codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE:

Via delle Terme di Caracalla 00100 ROME: Tel. 57971 Telex: 610181 FAO I. Cables Foodagri

ALINORM 83/20

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION Fifteenth Session

Rome, 4 - 15 July 1983

REPORT OF
THE SIXTEENTH SESSION
OF THE CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

Washington, D.C. 22-26 March 1982

W/M4198

TABLE OF CONTENTS

<u> </u>	3
INTRODUCTION	
Fourteenth Session of the Codex Alimentarius Commission	
REVIEW OF PROGRESS CONCERNING ACCEPTANCE OF CODEX STANDARDS FOR PROCESSED FRUITS AND VEGETABLES	
The Carry-Over Principle	
REPORT OF THE AD HOC WORKING GROUP ON THE POSSIBLE AMENDMENT OF THE CODEX STANDARDS FOR CANNED FRUIT COCKTAIL AND CANNED TROPICAL FRUIT SALAD	
Status of the Draft Standard for Dates8	
Status of the Standard 9 CONSIDERATION, AT STEP 7, OF THE DRAFT STANDARD FOR CANNED MANGOES 9	
Status of the Standard	
Status of the Standard10	
CONSIDERATION OF AMENDMENTS PROPOSED BY THE COORDINATING COMMITTEE FOR ASIA TO CERTAIN CODEX STANDARDS FOR PROCESSED FRUITS AND VEGETABLES	
Status of the Standard	
CONSIDERATION, AT STEP 4, OF THE PROPOSED DRAFT STANDARD FOR CASHEW KERNELS	,
REVISION OF METHODS OF ANALYSIS INCLUDED IN CODEX STANDARDS ON PROCESSED FRUITS AND VEGETABLES	3
Status of the Amendment	ŀ
CONSIDERATION, AT STEP 4, OF PROPOSED DRAFT WORLD-WIDE STANDARD FOR HONEY	i
Status of the Standard	
CONSIDERATION OF THE REPORT OF THE WORKING GROUP ON CONTAMINANTS	5 7

~	
	_ ++ _
•	- 1
	<u>Page</u>
APPENDIX I	- LIST OF PARTICIPANTS 18
APPENDIX II	- PROPOSED DRAFT AMENDMENT TO CODEX STANDARDS FOR CANNED PROCESSED FRUIT AND VEGETABLES
APPENDIX III	REGARDING A GENERAL PROVISION FOR STYLES
	REGARDING PACKING MEDIA, COMPOSITION AND LABELLING 23
	ANNEX I to APPENDIX III
APPENDIX IV	- PROPOSED DRAFT AMENDMENT TO CODEX STANDARDS FOR
	PROCESSED FRUITS AND VEGETABLES
ADDENIDEN II	REGARDING DATE MARKING
APPENDIX V	- REPORT OF THE AD HOC WORKING GROUP ON THE POSSIBLE
	AMENDMENT OF THE CODEX RECOMMENDED INTERNATIONAL STANDARDS FOR CANNED FRUIT COCKTAIL AND CANNED TROPICAL
	FRUIT SALAD 29
APPENDIX VI	- REPORT OF THE WORKING GROUP ON CLASSIFICATION AND
	REVIEW OF CODEX METHODS OF ANALYSIS FOR PROCESSED
	FRUITS AND VEGETABLES
APPENDIX VII	- DRAFT STANDARD FOR DATES
APPENDIX VIII	- PROPOSED DRAFT STANDARD FOR CANNED CHESTNUTS AND CANNED
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CHESTNUT PUREE 38
APPENDIX IX	- PROPOSED AMENDMENT TO THE SAMPLING PLANS FOR PREPACKAGED
APPENDIX X	FOODS 44 - REPORT OF THE AD HOC WORKING GROUP ON CONTAMINANTS IN
	PROCESSED FRUITS AND VEGETABLES
	·

INTRODUCTION

- 1. The Codex Committee on Processed Fruits and Vegetables held its Sixteenth Session in Washington, D.C., from 22 to 26 March 1982, by courtesy of the Government of the United States of America. Dr. Robert M. Schaffner (USA) was in the chair. The Session was attended by government delegations and observers from 24 countries. A list of participants, including the Secretariat, is given in Appendix I to this Report.
- 2. The meeting was opened by Dr. S. Miller, Director, Bureau of Foods, Food and Drug Administration (USA) who referred to the United States Government's long-standing support of the work of the Codex Alimentarius Commission, which provided a very important world-wide forum where food standards matters relating to consumer protection and facilitation of international trade in food could be discussed and resolved. Dr. Miller expressed his satisfaction at the increasing attention the Codex was paying not only to matters relating to health protection but also to nutritional considerations. He wished the Committee a successful meeting and indicated that the USA was prepared to give continuing support to the work of the Committee.

ESTABLISHMENT OF WORKING GROUPS FOR THE SESSION

3. In order to facilitate the consideration of comments received in relation to certain agenda items and the consideration of certain technical subjects, the Committee decided to set up the following Working Groups:

Working Group on Contaminants - (Chairman, Mr. L. Erwin, Australia)

Working Group on Fruit Cocktail - (Chairman, Mr. L. Erwin, Australia)

Working Group on Methods of Analysis- (Chairman, Dr. W. Horwitz, USA)

Working Group on Honey - (Chairman, Mr. C.P. Erridge, Canada)

The membership of the Working Groups is given later on in the relevant paragraphs dealing with the above questions (see also para 49 of this Report).

