/m	3.4
Papaya	Carica papaya	50% m/m]	[[3.4,4.1,4.2,4.4]
Peaches, cultivars from	Prunus persica	40% m/m	13% m/m	3.4,4.1,4.2,4.4
Pear	Pyrus communis	40% m/m	13% m/m	3.4,4.1,4.2,4.4
[Pineapple	Ananas comosus L. Merrill Ananas sativus L. Lindl	30% m/m	[[3.4,4.1,4.2,4.4]
Raspberries	Rubus idaeus L.	40% m/m	13% m/m	4.1,4.2,4.4
Rose hips	Cynorrhoda of Rosa spp.	40% m/m	13% m/m	4.1,4.2,4.4
Rowanberries	Sorbus aucuparia L.	30% m/m	13% m/m	4.1,4.2,4.4
Sea buckthorn	Hippophaea rhamnoides L. ;	25% m/m	13% m/m	4.1,4.2,4.4
Strawberries, cultivars and hybrids	Fragaria spp.	40% m/m	13% m/m	4.1,4.2,4.4
Tangerine (see Mandarin)		-		-

Whortleberries (or Lingonberries) [other fruits	Vaccinium vitis idaea L. -	30% m/m 30% m/m]	13% m/m []	4.1,4.2,4.4 [4.1,4.2,4.4]
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¹ For non-pulpy blackcurrant nectar: 30% m/m of single strength blackcurrant juice or the equivalent of concentrate.

² Discussion on two levels (30% - 50% m/m) pending.

³ L-ascorbic acid permitted in pulpy products only.

3.6 Essential Oils

In citrus based nectars the essential oil content shall not exceed [0.4 ml/kg].

3.7 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 (Subject to Endorsement by the Codex Committee on Food Additives)

The following food additives are permitted in conformity with the requirements laid down in Column V of Table 1:

	Maximum Level
4.1 Citric acid	Limited by GMP
4.2 Malic acid	Limited by GMP
4.3 Fumaric acid	Limited by GMP
4.4 L-ascorbic acid	Limited by GMP
4.5 Beta-) carotene	To adjust and standardize the natural colour only
4.6 Red colour) []	

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

5.1 Arsenic (As)	0.2 mg/kg
5.2 Lead (Pb)	0.3 mg/kg
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
5.7 Sum of Copper, Zinc and Iron	20.0 mg/kg
5.8 Sulphur dioxide	10.0 mg/kg

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 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. 1) recommended by the Codex Alimentarius Commission.

6.2 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.

7. WEIGHTS AND MEASURES

7.1 Fill of Container

7.1.1 Minimum Fill

The product 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° which the sealed container will hold when completely filled.

8. LABELLING (Subject to Endorsement by the Codex Committee on Food Labelling)

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

8.1 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 used except that:

(a) where a specific characterizing variety or cultivar of a fruit has been used, the name of that variety or cultivar may represent "X";

(b) where the product is a non-pulpy nectar the name of the product shall be "non-pulpy X nectar" or "non-pulpy nectar of X".

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 Where L-ascorbic acid has been used, it 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 ("Systems 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.

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 nectar may be represented pictorially on the label except fruit mentioned in the name of the food.

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 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.

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

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

8.10 Non-retail containers

In the case of nectars in non-retail containers, the information required by Sections 8.2 to 8.6 and 8.9.1 to 8.9.3 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 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 in the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING (To be endorsed by the Codex Committee on Methods of Analysis)

9.1 Taking of 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/l, mg/l) to m/m (g/kg, mg/kg) and the reverse.

9.2 Test for Fermentability¹ (Type I)

¹ Not appropriate to nectars of certain small fruits.

According to the IFJU method No. 18, 1974, Fermentation Test. Results are expressed as "positive" or "negative".

