

codex alimentarius commission

FOOD AND AGRICULTURE
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WORLD HEALTH
ORGANIZATION

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CODEX ALIMENTARIUS COMMISSION

Twelfth Session

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

Geneva, 19-23 July 1976

INTRODUCTION

1. The Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices held its twelfth session at Geneva from 19 to 23 July 1976 under the chairmanship of Professor W. Pilnik (Netherlands), with Mr. W. Orłowski (Poland) as Vice-chairman.

2. The session was attended by 50 participants including the representatives from Austria; Belgium; Brazil; Bulgaria; Canada; Finland; France; Germany, Fed. Rep. of; Greece; Israel; Italy; Ivory Coast; Japan; Kuwait; the Netherlands; Poland; Spain; Sweden; Switzerland; Thailand; the United Kingdom; the United States of America and Yugoslavia. Observers attended from the International Federation of Fruit Juice Producers (IFFJP), the Inter-national Wine Office (OIV), the Association of Official Analytical Chemists (AOAC) and the European Economic Community (See list of participants following para 87).

ADOPTION OF AGENDA

3. The Group briefly discussed whether to consider at an early stage Item 15 concerning the reclassification of fruit juices and decided to move this item forward to follow Item 8. Furthermore the Chairman drew attention to the need to discuss proposals for the future work of the Group. It was agreed that this should be done in connexion with Item 20, Other Business. The agenda was adopted with the above modifications.

ELECTION OF RAPPORTEUR

4. Mr. L.M. Beacham (United States of America) agreed to be the Rapporteur for the meeting.

Matters of Interest arising from Reports of the Codex Alimentarius Commission, of various Codex Communities and of the Joint Expert Committee on Food Additives (JECFA)

5. The Group had before it document CX/FJ 76/2 which was introduced by the secretariat. As regards the FAO/WHO Joint Expert Committee on Food Additives, the Group was informed, that this Committee at its 19th Session (1975), discussed the chemical and toxicological aspects of tin compounds as contaminants in canned products. However, due to lack of data both as to the nature of these compounds and of their toxicology no evaluation was carried out. The 20th Session (1976) reiterated the above opinion.

6. The Group noted, that the 10th Session of the Codex Committee on Food Additives decided to leave the previous ADI for L(+) tartaric acid unchanged. The ADI referred only, to added tartaric acid.

7. The Group further noted, that the Committee on Food Additives had requested Codex Commodity Committees to establish a maximum level for all food additives, for which an ADI had been elaborated, to indicate at which stage of the production process the maximum level would apply and to propose relevant methods of analysis.

8. Codex Commodity Committees were also requested to deal with the problem of contaminants and to propose maximum levels for the products to be standardized.

9. A specific request was made to collect data on tin contamination in canned products in the light of current technological developments, to enable JECFA to evaluate tin as a contaminant. The Codex Committee on Food Additives postponed the endorsement of maximum levels for tin until the JECFA evaluation would be available.

10. The Group took note, that for reasons mentioned in paragraph 7 a maximum level should be included in the provision on L-ascorbic acid in the standard for/concentrated grape juice.(See also paragraphs 60 and 61).

11. The secretariat reported on the latest sessions of the Codex Committees on Food Labelling and Food Hygiene. The latter had requested clarification as to why the provision on mould count by the Howard Method had been introduced only for tomato juice and not for citrus juices. It was pointed out, that much of the research work had been restricted to tomato juice and also that because of filtration and homogenization processes the applicability of the method of mould counts to other pulpy products was not practicable.

12. The Group was informed that the eleventh Session of the Codex Alimentarius Commission-had advanced four standards (those for the grape juices and pineapple juice) to Step 9 and one standard (non-pulpy blackcurrant nectar) to Step 5. The Commission established in the standard for pineapple juice the earlier maximum level for tin of 250 rag with the proviso, that the Codex Committee on Food Additives would have to endorse the above figure. -The Commission adopted also the editorial and consequential changes proposed by the Group at its eleventh Session and some additional amendments set out by the Delegation of the United Kingdom in Alinorm 76/39 Addendum 1, with the exception of points 4 and 5 dealing with provisions for carbon dioxide and sulphur dioxide. The Group discussed these latter two points and agreed to propose amendments related to point 4 on carbon dioxide (see appendix VI). When considering the introduction of a provision for a maximum level of 10 mg/kg for sulphur dioxide in all standards, the Group agreed, that a decision would be taken later during this session (see paras 27 and 28).

13. The Chairman proposed therefore to take up at a later stage discussion on the provisions for L-ascorbic acid and for sulphur dioxide.

14. The Group further noted that the Commission had amended the Procedure for the Elaboration and Amendment of Codex Standards to facilitate the adoption of editorial and consequential amendments.

PRELIMINARY DISCUSSION ON DEFINITIONS OF FRUIT JUICES

15. The Group had before it document CX/FJ 76/13 which had been prepared by the Chairman to afford the Group an opportunity to discuss some aspects of established techniques as well as of the new technological developments in the processing of fruit juices in the light of the processes covered by the expression "mechanical process" in the definition of fruit juices contained in the standards which had been elaborated by the Group and adopted by the Commission.

16. The Paper drew attention to the fact, that the Codex definitions as well as some of the provisions in the directive of the European Economic Community on fruit juices and similar products did not explicitly cover all the existing processing techniques. An example would be the enzymatic treatment of fruit pulp prior to processing which had been a well established practice for juices such as blackcurrant juice and more recently been successfully introduced in the processing of apple and red grape juices. Chemical processes according to the paper such as heat treatment to inactivate enzymes have already been employed for years. Moreover "mechanical process" would not embrace the newer techniques of diffusion or extraction.

17. The paper stimulated a full discussion of the scientific and technological aspects of fruit juice manufacture. Some members of the Group stressed the need to protect the traditional concept of a fruit juice by the consumer and in the industry by placing reliance upon mechanical processes. Others mentioned the techniques such as enzymatic treatment of pulp which had assisted mechanical processes leading to a final product of good body and colour which had been well accepted by the consumer for many years. The need to recognize such practices had been well established in the case of blackcurrants and other soft fruit. Other fruits such as citrus, tomatoes and pineapples have been subjected to heat treatment to improve the quality of the final product. The above examples were clearly (bio) chemical and physical processes respectively.

18. The Group agreed that purely chemical processes such as the use of organic extraction solvents and preservatives should not be brought within the scope of any amended definition of fruit juices.

19. Many Speakers emphasized that the compositional and organoleptical properties of fruit juices must be safeguarded by adequate manufacturing processes. However, this should not preclude the use of newer techniques provided that the products were properly labelled.

20. The Group, recognizing the far reaching implications of possible amendments to the definition of fruit juices, agreed to consider further this subject at its next session. In order to facilitate this the Group requested that governments should examine further document CX/FJ 76/13 and comment specifically on the following two aspects:

- (i) whether "mechanical process" should be extended to include enzymatic and heat treatments, which were being currently used in conjunction with mechanical processes, and
- (ii) whether "mechanical process" should be extended to include certain physical processes such as extraction or diffusion, but exclude explicitly organic solvent extraction techniques.