ADOPTION OF THE PROVISIONAL AGENDA

4. The Committee adopted the provisional agenda with the addition of an item (3.8) dealing with a matter raised by the Coordinating Committee for Asia and with the deletion of the item dealing with the question of flavours in canned apricots, in view of the fact that no comments had been received from governments.

REVIEW OF MATTERS ARISING FROM CODEX AND OTHER SESSIONS

5. The Committee noted that a number of matters arising from various sessions referred to later items on the agenda and decided to consider them at the appropriate time.

Fourteenth Session of the Codex Alimentarius Commission

(a) Steps aimed at Rationalizing the Work of Codex and of the UNECE

6. The Committee was informed of the steps which had been taken by the Secretariat, in cooperation with the Secretariat of the UNECE's Working Party on Standardization of Perishable Produce, to resolve differences still outstanding between certain Codex standards and draft standards and corresponding UNECE draft standards for dry and dried produce. Details of these steps are set out in the Report of the Fourteenth Session of the Commission (ALINORM 81/39, paras 103-112). The Committee noted that the Secretariat was continuing its efforts to resolve the differences still outstanding and noted that the Commission had stressed the responsibility of governments themselves for resolving issues of this kind. The Committee noted that the Secretariat had, at one stage, suggested an ad hoc joint UNECE/Codex meeting to resolve the differences, but that this proposal had not been accepted by the UNECE Group of Experts on Dry and Dried Produce.

(b) Other Matters Arising from the Commission's Session

7. The Committee noted the decision of the Commission that the Codex Committee on Cereals and Cereal Products should consider pulses and legumes. It also noted that the Commission had made certain changes in the Codex Procedures for the elaboration of standards and in the terminology used in connection with certain types of non-acceptance (see ALINORM 81/33). It noted that the Commission had decided that the regional standard for honey should be developed into a world-wide standard and had entrusted the Codex Committee on Processed Fruits and Vegetables with this task. The Committee was also informed that the International Olive Oil Council (IOOC) had proposed amendments to the Codex Standard for Table Olives and that the Executive Committee would discuss the need, or otherwise, to commence the amendment of the standard.

Codex Committee on Food Additives (CCFA)

- 8. The Committee noted that the CCFA had considered a paper prepared by the USA on the interpretation of the Codex maximum levels for contaminants in relation to lots or consignments and on the question of elaboration of sampling procedures for verifying compliance with maximum levels for contaminants in food. The CCFA would reconsider the matter at its next session in the light of comments. The Committee requested the Working Group on Contaminants (para 3) to consider the US paper (CX/FA 82/8) and the views of the CCFA (see para 129 of this Report).
- 9. The Committee was informed that the CCFA had considered draft guidelines for the establishment of food additive provisions in Codex standards and had decided to consider a revised version of the guidelines in the light of government comments at its next session. The Secretariat informed the Committee that the guidelines were intended to be complementary to the General Principles for the Use of Food Additives and would contain information for Codex Commodity Committees on the sort of data required to ascertain the technological need for food additives. As regards the above General Principles, the Committee noted that these would be included in one of the Volumes of the Codex Alimentarius.

Acceptances of Codex Standards - Extract from the Report of the Third Session of the Coordinating Committee for Asia, Colombo, February 1982

- 10. The Committee had before it document CX/PFV 82/13 containing an extract from the report of the Third Session of the Coordinating Committee for Asia. The extract was entitled "Review of Acceptances of the International Codex Standards by Countries of the Asian Region". The extract was brought to the attention of the Committee because the Coordinating Committee for Asia had expressed the view that some Codex standards, including those for processed fruits and vegetables, were too detailed in regard to secondary or aesthetic quality criteria, and that the standards would be more acceptable if those parts of the standards containing aesthetic quality criteria were made optional and left for settlement between buyer and seller.
- 11. The Committee noted that the views of the Coordinating Committee for Asia on this topic were not in line with the decisions taken by the Commission on this matter at its Fourteenth Session, but that the Coordinating Committee had felt strongly that the whole question should be re-examined by the Commission at the Fifteenth Session. The Committee further noted that a paper was to be prepared by India on this subject for consideration of the Commission. The Committee took note of the views expressed by the Coordinating Committee for Asia and of the other points covered in the above-mentioned extract, and noted that under a later item of the agenda it would be considering a number of specific amendments proposed by the Coordinating Committee for Asia to certain Codex standards (see para 82).

REVIEW OF PROGRESS CONCERNING ACCEPTANCE OF CODEX STANDARDS FOR PROCESSED FRUITS AND VEGETABLES

12. The Committee had before it document CX/PFV 82/2, from which it was noted that 35 countries had communicated to the Secretariat their positions concerning acceptance of the standards for processed fruits and vegetables. The main purpose of the document was to encourage delegations attending the session to inform the other participating delegations of steps being taken in their countries towards acceptance and implementation of the standards.