9.3 Determination of Minimum Content of Fruit Ingredient

(To be elaborated)

9.4 Determination of Sugars (Type II)

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

9.5 Determination of Honey

(To be elaborated)

9.6 Determination of Soluble Solids (Type III)

According to the IFJU method No. 8B, 1968, Estimation of Soluble Solids, indirect determination (see Official Methods of Analysis of the AOAC, 1975, 22.019, 31.009 and 52.010). Results are expressed as % m/m sucrose ("°Brix") with correction for temperature to the equivalent at 20 C.

9.7 Determination of Ethanol

According to the IFJU method No. 2, 1968, Determination of Alcohol (Ethyl alcohol).¹ Results are expressed as g ethanol/kg.

¹ To be amended by IFJU to take into account operating temperatures higher than 20°C.

9.8 Determination of L-Ascorbic Acid

According to the IFJU method No. 17, 1964, Determination of L-ascorbic Acid, or microfluroimetric method of AOAC (Official Methods of Analysis of the AOAC 1975) 43.056-43.062. Results are expressed as mg L-ascorbic acid/kg.

9.9 Determination of Arsenic

According to:

Colourimetric (Silver diethyl dithiocarbamate) method of AOAC (1980) XIII, 25.012-25.013. (Type II).

IFJU method No. 47, 1973, Determination of Arsenic (Method No. A.34/F of the "Office International de la Vigne et du Vin"). Results are expressed as mg arsenic/kg. (Type III).

9.10 Determination of Lead

According to:

AOAC (1980) XIII, 25.061-25.067. (Type II) ²

² Under elaboration by the Codex Committee on Methods of Analysis.

IFJU method No. 14, 1964, Determination of Lead (photometric method). Results are expressed as mg lead/kg. (Type III).

9.11 Determination of Copper

According to:

AOAC (1980) XIII, 25.044-25.048 atomic absorption method (Type II).

9.12 Determination of Zinc

According to:

AOAC (1980) XIII, 25.150-25.153 atomic absorption method (Type II).

9.13 Determination of Iron (Type II)

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

9.14 Determination of Tin

According to:

AOAC (1980) XIII, 25.150-25.153, atomic absorption method. (Type II).

9.15 Determination of Sulphur Dioxide (Type II)

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

9.16 Determination of Water Capacity and Fill of Containers (Type II)

According to the method published in the Almanac of the Canning, Freezing, Preserving Industries, 55th Edition, 1970, p. 131-132, E.E. Judge and Sons, Westminster MD (USA).¹

¹ Reproduced in ALINOKM 71/23, Appendix V. Endorsement suspended pending review of Codex methods. New reference to be provided.

DRAFT GUIDELINES ON MIXED FRUIT JUICES
AND MIXED FRUIT NECTARS
(Revised Text)

1. SCOPE

These guidelines apply to mixed fruit juices and mixed fruit nectars, as defined in Section 2 below, for direct human consumption, preserved exclusively by physical means.¹

2. DEFINITIONS AND DESCRIPTIONS

2.1 Fruit Juice is the unfermented but fermentable juice, intended for direct consumption, obtained by a mechanical process from sound, ripe fruits, preserved exclusively by physical means.¹ The juice may be turbid or clear. 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. A fruit juice for which a Codex standard has been elaborated should comply with the relevant standard. A fruit juice for which no Codex standard has been elaborated should be prepared in accordance with the definition of fruit juice given above and should have the essential composition and quality factors appropriate for the fruit concerned.

2.2 Concentrated Fruit Juice is the unfermented product, which is capable of fermentation after reconstitution, obtained from the juice of sound, ripe fruits, from which the water has been removed by physical means to the extent that the product has a soluble solids content of not less than double the content of the original juice intended for direct consumption. The product must be preserved exclusively by physical means¹ and may be clear or turbid. For some fruits, products obtained by other physical process than the mechanical one, may also be used as raw material for concentrated fruit juice provided that the fruit juice made from the concentrate maintains the essential composition and quality characteristics of the juice. A concentrated fruit juice for which a Codex standard has been elaborated should comply with the relevant standard. A concentrated fruit juice for which no Codex standard has been elaborated should be prepared in accordance with the definition of concentrated fruit juice given above and should have the essential composition and quality factors appropriate for the fruit concerned,