CONSIDERATION AT STEP 7 OF THE DRAFT STANDARD FOR NON-PULPY BLACKCURRANT NECTAR PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

21. The Group had before it Alinorm 76/14, Appendix VI which contained the draft standard as well as written government comments in documents AGRI/WP.1/GE.4/CRP.5 and 6. The Group examined the draft standard paragraph by paragraph and made the following decisions:-

- (i) Several delegations proposed the lowering of the minimum fruit content but after some discussion the Group decided to leave the provision unchanged.
- (ii) 2.2. Sugars This section was amended to read: "One or more of the sugars as defined by the Codex Alimentarius Commission shall be added. The addition of fructose is also permitted".
- (iii) Section 2.5 Acidity was deleted. The delegation of the Federal Republic of Germany opposed this deletion.
- (iv) Section 2.7 Organoleptic Properties was amended to read: "the Product shall have the characteristic colour, aroma and flavour of blackcurrants, taking into consideration the addition of honey in substitution for sugars".
- (v) Several delegations proposed the deletion of Section 3 FOOD ADDITIVES but the Group decided to leave the provision unchanged.
- (vi) The present section 4.7 was deleted and replaced by the following: "Sum of copper, zinc and iron.....20 mg/kg".
- (vii) The first sentence of 5. HYGIENE was deleted.
- (viii) Believing that the distinction should be between a "pulpy" nectar and a "non-pulpy" nectar rather than whether the nectar was "clear" or "turbid", the Group amended 7.1 Name of the Food to read: "The name of the product shall be "non-pulpy nectar of blackcurrants" or "non-pulpy blackcurrant nectar".
- (ix) Not to alter the draft standard after discussing a proposal of the delegation of the United Kingdom which would have permitted in section 7.1.2. an indication of fruit juice content where this figure was higher than the minimum content required.
- (x) Section 7.7.1. was amended to read:
"No fruit, fruit juice or fruit nectar may be represented pictorially on the label except blackcurrants, blackcurrant juice or blackcurrant nectar".

STATUS OF THE STANDARD

22. The Group agreed to advance the Draft Standard for Non-Pulpy Blackcurrant Nectar Preserved Exclusively by Physical Means to Step 8 of the Procedure (See Appendix I to this report).

CONSIDERATION AT STEP 4 OF THE PROPOSED DRAFT STANDARD FOR BLACKCURRANT JUICE PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

23. The Group had before it the proposed draft standard contained in Appendix I to CL 1975/30, and written government comments contained in documents CX/FJ 76/4 Add.1 and Add.2. The Group examined the proposed draft standard paragraph by paragraph and made the following changes. The Group noted that the possibility of adding sugars need not be mentioned in the title of the proposed draft standard and amended the title accordingly to "proposed draft standard for blackcurrant juice".

24. In section 2.1 Soluble Solids the words "by weight" in the second line were deleted. Also in this section, after discussion, the Group agreed to place the figure for soluble solids in square brackets for government comment. Considering the diverging views on the appropriateness of this figure, i.e. [12] % m/m, the Group decided to ask governments to send to the secretariat information on the soluble solids content of natural juice determined by refractometer, uncorrected for acidity and read as °BRIX. Where possible this information should cover a five year production period.

25. In conformity with the decision taken on the draft standard for non-pulpy blackcurrant nectar, section 2.2 was amended as follows:

"2.2 One or more solid sugars as defined by the Codex Alimentarius Commission may be added. The addition of fructose is also permitted. The total quantity of sugars added shall not exceed 200 g/kg."

26. Sections 2.4 Acidity and 2.8 Use of Carbon Dioxide were deleted. Further, section 4.7 was amended to read:

"4.7 Sum of copper, zinc and iron.....20 mg/kg."

27. The Group considered the tolerance of 10 mg/kg provided for SO₂ as a contaminant, especially as such a provision did not appear in the Step 9 Standards for apricot, peach and pear nectars, citrus or tomato juices. It was pointed out that SO₂ may be present in the juice in minute amounts (e.g. due to slight yeast activity), but in blackcurrant juice it would be bound to the anthocyanins and would not be able to be determined. The delegation of the Federal Republic of Germany pointed out that the provisions for contaminants in concentrated products made it possible to have very high levels of SO₂ in the product.

28. The Group agreed that this tolerance should appear in the other Step 9 Standards for nectars and juices and asked the secretariat to refer the proposed amendment to the Food Additives Committee for endorsement before submitting it to the Commission for approval.

29. The Group approved the following amendment in Section 7:-

- (i) Section 7.1.1 was amended to read:
"7.1.1 The name of the food shall be blackcurrant juice",
- (ii) Section 7.1.2. If the quantity of added sugar or sugars exceeds [120] g/kg the name of the product shall be "sweetened blackcurrant juice".
- (iii) In section 7.2.2. the word "sweet" and the brackets were deleted.
- (iv) Sections 7.7.2 and 7.7.5 were deleted.

30. The delegation of the United Kingdom proposed that the draft standard should include a provision for the quantitative label declaration of added sugars (expressed as a

percentage m/m). The Group considering that this suggestion was a departure from the normal requirement of providing only for the declaration of sugars and that such a suggestion would be of interest also to other Codex Commodity Committees, asked the secretariat to bring the proposal to the attention of the Labelling Committee at its next session.

31. The delegation of Switzerland reserved its position on the whole standard since in its view a product in which the soluble solids were derived to the extent of one-third from the fruit and two-thirds from the added sugars was rather a basic mixture for the preparation of a nectar than a fruit juice.

STATUS OF THE STANDARD

32. The Group agreed to advance the draft standard for Blackcurrant Juice Preserved Exclusively by Physical Means to Step 5 of the Procedure. The delegation of France stated his opposition to this decision because of the way in which the juice was obtained taking into account the name of the product (see Appendix II to this report).

CONSIDERATION OF THE FIRST DRAFT OF A PROPOSED DRAFT STANDARD FOR CONCENTRATED BLACKCURRANT JUICE PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

33. The Group had before it document CX/FJ 76/6, the proposed draft standard, and document CX/FJ 76/6 Add.1, the justification for the draft standard.

34. The delegation of the Netherlands, as author of this proposal, explained that the state of trade statistics did not permit, in many cases, a breakdown of the figures to indicate the exact extent of the international trade in blackcurrant concentrate. Some countries which do not grow blackcurrants were consumers of large quantities of such juices. The Netherlands itself imported about 370 metric tons of blackcurrant concentrate from ten different countries. Several delegations in supporting the need for a Codex standard for concentrated blackcurrant juices mentioned the considerable volume of production and/or consumption in their countries. The delegation of the United Kingdom expressed doubts on the need for such a standard at this time, especially in view of the lack of suitable data on which to make a decision.

35. However, the Group, considering the various aspects of the criteria, was satisfied that the international trade would be facilitated by the existence of a suitable standard for concentrated blackcurrant juice.

36. The Group studied the proposal for the draft standard paragraph by paragraph, and made the following decisions:

- (i) Section 1. DESCRIPTION in the first line the words "but fermentable juice" were deleted and the following words were inserted in their place after the word "unfermented":
"... product which is capable of fermentation after reconstitution...".
- (ii) Section 1.1 Process Definitions was amended to read as follows: "1.1 Process Definition The process of concentration consists of the physical removal of water until the product has a soluble blackcurrant solids content of not less than [24] % g/m as determined by refractometer at 20°C, uncorrected for acidity and read as °BRIX on the International Sucrose Scales, and may include the addition of (1) juice or concentrate or of water suitable for the purpose of maintaining the essential composition and quality factors of the

concentrate, and (2) natural volatile blackcurrant juice components where these have been removed".