- 13. During the Session, the delegation of Norway indicated that the Department of Agriculture in Norway was currently reviewing national regulations in the food standards field, and that the review was expected to be completed in 1983. The delegation indicated that a number of Codex standards for processed fruits and vegetables would be included in the new regulations. The delegation also indicated that considerable use was being made in Norway of Codex standards and that products in conformity with Codex standards would very likely have little difficulty in gaining entry into Norway.
- 14. The delegation of Argentina indicated that Argentina was in the process of taking decisions concerning the acceptance of the Codex standards for canned tomatoes, canned asparagus, canned pineapple, canned grapefruit and canned peas, and that these decisions would soon be sent to the Secretariat. The delegation indicated that Argentina intended to speed up the process of considering Codex standards in relation to the Codex acceptance procedures.
- 15. The delegation of Switzerland stated that Switzerland had not accepted, officially, any of the Codex standards, but that it had permitted free circulation in Switzerland of 31 products which were in conformity with Codex standards. On the basis of the new provisions relating to the publication of standards it had examined further standards.
- 16. The delegation of Saudi Arabia indicated that Saudi Arabia found Codex standards very useful for its national regulations, but that Saudi Arabia very often found it necessary to add, in its national regulations, certain provisions such as (i) limits for the presence of microorganisms and (ii) the declaration of the expiry date.
- 17. The Committee agreed that countries which were unable to give acceptance to the standards should consider the possibility of permitting free entry of products in conformity with the standards and should notify the Secretariat of any positive decisions in this respect.

REVISION OF CODEX STANDARDS

18. The Committee had before it documents CX/PFV 82/4(1) to 82/4(6) covering the question as to whether Codex standards should be revised with respect to the Carry-over Principle, a general provision for styles, declaration of drained weights, packing media, declaration of date marking and the Codex classification of methods of analysis. The Committee also had before it an extract from the Report of the Third Session of the Codinating Committee for Asia (CX/PFV 82/12) containing proposals for the amendment of the Codex standards for canned pineapple, fruit cocktail, peas and mature processed peas.

The Carry-over Principle

The Committee considered the amendment of Codex standards for processed fruits and vegetables in the light of the Carry-over Principle and noted that it was para 3 of the Carry-over Principle which governed the presence of food additives carried over from raw materials used in the preparation of foods. Any food additives carried over in conformity with para 4 of the Carry-over Principle would be listed in the section on food additives. It was agreed that the Carry-over Principle applied to all the processed fruits and vegetables elaborated or under elaboration by the Committee. The Secretariat was requested to use appropriate wording in giving effect to this decision. The delegation of Australia and the Secretariat were of the opinion that the Carry-over Principle should be redrafted editorially to convert it into a suitable text for publication in the Codex Alimentarius.

General Provision for Styles

- 20. The Committee discussed the feasibility of providing a general provision for styles in the light of a paper prepared by the United States of America (CX/PFV 82/4(2), which gave examples of styles currently in commerce but which were not included in the Codex standards for canned peaches, canned pears, table olives and canned green and wax beans.
- 21. After a detailed discussion, the Committee agreed that in providing for a general provision for styles in processed fruits and vegetables, careful consideration should be given to the guidelines laid down by the Codex Committee on General Principles (see para 3.2 of document CX/PFV 82/4(2)). It was also agreed that special consideration should be given to standards in which provisions had been included for the classi-

fication of defects relating to various styles. In these cases, the wording of the general styles provision should be changed to require that the additional style be in conformity with those provisions applying to the style which was closest to the new style being marketed. The delegation of Canada pointed out that it was not in favour of a general provision for other styles as styles were subject to quality grading which made the application of general provisions for styles difficult. The delegation of Australia stated that it was important, in considering the inclusion in standards of a general provision for other styles, to treat all products on an equal basis and recalled that the Committee had already taken a decision of principle at its last session that there should be a general provision for styles in Codex standards for processed fruits and vegetables.

22. The wording of the amendments is included in Appendix II to this Report. Governments were requested to comment on the proposed amendments at Step 3 of the procedure. It was noted that it would be decided at the next session as to which standards the general styles provision did not apply. It was noted that the 15th Session of the Commission would approve or otherwise the setting into motion of the acceptance procedure in relation to these standards.

Declaration of Drained Weights on the Label

- 23. The Committee discussed the need, or otherwise, for the declaration of drained weight in the light of a paper prepared by the US, CX/PFV 82/4(3). The paper suggested that the question of the declaration of drained weight be postponed until the Codex Committee on Food Labelling will have considered this question as a general issue in relation to the revision of the Codex General Standard for the Labelling of Prepackaged Foods in May 1982.
- 24. The Committee noted that at its Fifteenth Session, there had been a general consensus in favour of declaring drained weight. It was decided to have a discussion in order to see if there was still support for the declaration of fill-in weight. In this connection, the Committee was informed that a declaration of drained weight, unlike the declaration of fill-in weight, would necessitate research by industry resulting in costs running into millions of dollars which would have an effect on the cost of the product. It was also informed that the US industry had voluntarily introduced a declaration of fill-in weight. The point was also made that fill-in weight could not be verified on the end product moving in international trade and that, therefore, this sort of declaration was not appropriate for an international standard.
- 25. As regards the declaration of drained weight, the Delegation of the United Kingdom and the Secretariat stressed the need for agreeing, internationally, on methods of analysis in order to define drained weight and to be able to check compliance. This was particularly true of products containing soft fruit ingredients which tended to disintegrate. The Representative of EEC stated that the declaration of drained weight was compulsory within the European Community. The delegation of Argentina expressed the opinion that a declaration both of net weight and drained weight should be included on the label.
- 26. The Committee decided to await developments in the Codex Committee on Food Labelling and requested the Secretariat to bring remarks to the attention of the Sixteenth Session of that Committee.