2.3 Fruit nectar is the unfermented but fermentable non-pulpy or pulpy product, intended for direct consumption, obtained by blending the fruit juice and/or the total edible part of sound, ripe fruits, concentrated or unconcentrated, with water and sugars or honey and preserved exclusively by physical means,¹ to which citric acid, malic acid and 1-ascorbic . acid may be added, A fruit nectar for which a Codex standard has been elaborated should comply with the requirements of the relevant standard, A fruit nectar for which no Codex standard has been elaborated should be prepared in accordance with the definition of nectars given above and as regards the minimum fruit and/or fruit juice content should be in accordance with the requirements in Table 1.

2.4 Mixed fruit juice is the unfermented but fermentable product consisting of juices from two or more different types of fruit, preserved exclusively by physical means,¹ as defined in Section 2.1.

¹ For the purpose of these guidelines, preservation by physical means does not include ionizing radiation.

2.5 Mixed fruit nectar is the product obtained by blending two or more fruit nectars.

3. MIXED FRUIT JUICE

3.1 A mixed fruit juice should be prepared in accordance with Section 2.4.

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.

3.3 Labelling Requirements

3.3.1 In addition to Sections 1, 2, 4 and 6 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref.; CODEX STAN 1-1981) the following provisions should apply:

3.3.2 The Name of the Food

3.3.2.1 The name of a mixed fruit juice should be "fruit juice", while either this name should be accompanied 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",

3.3.2.2 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.

3.3.3 List of Ingredients

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

3.3.3.2 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, each name being accompanied by a figure indicating the minimum percentage of the relevant juice, The figure may be omitted for lemon juice [and/or lime juice] used for acidification purposes only,

3.3.3.3 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.

3.3.4 Net Contents

The net contents should 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 should be used,

3.3.5 Name and Address

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

3.3.6 Country of Origin

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

3.3.7 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.

3.3.8 Storage Instructions

3.3.8.1 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,

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

3.3.9 Lot Identification

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

3.3.10 Additional Requirements

The following additional specific provisions should apply as appropriate:

3.3.10.1 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,

3.3.10.2 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.

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

OR

No fruit or fruit juice may be represented pictorially on the label except the fruits used or the juices present in the product. If the product is derived from four or more fruits, the pictorial representation may be restricted to the three fruits that together are quantitatively most predominant in the product.

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

3.3.11 Non-retail Containers

In the case of a mixed fruit juice in non-retail containers, the information recommended in Sections 3.3.1 to 3,3,6 and 3.3,9 to 3,3,10,4, 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,

4. MIXED FRUIT NECTARS

4.1 A mixed fruit nectar should be prepared in accordance with Section 2.5 above.

TABLE I

<u>Nectars of</u>	Minimum content of fruit and/or fruit ingredient expressed in % m/m of the final product
a) Fruit with sour juice unfit for human consumption without appropriate treatment passionfruits (<i>passiflora edulis</i>) sloes plums sour cherries other cherries quinces azerolas	 [25] [30] [30] [35] [40] [50] [30]
b) <u>Fruits with juice that as such is fit for human consumption</u>	[50]

4.2 The soluble solids content of a mixed fruit nectar should not be less than 13% m/m and not be more than [20%] m/m as determined by refractometer at 20 C uncorrected for acidity and read as Brix on the International Sucrose Scales,

4.3 Labelling Requirements

In addition to Sections 1, 2, 4 and 6 of the Codex General Standard for the Labelling of Prepackaged Foods (Ref.: CODEX STAN 1-1981) the following provisions should apply;

4.3.1 The Name of the Food

4.3.1.1 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.