- (iii) Section 2.1 was amended to read as follows:
"2.1 The product obtained by reconstituting the concentrated blackcurrant juice in accordance with section 7.8 of this standard shall comply with the provisions of the Draft Standard for Blackcurrant Juice Preserved Exclusively by Physical Means (see Appendix II to this report)".
- (iv) Section 2.2 Sugars and section 2.3 Use of Carbon Dioxide were deleted.
- (v) In the discussion on section 4 CONTAMINANTS the delegation of Poland reminded the Group of its reservation on this section and similar sections of other standards for concentrated juices. After a discussion in which there was some support for the delegation of Poland, the Group agreed to discuss this section again after its later discussion on item 13 "Contaminants in concentrated grape juice". (See paragraph 73).
- (vi) Section 7.1 Name of the Food was amended to read: "The name of the food shall be "concentrated blackcurrant juice".
- (vii) Section 7.7.2 was deleted and section 7.8 Degree of Concentration was amended to read:
"7.8 Degree of Concentration
Instructions for dilution shall be given on the container by stating the percentage of soluble blackcurrant solids by weight, as determined by refractometer at 20 C, uncorrected for acidity, and read as °BRIX on the International Sucrose Scales or in the case of prepackaged products, 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 in order to obtain juice which complies with the provisions of the Draft Standard for Blackcurrant Juice Preserved Exclusively by Physical Means (see Appendix II of this report)".

STATUS OF THE STANDARD

37. The Group considering that the proposed draft standard was so closely linked with the proposed draft standard for blackcurrant juice, which it had already advanced to Step 5 of the Procedure, decided also to advance the proposed Draft Standard for Concentrated Blackcurrant Juice Preserved Exclusively by Physical Means to Step 5 of the Procedure. The Group noting that there might be a short period of time between the next session of the Commission in 1978, to which this standard would have to be sent for adoption at Step 5, and the next session of the Group, decided to request, exceptionally, government comments in advance of consideration of the standard by the Commission. It was agreed that, if necessary, the secretariat could seek the agreement of the Executive Committee to the proposed departure from the normal steps of procedure (see Appendix III to this report).

PROPOSAL FOR RECLASSIFICATION OF FRUIT JUICES

38. The Group (considered a paper (CX/FJ 76/15), which had been prepared by the delegation of Switzerland setting forth a proposed classification scheme based on three broad categories of products according to their manner of processing.

39. The Swiss delegation had further proposed that the Group should in general exclude from its considerations beverages with a fruit content of less than 30 per cent and soft drinks. The three broad categories were intended to cover fruit juices, concentrated fruit juices and nectars intended for direct consumption.

40. The Group examined the proposals put forward by the Swiss delegation. The question of the minimum fruit or fruit juice content of nectars led to considerable discussion as to whether the minimum content should be raised from 30 per cent to 50 per cent with specified exceptions. In this regard several delegations and the observer from the European Economic Community made reference to the directive of the Community on fruit juices and in particular to the schedule of exceptions from the 50 per cent rule contained in the annex to that directive.

41. A majority of delegations considered it more appropriate to retain the minimum level of 30 per cent, recognizing that this would lead to fewer specified exceptions.

42. The question was raised as to the position of products containing a very small quantity of preservative, which was added to obtain better results with modified heat treatment methods. The delegation of the Netherlands, while accepting the Swiss proposal, wondered whether they sufficiently took into account the fact that in the future standards might have to be elaborated for fruit juices not intended for direct consumption which may or may not have been chemically preserved.

43. The Chairman expressed the view that the amended definitions appeared to reflect the long standing philosophy of the Group on fruit juices and nectars and could serve as guidelines for the Group's terms of reference.

44. The Group agreed to the amended definitions of the three categories to be used as guidelines for the scope of work and terms of reference.

The definitions read as follows:

Fruit Juice – definition:

45. Unfermented but fermentable juice, intended for direct consumption, obtained by a mechanical process from sound, ripe fruits, preserved exclusively by physical means. 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. The addition of sugars or acids can be permitted but must be endorsed in the individual standard.

Concentrated fruit juice – definition:

46. unfermented product, which is capable of fermentation after reconstitution, obtained from the juice of sound, ripe fruits, from which the water has been removed 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 means and may be clear or turbid. The addition of sugars or acids can be permitted, but must be endorsed in the individual standard.

Nectar – Definition:

47. 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. Other addition of acids may be permitted but

must be endorsed in the individual standard. The fruit and/or fruit juice content in the product shall normally not be less than 30 per cent.

CONSIDERATION AT STEP 4 OF THE PROPOSED DRAFT STANDARD FOR PULPY NECTARS OF CERTAIN SMALL FRUIT, PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

48. The Group had before it the proposed draft standard in document Alinorm 76/14 App.VII, and the written government comments in documents CX/FJ 76/12, Add.1 Add.2 and Add.3.

49. The Group added two further species to section 1 SCOPE, namely Elderberries (*Sambucus nigra*) and Rose Hips (*Cynorrhoda*). As a consequence of permitting the addition of honey as the sole sweetening agent the Section 2 DESCRIPTION was amended by adding after the word "sugars" in the third line the words "or honey".

50. In relation to the minimum content of fruit ingredients, the Group decided to list the various species of berries together with the minimum content of fruit ingredient for such species, as follows;

"3.1 Minimum Content of Fruit Ingredient

- Sea Buckthorn	25%
- Whortleberries	30%
- White currants	30%
- Rowanberries	30%
- Redcurrants	30%
- Gooseberries	30%
- Cranberries	30%
- Cloudberries	30%
- Blackberries	30%
- Blackcurrants	30%
- Strawberries	40%
- Raspberries	40%
- Bilberries	40%
- Rose Hips	40%
- Elderberries	50%

The delegation of the United States urged that when these nectars were prepared from concentrates, minimum soluble solids should be indicated for each reconstituted juice, for the purpose of calculating the equivalent amounts of such reconstituted juice present in the product. However, the suggestion was not adopted.

51. A majority of delegations asked that an upper limit be set for the addition of sugars to nectars. Some delegations thought such a limit was not necessary. The delegation of Switzerland stated that as a principle it favoured setting a maximum limit for the addition of sugars to nectars; however, regarding pulpy nectars of certain small fruit, it was considered impossible to establish such a limit, taking account of the fact that the standard covered a wide range of small fruit in which acids and sugars were found in very different quantities.

52. The Group considered that such a limit could be set in either the present sections 3.2 Sugars or in 3.4 Soluble Solids, and decided to amend each section to provide a limit, put both provisions in square brackets and asked governments to comment. The sections were amended as follows:-

"3.2 Sugars One or more of the sugars as defined by the Codex Alimentarius Commission shall be added. The addition of fructose is also permitted. [The total quantity of sugars or honey shall not exceed 20% (calculated as dry matter)]".

"3.4 Soluble Solids The soluble solids content of the product shall be not less than 13% m/m [and not more than 25% m/m] as determined by refractometer at 20°C, uncorrected for acidity and read as °BRIX on the International Sucrose scales."

53. Section 3.3 Honey was amended to bring the wording into line with the nectar standard already at Step 9:

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

The delegations of the United States of America and Japan did not agree with this restriction on the use of honey.

54. In a discussion on whether the addition of lemon juice to nectars as an alternative for citric acid should be permitted, it was pointed out that for example, if in a blackcurrant nectar half the acid was replaced by lemon juice, the finished product might contain as much as 10% lemon juice. In the event that the lemon juice provision was deleted it would not prevent the addition of lemon juice, but the labelling of the resulting product be considered in the light of the discussion paper on Mixtures of Fruit Juices, Nectars etc. which had been prepared by the Netherlands (see Appendix V to this report). Section 3.4 Lemon Juice was deleted.