Packing Media

- 27. The Committee considered the possible amendment of Codex standards for all processed fruits packed in liquid packing media in relation to the composition and labelling of the packing media along the same lines as that adopted for the standard for canned apricots at the Fifteenth Session (ALINORM 81/20, paras 137-145). A working paper prepared by Australia and the USA (Appendix III of this Report) was considered by the Committee.
- 28. It was noted that the table in the paper relating to the various strengths of packing media in Brix was not complete in regard to canned grapefruit and pineapple. It was agreed that Governments should be requested to supply information to complete the table. Governments were requested to indicate whether they considered it desirable to attempt to make the syrup strengths uniform. Some delegations were of the opinion that this would not be possible in view of variations of the sugar/acid

ratio of fruits and other such factors. The question arose as to whether the requirement that a minimum amount of 10% fruit juice be present in the packing media before reference can be made to the fruit juice on the label, could be generally applied. The Committee noted that the figure of 10% was arbitrary, but decided to make no changes to this requirement. It was agreed that the amendment contained in Appendix III should be sent to governments for comment at Step 3 of the Codex amendment procedure. The meaning of the square brackets was noted to be that the figures or names in the square brackets should be substituted by the figures and names applicable to the food commodity being amended.

Date Marking

- 29. The Committee had before it a document prepared by the United States (CX/PFV 82/4(5)) on the question of whether date marking of processed fruits and vegetables is needed and, if so, what type of date mark should be used.
- 30. The delegations of the Netherlands, United Kingdom and France suggested that products with a shelf stability of less than 18 months should be provided with a date mark as decided for fruit juices by the Joint ECE/Codex Group of Experts. It was up to manufacturers to decide whether their products were shelf stable for over 18 months. The delegations of Saudi Arabia and Iraq stated that date marking was essential to prevent the dumping of products the quality of which had deteriorated as a result of long storage. The delegation of Canada considered canned fruits and vegetables to be shelf-stable products under normal storage conditions and, therefore, saw no need for date marking. The Committee discussed the declaration of the date of minimum durability as most delegations were in favour of date marking. In this respect, it was noted that the durability of canned products depended on a number of factors such as the quality of the raw materials used and the condition of storage and that this would have to be determined by the manufacturer on a commodity by commodity basis. The delegation of the US indicated that this would be difficult in view of the fact that, at the time of manufacture, the destination of the products was not known. The delegation of Japan expressed the opinion that date marking should be limited to a declaration of the date of manufacture for dried fruits.
- 31. The delegation of Iraq indicated that the practice of exporting processed food in bulk containers followed by packaging would, in such cases, make the declaration of the date of manufacture misleading. It was pointed out that there was increasing pressure from consumers and countries to have mandatory declaration of date marking and that this would lead to better stock rotation.
- 32. The Committee agreed that a declaration of the date of minimum durability should be introduced in all the standards it had elaborated, with the accompanying requirement that storage instructions should be given on the label. The text of the date marking provision is that given in para 6.1 of the Guidelines on Date Marking (CL 82/2); the provision for storage instructions should be based on para 4 of the Guidelines.
- 33. It was agreed that the procedure for the amendment of the Codex standards be initiated, subject to subsequent approval by the Commission, and that this matter be also brought to the attention of the forthcoming session of the Codex Committee on Food Labelling under the item dealing with matters of interest (see Appendix IV).

REPORT OF THE AD HOC WORKING GROUP ON THE POSSIBLE AMENDMENT OF THE CODEX STANDARDS FOR CANNED FRUIT COCKTAIL AND CANNED TROPICAL FRUIT SALAD

- 34. The above report was introduced by the Chairman of the Ad Hoc Working Group, Mr. L. Erwin (Australia). The following countries were represented on the Working Group: Argentina, Brazil, Canada, France, Iraq, Japan, The Netherlands, Saudi Arabia, South Africa, Switzerland, Thailand, United Kingdom, United States of America and Venezuela.
- 35. The report of the Ad Hoc Working Group is attached as Appendix V to this Report, and the recommendations of the Working Group are contained in paragraph 12 of its report.
- 36. The Committee agreed that there should be no change in the standard for Canned Fruit Cocktail, because this was a well established quality product, which moved

in significant quantities in international trade, and whose name was meaningful to the consumer as to composition and style of presentation.