4.3.1.2 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,

4.3.3. List of Ingredients

4.3.3.1 A complete list of ingredients should be declared on the label in descending order of proportion,

4.3.3.2 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 minimum percentage of the product consisting of the relevant fruit ingredient. The figure may be omitted for lemon juice [and/or lime juice] used for acidification purposes only.

4.3.4 Net Contents

The net contents should 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 should be used.

4.3.5 Name and Address

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

4.3.6 Country of Origin

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

4.3.7 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 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,

4.3.8 Storage Instructions

4.3.8.1 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,

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

4.3.9 Lot Identification

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

4.3.10 Additional Requirements

The following addition specific provisions should apply as appropriate;

4.3.10.1 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,

4.3.10.2 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,

OR

No fruit ingredient 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. If the product is derived from four or more fruits, the pictorial representation may be restricted to the three fruits that together are quantitatively most predominant in the product.

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

4.3.11 Non-retail Containers

In the case of a mixed fruit nectar in non-retail containers, the information recommended in Sections 4,3.1 to 4,3.6 and 4.3.9 to 4.3.10.3, 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.

Report of an Ad hoc Working Group on Methods of Analysis

1. The Working Group on Methods of Analysis met under the Chairmanship of Prof. Dr. H.J. Bielig (Federal Republic of Germany) and consisted of members of the following delegations: Australia, Austria, Cuba, Federal Republic of Germany, Norway, Switzerland, United Kingdom, United States and the representative of the EEC.
2. The Working Group considered a number of items arising from the report of the Codex Committee on Methods of Analysis including the following:

IFJU Methods

3. The Working Group noted the opinion that the IFJU methods should be generally reviewed. The Group pointed out that in connection with the consideration of General Codex Methods for heavy metals a large number of IFJU methods would be reviewed (see para. 7). The Working Group recommended that the statistical material arising from the collaborative studies of IFJU methods should be made available by IFJU to the Committee on Methods of Analysis.

IFJU Methods for Determination of Sugars

4. The Working Group was informed that the Committee on Methods of Analysis, at its 12th Session, had questioned whether the above method had been collaboratively studied and had also noted that the method did apply to total sugar and not to the added amount only. Mention had also been made of the availability of AOAC GLC methods for specific sugars.
5. The Working Group confirmed that in products which contained natural sugars of different types and to which different sugars could be added in accordance with the provisions of the standard only a determination of total sugars was possible. The Working Group noted that two different approaches to this matter were possible, in some EEC countries the amount of ingoing sugars (g/kg) was controlled by food control authorities. Where international trade was concerned, this method was not enforceable. Therefore the Working Group agreed with a proposal to suggest the introduction of a maximum level into the provision concerning the total soluble solids content in the Standards for Fruit Juices, Concentrated Fruit Juices and Nectars.

Classification of Methods of Analysis

6. The Working Group noted that in the majority of cases the Committee on Methods of Analysis had agreed with the evaluation as contained in Appendix VII to ALINORM 81/14. The Group also agreed with the amendment made by CCMAS.

Consideration of Applicability of General Codex Methods for Heavy Metals

7. The Working Group took note that the CCMAS had postponed endorsement of the methods for heavy metals included in the standard for nectars of certain citrus fruits and had recommended to examine the applicability of the general methods as contained in Appendix IV to ALINORM 81/23.

The Group agreed that the following methods should be included in the standards for fruit juices:

Arsenic

Colorimetric (silver diethyl dithiocarbamate) method of AOAC (1980) XIII 25.012 - 25.013 (Type II).

According to the IFJU method No. 47, 1973, Determination of arsenic (Method No. A.34/F of the "Office International de la Vigne et du Vin"). Results are expressed as mg arsenic/kg (Type III).

Lead

Official method of Analysis of the AOAC (1980) XIII, 25.061 - 25.067 (Type II) (Step 6).

According to the IFJU method No. 14, 1964, Determination of lead (photometric method). Results are expressed as mg lead/kg. (Type III).

Copper

AOAC (1980) XIII, 25.044 - 25.048 atomic absorption method (Type II).