55. Many delegations supported the proposal of the delegation of the United Kingdom that section 3.6 Apparent Viscosity be deleted. The delegations felt that this test was unreliable, minimum fruit content was defined and the consumer could well choose the most suitable viscosity according to personal preference. On the other hand the delegation of the United States of America felt that the test served to distinguish between a pulpy and a non-pulpy nectar, and should be retained.

56. The Group decided to put section 3.6 in square brackets, to cite the name of the analytical method and to ask governments to comment.

57. The Group felt that section 3.8 Hydroxymethylfurfural providing a limit for HMF served no practical purpose and decided to delete the section.

58. In order to take account of use of honey the Group amended the present section 3.9

Organoleptic Properties as follows:

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

59. In section 4. FOOD ADDITIVES some delegations were of the opinion that the provisions for Citric Acid and Malic Acid should be deleted but the Group decided to leave the provisions unchanged.

60. Further, the Group noted the request of the Codex Committee on Food Additives at its tenth session (Alinorm 76/12), that all Codex Commodity Committees should give full technical justification for the use of additives when preparing proposals for their use as well as propose maximum limits for additives for which an ADI has been established.

The Group recalled that it had not set a limit for L-ascorbic Acid in the standard for apple juice (or for concentrated apple juice), because L-ascorbic Acid was added as an antioxidant at the first stages of production in order to prevent enzymatic browning, after which as a consequence of chemical reactions, it was not be found in the finished product.

61. In the standard for grape juice the Group had set a limit of 400 mg/kg for L-ascorbic acid in the final product, and although at the time it had limited the addition of L-ascorbic acid by GMP for concentrated grape juice and sweetened Labrusca type grape juice, the Group agreed on the maximum level of 400 mg/kg of L-ascorbic acid for all three standards.

62. In regard to nectars of small fruit the Group, recognizing that because the content of naturally occurring ascorbic acid varied widely in the various fruits, and because the addition as an anti-oxidant was required in only one or two cases it was decided that it was not possible to set a maximum level for L-ascorbic acid and agreed to limit its use by GMP where appropriate. Section 4.3 was amended accordingly.

63. Section 5. CONTAMINANTS was amended according to a previous decision on this section:

"5.7 Sum of copper, zinc and iron 20 mg/kg".

64. The square brackets were removed from Section 8.2.1 and a new section 8.7.4 was added to Additional Requirements to ensure that the consumer would be informed that the nectar contained honey. The new section reads as follows:

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

The delegation of the United States of America reminded the Group that this provision would have to be incorporated into the corresponding standards previously advanced by the Group.

Status of the Standard

65. The Group agreed to advance the Draft Standard for Pulpy Nectars of Certain Small Fruit Preserved Exclusively by Physical Means to Step 5 of the Procedure (see Appendix IV to this report).

CONSIDERATION OF A PROPOSAL FOR A DRAFT CODE OF PRACTICE FOR WATER

66. Document CX/FJ 76/11 was written by co-rapporteurs from the delegation of Denmark, the Federal Republic of Germany and Yugoslavia. Document CX/FJ 76/11 Add.1 contained comments from the Government of Denmark on the proposed code, and in the absence of the delegation of Denmark, the Group noted that Denmark would prefer to establish a standard for water which would provide for the use of normal drinking water in reconstitution of fruit juices (with, of course, stated safeguards), before the Group elaborated a code of practice.

67. The code of practice was introduced by the delegation of the Federal Republic of Germany on behalf of the co-rapporteurs. The Group complimented the rapporteurs on their joint effort and agreed that the approach adopted by the rapporteur was a sound one, but that all delegations would need to consult their appropriate authorities concerned with the quality and composition of water. It was noted that at the international level the World Health Organization of the United Nations had developed

standards for drinking water which prescribed conditions for potability and other compositional factors.

68. On considering the paper several delegations drew attention to the microbiological and nitrate aspects. In view of the far reaching implications on the question of the quality of water not only for the reconstitution of fruit juices but for the use in food generally delegations should consult with the appropriate national authorities. The Group agreed to reconsider further the paper at a future session in the light of further information and data to be supplied by the delegations to the rapporteur. Meanwhile the paper could be regarded as a guideline indicating the philosophy of the Group concerning the quality of the water required for the reconstitution of fruit juices.

CONSIDERATION OF THE LEVEL OF TIN AND LEAD IN FRUIT JUICES IN THE LIGHT OF TECHNOLOGICAL INFORMATION AND DATA ON CONSUMPTION

69. The Group had before it documents CX/FJ 76/7 (Tin), and written government comments and information in documents CX/FJ 76/8 and Add.1, Add.2 and Add.3 (Tin), CX/FJ 76/9 (Lead). The technological paper on tin emphasized the need for further toxicological research as current data concerning the toxicity of tin was limited. It was further noted that the form of tin and tin compounds needs to be clearly identified in order that the Joint Expert Committee on Food Additives could make a toxicological evaluation in the light of further data.

70. During the discussion of the paper several delegations felt that there could be two approaches to the question of the level of tin in fruit juices. One could be from the purely toxicological side, i.e. the establishment of an ADI or weekly tolerated intake. On the other hand the matter could be approached by an examination of manufacturing practices and by a serious endeavour to reduce as low as would be technologically possible the level of tin in the product. Ideally, both aspects must be taken into consideration.

71. The delegation of the United States of America supplied information on the tin levels found in fruit juices packed in various containers and kept under accelerated storage conditions i.e. 100 F. This information indicated that tin, whilst being a contaminant, also served a functional purpose in protecting the colour and flavour of the juice. The addition of stannous chloride had been also briefly examined but current information indicated that tin, whilst being a contaminant, also served a functional purpose in protecting the colour and flavour of the juice. The addition of stannous chloride had been also briefly examined but current information indicated that even when the product contained up to 250 mg/kg, it only retained an acceptable colour and flavour for a storage period of 3 months.

72. The Group agreed that there was a need to stimulate more work to supply information for a toxicological evaluation to be carried out by the Joint Expert Committee on Food Additives.

73. The delegation of Poland supported by some delegations expressed the view that the provision on contaminants contained in the standards for concentrated fruit juices should not be taken to apply in the case of tin. The delegation was of the opinion not only that tin levels in single strength fruit juices were too high, but also that the tin level in concentrated fruit juices should not exceed that to be found in single strength fruit juices. The Group noted that concerning interpretation of the contaminants provision in respect of concentrated fruit juices the products must first be reconstituted to single strength and compliance with the maximum limits for contaminants be determined on the

basis of the reconstituted product. The majority of the Group was unwilling to set levels for contaminants in the concentrated product and decided to retain the present text of the section on Contaminants unchanged.

CONSIDERATION OF THE FIRST DRAFT OF A PROPOSED DRAFT STANDARD FOR CITRUS FRUIT BEVERAGES WITH A HIGH JUICE CONTENT

74. The Group had before it the draft proposal in document CX/FJ 76/3, and the justification for a standard in CX/FJ 76/3 Add.1.

75. The Group expressed its appreciation to the delegation of Spain for having prepared the justification criteria and the draft proposal for the above products. In view of the Group's earlier decision concerning the definition of nectars it was agreed that it would be more appropriate to consider the above mentioned products in the framework of standards for citrus nectars. After noting that the draft permitted chemical preservation, the Group further agreed to restrict the standard to products preserved exclusively by physical means. The delegation of Spain in the light of the above decision and the reclassification definition undertook to make appropriate changes to the proposed draft standard, which would be considered at the next session of the Group in the light of government comments to be obtained prior to the next session.