- 37. Concerning the standard for Tropical Fruit Salad, the Working Group had considered a proposal of the Delegation of Thailand, speaking on behalf of the Coordinating Committee for Asia, that: (a) the term "cocktail" be permitted to be used as an alternative to the term "salad" in the name of the product, and (b) the list of fruits appearing in the standard be extended to include those fruits specified in document CX/PFV 82/12. The fruits specified in document CX/PFV 82/12 had been proposed by the Coordinating Committee for Asia for inclusion in the standard for Canned Fruit Cocktail.
- 38. The Committee agreed that the standard for Tropical Fruit Salad should be amended to provide for an alternative name of the product. As regards the matter of what the name of the product should be, several delegations favoured a name such as, for example, "Tropical Fruit Mix", with provision for the use of the term "cocktail style" for the diced presentation. The delegations of Iraq and The Netherlands, and the Coordinator for Asia, Professor A. Bhumiratana (Thailand) considered that a mixture of diced tropical fruits should be permitted to be designated "Tropical Fruit Cocktail". The delegation of Iraq was opposed to the term "salad" in the name of the product, as this term was not appropriate to describe a canned fruit mixture in Middle East countries.
- 39. The Committee agreed that the standard should be amended to allow for an increase in the list of fruits.
- 40. As regards future action concerning the standard for Canned Tropical Fruit Salad, the Committee decided that a circular letter should be sent to governments drawing their attention to the Committee's discussions concerning the need to amend the standard. Governments should be invited to consider what amendments appeared to be necessary throughout the body of the standard. The replies from governments should be sent to the Chairman of the Ad Hoc Working Group, Mr. L. Erwin (Australia) and to the Coordinator for Asia, Professor A. Bhumiratana (Thailand), who should jointly formulate proposals for the amendment of the standard. These proposals would be sent to Governments for comment and the proposals and the comments would be considered by the Committee at its next session.
- 41. The Committee noted that the Commission would be asked to approve the Committee's decision that there was a need to amend the standard.
- 42. Concerning the recommendations of the Ad Hoc Working Group that a survey be undertaken to establish the extent of trade in the designations of temperate zone products similar to "Fruit Cocktail" but not conforming to the standard, the Committee agreed to consider this matter later in the agenda, when considering future work (see para 138 of this Report).

CONSIDERATION, AT STEP 7, OF THE DRAFT STANDARD FOR DATES

- 43. The Committee had before it the above draft standard which was contained in Appendix IX of ALINORM 81/20, together with government comments thereon contained in CX/PFV 82/5(1). The Committee noted that the draft standard, which had been submitted to the Fourteenth Session of the Commission for adoption at Step 8, had been returned by the Commission to the Committee for further consideration, in the light of comments made by the delegation of Iraq at the Commission's Session.
- 44. At the outset, the Secretariat referred to the efforts which had been made by the Committee at its last Session to bring the draft UNECE standard for dates and the draft Codex standard for dates into alignment with each other as far as possible. The Committee noted that, although a good deal of progress had been made in this respect, a number of differences still remained.
- Concerning Section 2.5, size classification, which was optional, the delegation of Iraq proposed that for the size "small" the number of dates in 500 g be increased to "more than 100" in the case of unpitted dates and to "more than 110" in the case of pitted dates. The reason for this proposal was that the existing provision was too restrictive, in that it placed outside the standard varieties of dates which,

although small, were of good quality and taste. In putting forward this proposal, the delegation of Iraq stressed that the quality of dates could not be judged solely on their size. The delegation of the United Kingdom stated that, although size was not the only factor to be taken into account in judging quality, general experience with small dates imported into the United Kingdom was that their quality was less than satisfactory. The delegation of the United Kingdom also pointed out that acceptance of the proposal of the delegation of Iraq would necessitate lowering the minimum size figure of 5 grammes for unpitted dates, which was also the minimum figure in the UNECE draft standard for dates. After a full discussion, a general consensus emerged in favour of the proposal of the delegation of Iraq which was adopted by the Committee.