Zinc

AOAC (1980) XIII, 25.150 - 25.153 atomic absorption method (Type II).

Tin

The Working Group noted that a suitable method for the determination of tin was now available and agreed to propose the inclusion into the standards of the following method:

AAS method AOAC (1980) XIII, 25.136 - 25.138. Iron

No amendment was made to Section 8.13 - Determination of Iron, since no General Codex Method had been proposed for this substance.

8. The Working Group recommended that the above method should be included in the standards under elaboration as well as the Step 9 standards.

General Review of Methods of Analysis on Codex Standard for Fruit Juices (etc.)

The Working Group recalled that it had at its 13th Session carried out a review of methods of analysis and had up-dated a number of them editorially. It was recognized, however, that further work might be required to be done especially in the light of the guidelines on methods of analysis elaborated by the CCMAS which contained certain criteria which had to be used.

The Working Group was of the opinion that such a review could be carried out only if the methods and proposal for amendments were presented in a tabulated form well in advance to the next session of the Group of Experts.

The Working Group agreed that this document should be prepared by the ECE Secretariat together with the International Federation of Fruit Juice Producers (Prof. Woidich).

Determination of Fruit Juice (Ingredient) Content in Nectars

The Working Group was informed that due to the wide biological range of fruit juice constituents in different varieties of the same species it was impossible, at present, to arrive at a fruit juice/ingredient determination with reasonable accuracy. This was

especially true in the case of products which might contain defined different proportions of fruit juice (ingredient) such as mango nectars with 30 and 50%.

Extract from the Adopted Report of the Third Session of the
Codex Coordinating Committee for Asia Proposing Amendments
to Certain Step 9 Standards

“97. The standards for fruit juices to which amendments were proposed were those for Pineapple Juice, Apple Juice and Grape Juice. Concerning the section headed "Organoleptic Properties" in these three standards the Committee recognized that there could be a loss of volatile components during the process of concentration. This was the only circumstance in which the Committee could see a loss of volatiles. The Committee did not think that the way in which this particular provision in the standards had been drafted made it clear that the restoration of lost volatiles was permitted only under the circumstances mentioned above. The Committee proposed to amend the provision as follows to clarify the situation "Natural volatile - (name of the fruit) juice components may be restored to any juice from which only if the natural volatile - (name of the fruit) juice components have been (removed) lost during processing".

98. Concerning the provision for tin in the standard for Pineapple Juice and Apple Juice, the Committee expressed the wish that the figure of 250 mg/kg for tin be accepted by the Group of Experts on Fruit Juices as a firm figure and that it be fully endorsed by the Codex Committee on Food Additives. As regards the standard for Apple Juice, the Committee proposed that the level for tin be increased from 150 mg/kg to 250 mg/kg. In this connection, the Committee pointed out that the existing level of 150 mg/kg was too low for conditions in tropical climates and that, in any event, no evidence had been produced which would indicate that a level of 250 mg/kg posed a hazard to health. The Committee also wished to point out that the provisions of Codex standards were intended to promote international trade and exports and not to be so restrictive as to possibly create difficulties for some exporting developing countries. "

Extract from Appendix to Report containing actual amendments proposed by Coordinating Committee :

"Pineapple Juice (CAC/RS 85 - 1976) 2.4 Organoleptic properties amend the second sentence to read as follows: 'Natural volatile Pineapple Juice components may be restored to any Pineapple Juice only if the natural volatile Pineapple Juice components have been lost during processing'.

Apple Juice (CAC/RS 48 - 1971) 2.4 Organoleptic properties similar amendment proposed as in case of standard for Pineapple Juice.

Contaminants, it is proposed to increase the maximum level for tin from 150 mg/kg to 250 mg/kg.

Grape Juice (CAC/RS 82 - 1976) 2.5 Organoleptic properties similar amendment proposed as in case of standard for Pineapple Juice.

Contaminants, same observation as in case of standard for Apple Juice."