MIXTURES OF FRUIT JUICES NECTARS ETC. - A PAPER PREPARED BY THE DELEGATION OF THE NETHERLANDS

76. The Group had before it a conference room document prepared by the delegation of the Netherlands on mixtures of fruit juices, nectars etc. It was agreed that the secretariat should distribute the paper to governments for their observations, and that the subject would be considered at the next session of the Group. (See Appendix V).

APPLICABILITY OF SAMPLING PLANS FOR PREPACKAGED FOODS TO FRUIT JUICES AND BULK SAMPLING

77. The Group had before it written government comments on applicability of the plans in document CX/FJ 76/16 and in AGRI/WP.1/CRP.6, and a statement by the Government of the United States of America on Bulk Sampling in document CX/FJ 76/17.

78. The Group noted that since the last session Canada, France, Switzerland, the United Kingdom and the United States of America has voiced the opinion that the sampling plan with an AQL of 6.5 would be acceptable for certain criteria.

79. The Group further noted that the main issue before it was to determine criteria to which the sampling plan would be appropriate. It was agreed that a small working group, co-ordinated by the delegation of the United States of America, and comprising France and Switzerland, should examine this difficult question and make a recommendation to the Group for its next session. The Working Group should bear in mind and consult with the Codex Committee on Methods of Analysis.

80. It was further agreed that the Working Group should consider the subject of bulk sampling and report back to the Group at its next session.

REPORT OF THE WORKING GROUP ON METHODS OF ANALYSIS FOR FRUIT JUICES

81. The Group had before it a report of the ad hoc meeting on Methods of Analysis for Fruit Juices, which had met in Budapest on 3 November 1975 (document CRP.1).

82. Dr. Rentschler, Chairman of the Working Group, indicated methods which had been reviewed and agreed upon for concentrated apple juice, concentrated orange juice, grape juice, concentrated grape juice and sweetened concentrated Labrusca-type grape juice. These methods have to be endorsed by the Codex Committee on Methods of Analysis and Sampling and would later being corporated in the standards for the products concerned. Dr. Rentschler advised that the IFFJP Commission on Methods of Analysis would be concentrating on atomic absorption spectro-photometrie methods for metal determination. The Group expressed its appreciation to Dr. Rentschler, the retiring Chairman of the Working Group, and noted that he would be succeeded by Dr. Woidich (Austria).

ELECTION OF CHAIRMAN AND VICE-CHAIRMAN

83. The Group unanimously elected Professor W. Pilnik (Netherlands) and Mr. W. Orlowski (Poland) Chairman and Vice-Chairman respectively to serve from the end of the twelfth session to the end of the thirteenth session.

OTHER BUSINESS

84. Future Work. The Group agreed on the following programme of future work:

1. Completion of Current Work

- (i) Blackcurrant juice
- (ii) Concentrated blackcurrant juice
- (iii) Pulpy nectars of certain small fruit
- (iv) Citrus nectars (Spain)
- (v) Quality of water used in reconstitution
- (vi) Mixtures of fruit juices, nectars, etc.
- (vii) Sampling plan and bulk sampling - Report of the Working Group
- (viii) Reconsideration of contaminants

2. New Work

- (i) Pineapple concentrate (Thailand and the United States of America)
- (ii) Consideration of the definition of fruit juices (comments on document CX/FJ 76/13).
- (iii) Quantitative declaration of fruit content in nectars and of sugars (advice of Codex Committee on Food Labelling)
- (iv) Consideration of Codex Recommendations on date marking

85. In pointing out the increasing importance of concentrated citrus products used as a basis for beverages, the delegation of Yugoslavia proposed the elaboration of a Codex standard for these products. However, the Group felt, that this was not possible under the present terms of reference, and in the light of previous decisions on ingredient juices.

86. The Group noted the consequential editorial adjustments arising out of the discussions at the current session, which would be incorporated into the existing Step 9 standards. The secretariat was authorized to undertake the work and to seek, if necessary, any authority to do so from the Executive Committee.(See Appendix VI).

DATE AND PLACE OF NEXT SESSION

87. The Group was informed that the next Session would be held in 1978 after the 12th Session of the Codex Alimentarius Commission.

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**DRAFT STANDARD FOR NON-PULPY BLACKCURRANT NECTAR
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS ^{1/}**

(Advanced to Step 8 of the Procedure)

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

1. **DESCRIPTION**

Unfermented but fermentable product, intended for direct consumption, obtained by blending the juice of sound and ripe blackcurrants concentrated or unconcentrated, with water and sugars or honey, and preserved exclusively by physical means. The product may be turbid or clear.

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Minimum Content of Fruit Juice**

The product shall contain not less than 30 per cent m/m of single strength blackcurrant juice or the equivalent derived from concentrated blackcurrant juice.

2.2 **Sugars**

One or more of the sugars as defined by the Codex Alimentarius Commission shall be added. The addition of fructose is also permitted.

2.3 **Honey**

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

2.4 **Soluble Solids**

The soluble solids content of the product shall be not less than 13 per cent 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 2 g/kg.

2.6 **Organoleptic Properties**

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

3. **FOOD ADDITIVES**

3.1 Citric Acid

3.2 Nalic Acid

Maximum Level

Limited by GMP

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
4.3	Copper (Cu)	5 mg/kg
4.4	Zinc (Zn)	5 mg/kg
4.5	Iron (Fe)	15 mg/kg ^{1/}
4.6	Tin (Sn)	150 mg/kg
4.7	Sum of copper, zinc and iron	20 mg/kg
4.8	Sulphur dioxide	10 mg/kg

^{1/} The provisional limit of 150 mg/kg for tin is currently under review, and the endorsement was postponed pending evaluation by JECFA.

5. HYGIENE

5.1 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 Recommended General Principles of Food Hygiene (Ref. Mo. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

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

- (a) shall be free from micro-organisms capable of development under normal conditions of storage; and
- (b) shall not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

Minimum Fill

The 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 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. CAC/RS 1-1969) the following provisions apply:

7.1 The Name of the Food

The name of the product shall be "non pulpy nectar of blackcurrants" or "non pulpy blackcurrant nectar".

7.1.1 The words "minimum fruit juice content 30/6" shall appear in close proximity to the name of the product.

7.2 List of Ingredients

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

7.3 Net Contents

The net 10 mg/kg 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 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 Additional Requirements

The following additional specific provisions shall apply:

7.7.1 No fruit, fruit juice or fruit nectar may be represented pictorially on the label except blackcurrants, blackcurrant juice or blackcurrant nectar.

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

7.7.3 No claim shall be made in respect of "Vitamin C" nor shall the term "Vitamin C" appear on the label unless the product contains such 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.

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

7.7 Bulk Packs

In the case of products in bulk, the information required by Sections 7.1.1 to 7.7.4 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.

8. METHODS OF ANALYSIS AND SAMPLING

Will be completed later.

DRAFT STANDARD FOR BLACKCURRANT JUICE
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS

(Advanced to Step 5 of the Procedure)

1. DESCRIPTION

Unfermented but fermentable juice intended for direct consumption, obtained by a mechanical process from sound ripe blackcurrants (Ribes nigrum L.) preserved exclusively by physical means. The juice may be turbid or clear. The juice may be clarified. The juice may have been concentrated and later reconstituted with water suitable for the purpose of maintaining the essential composition and quality factors of the juice.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 Soluble Solids

The soluble blackcurrant solids content of blackcurrant juice (exclusive of added sugars) shall be not less than [12] per cent m/m as determined by refractometer at 20 C, uncorrected for acidity and read as °BRIX on the International Sucrose Scales.