- In <u>Section 3.1.1</u>, the Committee agreed, on the proposal of the delegation of the United Kingdom, to make it quite clear that the product, besides being free of live insects, must be free of live insect eggs. The Committee considered a proposal to increase the maximum moisture content figure for cane sugar varieties from 26% to 30%. The delegation of Iraq, which had presented this proposal, pointed out that, although Iraq itself was not seeking to increase the figure for moisture content, some North African countries would like to see the figure increased, in order to allow for rehydration of the dates, which was done for commercial reasons to meet certain consumer tastes. Several delegations were opposed to the above proposal, mainly because it might give rise to some food safety problems. The Committee decided to leave the existing provision unaltered.
- 47. Concerning the minimum size figure for unpitted dates (see also para 45 above), the Committee was informed by the delegation of Iraq that if the minimum figure of 5 grammes was not lowered somewhat in order to accommodate the small varieties referred to earlier, some 30 to 40% of Iraqi production would fall outside the standard. The Committee agreed to reduce the minimum size figure for unpitted dates to 4.75 grammes. the delegation of the United Kingdom, whilst agreeing that it would be wrong to exclude from an international standard any good quality produce, reiterated that experience with small dates in the United Kingdom did not lead to the conclusion that they were generally of good quality. The delegation of the United Kingdom also stressed the importance of not including inferior quality produce in international standards.
- 48. The Committee considered Section 3.1.2 Definition of Defects and Section 3.1.3 Allowances for Defects. After a full discussion, the Committee decided to request the delegations of Oman, Iraq, Saudi Arabia, United Kingdom and USA to re-examine the definitions of defects and the allowances for defects, with a view to re-grouping them in such a way that a more satisfactory distinction, in terms of tolerances, would be drawn between serious defects and less serious ones.
- 49. A Ad Hoc Working Group comprised of delegates from the countries mentioned in paragraph 48 above, met under the chairmanship of Mr. H.W. Schutz (USA). The Group considered several proposals for defining defects and maximum allowances for products entering international trade. Following lengthy discussions, the Group unanimously agreed upon revised definitions of and allowances for defects and recommended that the Committee amend the draft standard accordingly.
- 50. The Committee adopted the definitions of and allowances for defects as presented by the Ad Hoc Working Group and as shown in the revised version of the draft standard, attached as Appendix VII to this report.
- 51. Concerning <u>Sub-section 5.2</u> of the <u>Section on Hygiene</u>, the delegation of Iraq stated that any food which had not been heat treated could not be free from microorganisms. It was pointed out that the reference in the text was to the freedom from microorganisms capable of development under normal conditions of storage when tested by appropriate methods of sampling and examination. It was noted that this provision was contained in the hygiene section of many Codex standards. The Committee decided to leave the text unchanged.
- 52. As regards <u>Sub-section 7.1.3</u> of the <u>Section on Labelling</u>, the Committee agreed to adopt a proposal of the delegation of Iraq to include in the text of 7.1.3 examples of varietal types, as had been given by Iraq in its written comments.
- 53. Concerning Section 7.5, the Committee agreed, on the proposal of the delegation of Iraq, to require mandatory declaration of the country of origin. The observer from

the European Economic Community pointed out that EEC regulations required the country of origin to be declared only if the absence of the declaration of country of origin could mislead the consumer.

54. As regards date marking, the Committee decided in favour of the declaration of the date of minimum durability (see paras 29-33 of this Report).

Status of the Draft Standard for Dates

55. The Committee agreed to advance the draft standard for dates to Step 8 of the Procedure for the Elaboration of Worldwide Codex Standards (see Appendix VII).

CONSIDERATION, AT STEP 7, OF THE DRAFT STANDARD FOR CANNED PALMITO

The Committee had before it the above standard contained in Appendix VI to ALINORM 81/20 and Government comments thereon in document CX/PFV 82/5(2). The delegation of Brazil introduced the subject. It indicated that <u>Euterpe oleracea</u> (Mart.) grown in the Amazon area was proving to be a good source of raw material. The particular characteristics of this species required further investigation of Sections 1.3(a) and 1.4 of the standard, which should, therefore, be placed in square brackets. The Committee agreed to this change and proceeded to examine the standard in order to see whether other sections required changing.

1.3.1 Other Styles

57. The Committee decided to follow its previous decision concerning the inclusion of other styles (see paras 20-22 of this Report).

1.4 Designation in accordance with size

58. The Committee discussed briefly whether this section should be mandatory or optional and decided to discuss this question at its next session when reconsidering Section 1.4 (now in square brackets). It was noted that the industry would study all the appropriate species and varieties of raw materials and the various blends and styles of product in commerce in light of the draft standard.

2.1.1(d) Starches, etc.

59. The Committee noted that, in the written comments, the Federal Republic of Germany had requested that a maximum level of 1% m/m should be included for starches.

2.1.1(b) Aromatic herbs, etc.

60. The delegation of Brazil confirmed that the maximum level of 10% for these ingredients was appropriate.

2.2.5(b) Mineral Impurities

61. The Committee noted that the maximum level of 0.5% m/m was still subject to confirmation and maintained the square brackets.

3. Food Additives

- 62. The Committee considered a revised section 3 prepared by the Secretariat with the assistance of Brazil. It noted that the antioxidants BHT and BHA were both carried over from fatty ingredients but that some additional amounts were needed. They should, therefore, be included in the section on food additives and provided with an appropriate maximum level.
- 63. As regards the acidifiers, the pH of the product was changed to 4.6. The Committee agreed that the revised text of section 3 prepared by the Secretariat should be included in the Standard. It noted that the additives required further study and requested Brazil and other interested producing countries, such as Venezuela, to provide adequate technological justification for the use of the additives for the next session.

4. Contaminants

64. The Committee noted that the Working Group on Contaminants had recommended a maximum level of 250 mg/kg for tin and had suggested the inclusion of a provision for lead at a maximum level of 1 mg/kg. The Committee adopted these suggestions and requested Governments to study these maximum levels on the various commercial products in question.

5. Hygiene

65. The Committee agreed to make reference also to the Codex Code of Hygienic Practice for Low Acid Foods.

6.1.4 Minimum Drained Weight

66. The Committee agreed with the proposal of the delegation of Brazil to place the drained weight provision for the "sliced length-wise" style in square brackets, noting that industry intended to re-study this type of product.