2.2 Sugars

One or more solid sugars, as defined by the Codex Alimentarius Commission may be added. The addition of fructose is also permitted. The total quantity of sugars added shall not exceed 200 g/kg.

2.3 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

2.4 Volatile Acids

The volatile acids content shall not exceed 1.2. g/kg expressed as acetic acid.

2.5 Organoleptic Properties

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

2.6 Use of Concentrates

The addition of concentrate to juice is permitted. Only concentrate from Ribes nigrum L. may be used.

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

3.1 Processing Aids

3.1.1 Clarifying and filtering agents as approved by the Codex Alimentarius Commission and used in accordance with good manufacturing practice.

<u>Contaminant</u>	Maximum Level
3.1.2 Vegetable carbon	Limited by GMP
3.1.3 Nitrogen	
3.1.4 Carbon dioxide	

4. CONTAMINANTS

The following provisions in respect of contaminants are 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 “
4.3	Copper (Cu)	5 “
4.4	Zinc (Zn)	5 “
4.5	Iron (Fe)	15 “
4.6	Tin (Sn)	150 “
4.7	Sum of Copper, zinc and iron	20 “
4.8	Sulphur dioxide	10 “ ^{1/}
4.9	Mineral impurities insoluble in 10% hydrochloric acid	20 “

^{1/} The provisional limit of 150 mg/kg for tin is currently under review and the endorsement was postponed pending evaluation by JECFA.

5. HYGIENE

The following provisions in respect of the food hygiene of this product have to be endorsed by the Codex 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 product (Ref. No. CAC/RCP 2-1969) and the General Principles of Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

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

- (a) shall be free from micro-organisms capable of development under normal conditions of storage; and
- (b) shall not contain any 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 blackcurrant juice shall occupy not less than 90 per cent v/v of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

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

In addition to sections 1, 2, 4 and 6 of the Recommended International General Standard for the Labelling of Pre-packaged 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 food shall be "blackcurrant juice".

7.1.2 If the quantity of added sugar or sugars exceeds [120] g/kg the name of the product shall be: "sweetened blackcurrant juice".

7.2 List of Ingredients

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that water added for reconstitution of juice according to section 1 and the processing aids specified in sections 3.1.1 to 3.1.4 need not be declared.

7.2.2 In the case of blackcurrant juice made from concentrate, the fact of reconstitution shall be declared in the list of ingredients as follows: "blackcurrant juice made from concentrate", or "reconstituted blackcurrant juice" or "blackcurrant juice made from concentrated blackcurrant juice". If there are no ingredients to be listed in accordance with section 7.2.1, the expression "blackcurrant juice made from concentrate" or "reconstituted blackcurrant juice" or "blackcurrant juice made from concentrated blackcurrant juice" shall appear on the label.

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 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 Additional Requirements

The following additional specific provisions shall apply:

7.7.1 No fruit or fruit juice may be represented pictorially on the label except blackcurrants or blackcurrant juice.

7.7.2 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 county in which the product is sold, as warranting such claim or the use of such a term.

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

7.8 Bulk Packs

In the case of blackcurrant juice in bulk, the information required by sections 7.1 to 7.7. 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 accompany documents.

In the case of sweetened blackcurrant juice the amount of sugar added per cent m/m must be given.

8. METHODS OF ANALYSIS AND SAMPLING

(To be completed).

DRAFT STANDARD FOR CONCENTRATED BLACKCURRANT JUICE
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS ^{1/}
(Advanced to Step 5 of the Procedure)

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

1. **DESCRIPTION**

Concentrated blackcurrant juice is the unfermented product which is capable of fermentation after reconstitution, preserved exclusively by physical means ^{1/}, obtained by the process of concentration (as defined in section 1.1) from the raw materials as described in section 1.2. The product may be turbid or clear. The concentrated juice may be clarified.

1.1 **Process Definitions**

The process of concentration consists of the physical removal of water until the product has a soluble blackcurrant solids content of not less than [24] per cent m/m as determined by refractometer at 20 C, uncorrected for acidity and read as °BRIX on the International Sucrose Scales, and may include the addition of (1) juice or concentrate or of water suitable for the purpose of maintaining the essential composition and quality factors of the concentrate and (2) natural volatile blackcurrant juice components where these have been removed.

1.2 **Raw Material**

The raw material from which this product is obtained is unfermented but fermentable blackcurrant juice obtained by a mechanical process from sound, ripe blackcurrants (Ribes nigrum L).

2. **ESSENTIAL COMPOSITION AND QUALITY FACTORS**

2.1 **Requirements for the Juice after Reconstitution**

The product obtained by reconstituting the concentrated blackcurrant juice in accordance with Section 7.8 of this standard shall comply with the provisions of the Draft Standard for Blackcurrant Juice Preserved Exclusively by Physical Means (see Appendix II to this report).

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

3.1 **Processing Aids**

3.1.1 Clarifying and filtering agents as approved by the Codex Alimentarius Commission and used in accordance with good manufacturing practices.

	<u>Maximum Level</u>
3.1.2 Vegetable carbon	Limited by GMP
3.1.3 Nitrogen	
3.1.4 Carbon dioxide	

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

When blackcurrant juice is reconstituted in accordance with section 7.8 of this standard, the limits of contaminants shall not exceed those laid down in section 4 of the Draft Standard for Blackcurrant Juice Preserved Exclusively by Physical Means (see Appendix II to this Report).

5. HYGIENE

The following provisions in respect of the food hygiene of this product have to be endorsed by the Codex 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 1-1969) and the General Principles of the Food Hygiene (Ref. No. CAC/RCP 1-1969) recommended by the Codex Alimentarius Commission.

- 5.2 When tested by appropriate methods of sampling and examination, the product:
- (a) shall be free from micro-organisms capable of development under normal conditions of storage; and
 - (b) shall not contain any 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 (exclusive of hulk pack)

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

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

In addition to Sections 1, 2, 4 and 6 of the 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

The name of the product shall be "concentrated blackcurrant juice".

7.2 List of Ingredients

7.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion, except that the components mentioned in section 1.1 and the processing aids specified in sections 3.1.1 to 3.1.4 need not be declared.

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 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 Additional Requirements

The following specific provisions shall apply:

7.7.1 No fruit or fruit juice may be represented pictorially on the label except blackcurrant or blackcurrant juice.

7.7.2 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.

7.7.3 Where concentrated blackcurrant juice required to be kept under conditions of refrigeration, there shall be information for keeping and, if necessary, thawing of the product.

7.8 Degree of Concentration

Instructions for dilution shall be given on the container by stating the percentage of soluble blackcurrant solids, by weight as determined by refractometer at 20°C, uncorrected for acidity, and read as °BRIX on the International Sucrose Scales, or, in the case of prepackaged products, 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 in order to obtain juice which complies with all the provisions of the Draft Standard for Blackcurrant Juice Preserved Exclusively by Physical Means (see Appendix II to this Report.)

7.9 Bulk Packs

In the case of concentrated blackcurrant juice in bulk, the information required by Sections 7.1 to 7.8 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

Will be completed later.

**DRAFT STANDARD FOR PULPY NECTARS OF CERTAIN SMALL FRUITS
PRESERVED EXCLUSIVELY BY PHYSICAL MEANS^{1/}**

(Advanced to Step 5 of the Procedure)

^{1/} For the purpose of this standard, and at this time, preservation by physical means does not include ionizing radiation.