Date Marking

67. It was agreed that the text adopted for processed fruits and vegetables (see para 32) should be included.

8. METHODS OF ANALYSIS AND SAMPLING

68. It was agreed to reconsider this matter under the item dealing with the review of methods of analysis and the amendment of the Sampling Plans for Prepackaged Foods (see para 107 of this Report).

Status of the Standard

69. The Committee agreed with the proposal of the delegations of Brazil and Venezuela that this standard be returned for further comments at Step 6. The delegation of Brazil was requested to prepare a revised draft standard, taking into consideration the (a) conclusions of the Committee; (b) written comments received from Governments; and (c) information generated by the industry and by others so that the square brackets could be reviewed prior to the standard being submitted for comments at Step 6. Governments should also be invited to provide information to Brazil in order to facilitate this task.

CONSIDERATION, AT STEP 7, OF THE DRAFT STANDARD FOR CANNED MANGOES

70. The Committee had before it the above standard contained in Appendix VII to ALINORM 81/20 and Government comments thereon, included in document CX/PFV 82/5(3). The delegation of the United Kingdom agreed to introduce the subject matter. The Committee discussed the standard in detail in the light of comments. The following is a summary of the discussions and conclusions of the Committee.

1.3 Styles

71. The Committee decided to delete the words "with very little free-flowing liquid" in solid packs, as such an expression was subject to varying interpretation. It was also agreed that section 1.3 should be editorially re-arranged so that the style "solid pack" be given a separate number.

2.1 Packing Media

72. It was agreed to add water as an additional packing medium in order to be consistent with section 7.1.3.1 dealing with the declaration of water as a packing medium. It was noted that, since soluble solids were extracted into water when used as a sole packing medium, this would be difficult to determine analytically. It was agreed to move the footnote in sub-section 2.1.1(d) to "mango nectar" in the text.

2.1.2 Classification of Packing Media when Sugars are added

73. The Committee agreed to the editorial amendment that syrup strength should be referred to only as ^OBrix and not additionally as percent soluble solids (see also para 27).

2.3.7 Allowance for Defects

74. It was agreed to express the defect as 1/8 stone or equivalent per 500g, for the sake of consistency.

3. Food Additives

75. The delegations of Switzerland and France reserved their position concerning the use of fumaric acid.

4. Contaminants

76. The Committee noted that the Working Group on Contaminants had recommended the deletion of all contaminant provisions except for lead and tin. The Committee accepted this recommendation and also adopted the maximum levels suggested, i.e., lead 1 mg/kg, tin 250 mg/kg.

6.2 Minimum Drained Weight

77. The question arose as to whether the provision of 50% minimum drained weight applied to the various styles provided for in Section 1.3. It was agreed that clarification of this matter should be sought from interested Governments.

Status of the Standard

78. The Committee requested the Secretariat to issue a revised document on the basis of the decisions of the Committee and in consultation with the author countries (India and Mexico). The revised standard should then be distributed to Governments for comments at Step 6 of the Procedure. Governments should be requested to provide information so that the Standard could be finalized at the next session.

CONSIDERATION, AT STEP 7, OF THE DRAFT STANDARD FOR MANGO CHUTNEY

- 79. The Committee had before it the above standard contained in Appendix VIII to ALINORM 81/20 and Government comments thereon in document CX/PFV 82/5(4).
- 80. In view of the fact that the author country, India, was not represented at the Session, and since there were no other producing countries present at the Session to enable the Committee to have a fruitful discussion of the standard, the Committee agreed that the standard should be redrafted by the Secretariat in the light of the general decisions of the Committee in relation to questions such as styles and datemarking and the available written comments, in cooperation with India.

Status of the Standard

81. It was agreed that the revised draft standard should be returned to Governments for further comments at Step 6. Interested producing countries were urged to comment on the standard and to attend the Session of the Committee when the standard will be discussed. The Secretariat was requested to contact the interested countries, including Cuba and Egypt, in order to ensure appropriate participation and input by those countries in the elaboration of the standard.

CONSIDERATION OF AMENDMENTS PROPOSED BY THE COORDINATING COMMITTEE FOR ASIA TO CERTAIN CODEX STANDARDS FOR PROCESSED FRUITS AND VEGETABLES

- 82. The Committee had before it document CX/PFV 82/12 containing an extract from the Report of the third session of the Coordinating Committee for Asia entitled "Consideration of Proposed Amendments to certain Codex Standards". The document also contained details of the amendments which had been proposed by the Coordinating Committee to the Codex standards for canned pineapple, canned fruit cocktail, canned peas and canned mature processed peas.
- 83. In introducing document CX/PFV 82/12, the Secretariat outlined the background to the proposed amendments of the Coordinating Committee, and explained why the amendments were being proposed. The Secretariat drew the attention of the Committee to the decisions of the Commission on this topic at its fourteenth session, as contained in paragraph 166 of ALINORM 81/39. The Committee was also informed that the Coordinating Committee for Asia was not happy with the decisions of the Commission on this subject, and had charged the delegation of India to prepare a paper for consideration by the Commission at its fifteenth session.
- 84. The Coordinator for Asia, Prof. A. Bhumiratana (Thailand) also explained in detail why the Coordinating Committee for Asia was proposing amendments to the standards mentioned, pointing out that, as very few countries had accepted the standards in question, it was really the buyers' standards which had to be observed and these were often below the requirements of the Codex standards. The Coordinator for Asia also

pointed out to the Committee the concerns of the Coordinating Committee for Asia on this subject, as set forth in the Report of the Coordinating Committee's third session.