1. SCOPE

This standard applies individually to pulpy nectars made from berries of the following species and their hybrids:

- blackcurrants (Ribes nigrum L.)
- red and white currants (cultivars from Ribes rubrum L., R. pallidum, Otto, and Dietr., R. sylvestre (Lam.) Mert. and W.D.J. Kock, etc.)
- gooseberries (Ribiss uva-crispa L. and hybrids)
- strawberries (cultivars and hybrids from Fragaria spp.)
- raspberries (Rubus ideaus L.)
- blackberries (Rubus procerus P.J. Muell., etc.)
- cloudberrries (Rubus chamaemorus L.)
- cranberries (Vaccinium oxycoccus L., V. marerocarpon Ait.)
- whortleberries^{2/} (Vaccinium vitis idaea L.)
- bilberries (Vaccinium myrtillus L.)
- rowanberries (Sorbus aucuparia L.)
- sea buckthorn (Hippophaërhannoides L.)
- elderberries (Sambucus nigra)
- rose hips (Cyriorrhoda of Rosa spp.)

^{2/} Known also by the Swedish name of "lingon" berries.

2. DESCRIPTION

Unfermented but fermentable pulpy product^{3/} intended for direct consumption, obtained by blending the total edible sieved or ground and homogenized product of clean, sound and ripe berries, concentrated or unconcentrated, with water and sugars or honey and preserved exclusively by physical means.

^{3/} In some species the natural content of free benzoate and sorbate may cause the result of the fermentation test to be negative.

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 in pulpy nectars shall be as follows for:

	<u>Minimum content</u>
- sea buckthorn	25%
- blackcurrants	30%
- rowanberries	30%
- redcurrants	30%
- whitecurrants	30%
- gooseberries	30%
- blackberries	30%
- cloudberrries	30%
- cranberries	30%

- whortleberries	30%
- raspberries	40%
- strawberries	40%
- bilberries	40%
- rose hips	40%
- elderberries	50%

3.2 Sugars

One or more of the sugars as defined by the Codex Alimentarius Commission shall be added. The addition of fructose is also permitted. [The total quantity of sugars or honey added shall not exceed 200 g/kg, calculated as dry matter].

3.3 Honey

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

3.4 Soluble Solids

The soluble solids content of the product shall be not less than 13% m/m [and not more than 25% m/m] as determined by refractometer at 20°C, uncorrected for acidity and read as °BRIX on the International Sucrose Scales.

[3.5 Apparent Viscosity

The apparent viscosity of the product shall be such that the flow-time is not less than 25 seconds, as determined by the method of Lamb and Lewis referred to in Section 97 of the Recommended International Standard for Apricot Peach and Pear Nectars, Preserved Exclusively by Physical Means (Ref. No. CAC 44-1971)].

3.6 Ethanol Content

The ethanol content shall not exceed 3 g/kg.

3.7 Organoleptic Properties

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

4. FOOD ADDITIVES

The following provisions in respect of food additives are subject to endorsement by the Codex Committee on Food Additives:

	Maximum Level
4.1 Citric acid	Limited by GMP
4.2 Malic acid	
4.3 L-Ascorbic, acid as an antioxidant	

5. CONTAMINANTS

The following provisions in respect of contaminants are subject to endorsement by the Codex Committee on Food Additives:

	<u>Maximum Level</u>
5.1 Arsenic (As)	0.2 mg/kg
5.2 Lead (Pb)	0.3 mg/kg
5.3 Copper (Cu)	5 mg/kg
5.4 Zinc (Zn)	5 mg/kg
5.5 Iron (Fe)	15 mg/kg
5.6 Tin (Sn)	150 mg/kg ^{1/}

5.7	Sum of copper, zinc and iron	20 mg/kg
5.8	Sulphur dioxide	10 mg/kg

¹ The provisional limit of 150 mg/kg for tin is currently under review.

6. HYGIENE

The following provisions in respect of the food hygiene of this product have to be endorsed by the Codex Committee on Food Hygiene:

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

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

- shall be free from micro-organisms capable of development under normal conditions of storage; and
- 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 nectar shall occupy not less than 90% v/v of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

8. LABELLING (subject to endorsement by the Codex Committee on Food Labelling)

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

8.1 The Name of the Food

8.1.1 The name of the product shall be "X nectar" or "pulpy X nectar" or "nectar of X" or "pulpy nectar of X" where "X" is the common name of the berry used.

8.1.2 The words "minimum fruit content X%" shall appear in close proximity to the name of the product where "X" is the minimum percentage prescribed for the nectar in Section 3.1,

8.2.2 List of Ingredients

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

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

- "L-ascorbic acid as antioxidant" or
- "antioxidant"

8.3 Net Contents

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

8.4. Name and Address

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

8.5 Country of Origin

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

8.6 Lot Identification

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

8.7 Additional Requirements

The following additional specific provisions shall apply:

8.7.1 The pictorial representation of fruit or nectar on the label may only be the species of fruit used as the fruit ingredient.

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

8.7.3 No claim shall be made in respect of "Vitamin C" nor shall the term "Vitamin C" appear on the label unless the product contains such 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.

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

8.8 Bulk Packs

In the case of fruit nectars in bulk, the information required by Sections 8.1.1 to 8.7.4 shall either be given on the container or in accompanying documents except that the name of product and the name and address of the manufacturer or packer should appear on the container. However, the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

9. METHODS OF ANALYSIS AND SAMPLING

(To be completed).

MIXTURES OF FRUIT JUICES AND NECTARS

(Paper prepared by the Delegation of the Netherlands)

Codex Standards for fruit juice.-: and nectars elaborated so far do not apply to mixtures of fruit juices and nectars for direct consumption. At the eleventh session of the Group of Experts the delegation of the Netherlands agreed to prepare a working paper on the above products (see Alinorm 76/14, para 143).

The matter has been discussed in The Netherlands and the following conclusions were reached :

1. There is an increasing demand for mixtures of fruit juices and mixtures of fruit nectars.
2. It is therefore recommended that some provisions on compositional aspects and on the designation of these products are worked out by the group of experts.

This may ensure that developments in this field in different countries of the world do not grow apart, but will take place along similar lines.

3. Information on the composition of these types of products, that are already on the market, is not readily available and also scanty, making it difficult to work out more elaborate provisions.

This should not be felt as a difficulty, however; on the contrary it may still be too early to work out detailed provisions considering that commercialization of these products in general is still in an early phase and that detailed provisions may hamper developments in this field rather than promoting it.

It is therefore advisable that for the time being the group restricted itself to formulating only general principles.

4. General principles

For the moment it is thought to be sufficient to formulate general principles concerning

- a. the number of fruits that may be used for the mixtures
- b. the minimum contribution of a fruit to the product, allowing the fruit to be mentioned in the name of the product
- c. the name of the products.

- a. Number of fruit types that may be used

"Mixed fruit juices" and "mixed fruit nectars" (pulpy, turbid or clear) may be made of any number of types of fruit. That is there should be no limit to the number of fruit types that may be used in the manufacturing of fruit juice mixtures or fruit nectar mixtures.

- b. Minimum fruit content

The name of a certain type of fruit shall not occur in the name of the product, nor accompany the name of the product (see sub c), if the contribution of its fruit ingredient to the product is less than a certain percentage.

Initially it was thought that this percentage was to be fixed at 10% for fruit juice. Reference is made to the standard for orange juice (CAC/RS 4.5-1971), in which the admixture of 10% mandarin juice is allowed without the obligation of mentioning this juice in the name of the product.

However, it was considered that this percentage may already be too high for highly acid juices or juices with a very strong taste such as mentioned in Appendix VII of Alinorm 76/14 (proposed draft standard for pulpy nectars of certain small fruits, etc.), for instance juices of blackcurrants and of gooseberries.

Therefore it is suggested that the minimum required percentage for fruit juices in general be fixed at 5%, realizing that for fruit juices with & very strong taste, like juice of the passion fruit, a still lower minimum percentage may have to be fixed, e.g. 2.5%. If a figure of 5% is accepted, the Group will have to reconsider the matter of admixing mandarin juice to orange juice, i.e. keep to the 10% for this juice or lower the figure to 5% as for the other juices.

For fruit nectar mixtures the minimum required percentage could than be fixed at 5% of the fruit ingredient percentage, that is the minimum required for the type of fruit which is the main component of the fruit nectar mixture,

c. Name of product

1. Mixed fruit juice

The name of the product should be

1. fruit juice, or
2. fruit juice mixture, or
3. mixed fruit juice.

If the name "fruit juice" is used the name shall be directly accompanied by, or the word "fruit" shall be replaced by, the enumeration of the names of the types of fruit contributing to the final product, in descending order of their quantitative contribution taking into account the requirements mentioned in sub-section 4b.

If the name "mixed fruit juice" or "fruit juice mixture" is used, the name shall be accompanied by the enumeration of the name of the types of fruit contributing to the product, in descending order of their quantitative contribution, taking into account the requirements mentioned in sub-section 4b.

If the number of fruit types present in the mixture is more than four, the names of these types need not to be mentioned in the name of the product. Their mentioning in the list of ingredients is sufficient. The name should than be fruit juice mixture or mixed fruit juice.

2. Mixed fruit nectar

The name of the product shall be

1. fruit nectar, or
2. mixed fruit nectar, or
3. fruit nectar mixture, apart from the fact that, of course

also in the name reference has to be made to the pulpy or clear nature of the product.

If the name "fruit nectar" is used the name shall be directly accompanied by, or the word "fruit" shall be replaced by, the enumeration of the names of the types of fruit contributing to the final product, in descending order of their quantitative contribution taking into account the requirements mentioned in sub-section 4b.

If the name "mixed fruit nectar" or "fruit nectar mixture" is used, the name shall be accompanied by the enumeration of the name of the types of fruit contributing to the product, in descending order of their quantitative contribution, taking into account the requirements mentioned in sub-section 4b.

If the number of fruit types present in the product is more than four, the same applies as has been mentioned above for fruit juice mixtures.

5. Fruit ingredient admixtures of less than 5%

In our discussions the question was raised whether it should be permitted, that for special purposes such as colouring, small amounts of fruit ingredient be added, up to the minimum percentage mentioned earlier.

Such additions should not be mentioned in the name, but only in the list of ingredients.

Provisions of this kind exist in some countries. Therefore, it was felt that this matter might be brought to the attention of the Group in this context.

An aspect that also may have to be discussed is whether it is sufficient that the presence of a small amount of another juice should only be mentioned in the list of ingredients, or whether it should explicitly be mentioned On the label that the juice is not a "pure single-fruit juice".

6. It is recommended that the Group should invite governments to send, in time for the next meeting, further data on mixtures of fruit juices and mixtures of fruit nectars, especially on the composition. After receipt of such additional information, some more detailed provisions could be made.

PROPOSED CHANGES TO STEP 9 STANDARDS FOR FRUIT JUICES AND NECTARS

The following amendments are considered to be of editorial or consequential nature by the Group of Experts:

1. DESCRIPTION

- (a) Standard concerned: Apricot, Peach and Pear Nectars (Section 1) The words "or honey" should be added after "sugars".

2. SOLUBLE SOLIDS

Standards concerned:

- (a) Orangs juice
A new section should be inserted after section 2.1 - soluble solids, to read as follows: "where the juice had been obtained using concentrated juice with the addition of water, the soluble orange juice solids content shall be not less than 11% m/m as determined by refractometer at 20°C, uncorrected for acidity and read as "Brix on the International Sucrose Scales".
- (b) Concentrated Orange Juice (Section 2.1)
The following heading should be introduced: "Requirements for the Juice after Reconstitution". The following words of section 2.1 should be deleted: "all" and "except that the soluble orange juice solids shall be not less than 11% m/m (exclusive of added sugars) as determined in Section 1.1".

3. SUGARS

Standards concerned:

- (a) Orange Juice, Grapefruit Juice (Section 2.2)
The first sentence of section 2.2 should be replaced by the following: "One or more solid sugars, as defined by the Codex Alimentarius Commission may be added. The addition of fructose is also permitted".
- (b) Concentrated Orange Juice (Section 2.2)
Insert the heading "Sugars".
The first sentence should be replaced by the following: "One or more of the sugars, as defined by the Codex Alimentarius Commission may be added".
- (c) Apricot, Peach and Pear Nectars (Section 2.2)
Section 2.2 should be replaced by the following: "One or more of the sugars, as defined by the Codex Alimentarius Commission shall be added. The addition of fructose is also permitted.

4. USE OF CARBON DIOXIDE

Standard concerned:

Concentrated Apple Juice.

Section 2.2, use of carbon dioxide, and consequential Section 7.6.2 should be deleted.

5. ORGANOLEPTIC PROPERTIES

Standard concerned:

Apricot, Peach and Pear Nectars (Section 2.9)

Section 2.9 should be amended to read as follows:

"... which it is made, taking into consideration the addition of honey in substitution of sugars."

6. FOOD ADDITIVES

Standard concerned:

Apple Juices

Changes should be made in Section 3 to read as follows:

	<u>Maximum Level</u>
3.1 L-ascorbic acid	Limited by GMP
3.2 Carbon dioxide	
3.3 Processing aids	
3.3.1 Unchanged text of 3.2	<u>Maximum level</u>
3.3.2 Vegetable carbon	Limited by GMP
3.3.3 Nitrogen	
3.3.4 Carbon dioxide	

Editorial changes consequential to the above should be made for Concentrated Apple Juice.

7. CONTAMINANTS

(a) Total metal content precipitable by potassium hexacyanoferrate (II)

Standards concerned:

Orange, grapefruit, Lemon and Tomato Juices (Section 3.7)

Apricot, Peach and Pear Nectars (Section 4.7)

Apple Juice (Section 4.7)

The provision in Section 3.7 and 4.7 respectively should be substituted by the following wording:

"Sum of copper, zinc and iron	<u>Maximum level</u> 20 mg/kg "
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(b) Sulphur dioxide

Standards concerned:

Orange, Grapefruit, Lemon and Tomato Juices (Section 3.8)

Apricot, Peach and Pear Nectars (Section 4.8)

A new section 3.8 and 4.8 respectively for sulphur dioxide should be included to read as follows:

"Sulphur dioxide	<u>Maximum level</u> 20 mg/kg "
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The existing provisions under 3.8 for tomato juice be renumbered 3.9

8. LABELLING -, ADDITIONAL REQUIREMENTS

Declaration of honey

Standard concerned:

Apricot, Peach and Pear Nectars

The following new Section 7.6.2 should be inserted "where the product contains honey. The declaration "contains honey" shall appear in close proximity to the name of the product". Sections 7.6.2 and 7.6.3 should be renumbered to read 7.6.3 and 7,6.4 respectively.