- 85. The Committee decided that it would be premature to take any decision on the proposed amendments of the Coordinating Committee for Asia at this stage, in view of the fact that the entire question of having some parts of the standards optional would be reviewed by the Commission at its next session, in the light of a paper to be prepared by the delegation of India. The Committee thought it important to await guidance from the Commission on this matter which might also apply to the standards developed by other Codex Commodity Committees. The point was made that to make optional provisions which had been negotiated over a number of years might have the effect of undermining some important aspects of the standardization work of the Committee.
- As regards the other proposed amendments, such as those relating to the use of certain kinds of additives, the Committee felt that it was not in a position to come to a decision about them at this session as more time would be needed to consider them fully.

CONSIDERATION, AT STEP 4, OF THE PROPOSED DRAFT STANDARD FOR CANNED CHESTNUTS AND CHESTNUT PUREE

87. The Committee had before it the above proposed draft standard contained in document CX/PFV 82/7 and government comments thereon in document CX/PFV 82/6(1) and ADD.1 to it, as well as comments from Portugal (CX/PFV 82/7-ADD.1) and a room document containing a revised draft standard prepared by Japan. For practical reasons the Committee proceeded to consider document CX/PFV 82/7. The Committee made the following observations and conclusions following consideration of all working papers on the subject.

1. Scope

88. It was agreed that there was no need for a section on scope.

1.1 Product Definition

89. The Committee decided to adopt the improved text prepared by Japan. As regards the use of plastic pouches for the vacuum packaging of chestnuts, the Committee noted that the use of such forms of package was not excluded from the standard. In this respect, it was pointed out that plastic vacuum packs of chestnuts would have a different shelf life to chestnuts packed in cans or in glass containers.

1.2.2.1 and 1.2.2.2

90. The Committee noted that in the French text the terms should be: "sucré" and "sans addition de sucre", respectively.

1.2.3 Other Styles

91. The Committee agreed to insert that version of the general styles provision which was applicable to products which had defect criteria independent of styles (see para 20).

2.1 Packing Media

92. The Committee agreed to apply the general wording relating to packing media, noting that water related to potable water.

2.2 Other Ingredients

93. It was agreed to delete the word "puree" in order to permit the use of sugars and salt in all styles.

2.2.5 Sizing

94. The Committee noted that sizing of chestnuts was not used in commercial practice and agreed to delete the section.

3. Food Additives

95. The Committee received an explanation from the delegation of Japan concerning technological justification for the use of the food additives included in this section.

As regards firming agents, the Committee agreed to specify the substance to be permitted, i.e., aluminum potassium sulphate. It was noted that chelating agents and acidifying agents were provided for to prevent discoloration and that these substances would, therefore, be used in small quantities and not in quantities needed for pH adjustment or to adjust flavour. The delegation of France indicated that fumaric acid was not permitted for use in canned chestnuts in that country. As regards the limit for SO₂ the Committee was informed that the limit of 30 mg/kg had been provided for to cover the residue resulting from the use of sulphites in the bleaching of chestnuts.

- As regards the use of colours, the delegation of France indicated that colouring of canned chestnuts was not permitted in France. The Secretariat informed the Committee that the natural colours crocin and carthamus yellow had not yet been cleared by the JECFA for use in food and that the Codex Committee on Food Additives would, in all likelihood, require a maximum level for these colours. Furthermore, turmeric was not only a colour but also a spice. With respect to the general requirement for natural and nature-identical flavours, the Committee decided to provide only for extract of vanilla and for vanillin subject to GMP.
- 97. It was agreed to provide for both natural and amidated pectins in all styles of canned chestnut products.

4. Contaminants

98. The Committee accepted the advice of the Working Group on Contaminants to provide for a limit of 250 mg/kg tin and 1 mg/kg lead. The delegation of France reserved its position on the limit of lead which it considered to be too high.

5. Hygiene

99. The Committee agreed to make reference also to the Codex Code of Hygienic Practice for Low Acid Foods.

7.1.3

100. As regards the style designation used in connection with the name of the food, the Committee agreed that the term "unpellicled" did not seem to be appropriate and agreed that Governments should be requested to suggest appropriate designations. It was agreed to insert the term "with seed coat" on a provisional basis. The French term "avec tégument" was noted to be correct.

7.2 Declaration of Size

101. This section was deleted consequential to the deletion of section 2.3.5 on sizing.

Status of the Standard

102. The Committee decided to advance the Draft Standard for Canned Chestnuts and Chestnut Puree to Step 5 of the Codex Procedure. Governments were requested to provide technological justification for the use of the additives and to suggest maximum levels for them where appropriate (see Appendix VIII).

CONSIDERATION, AT STEP 4, OF THE PROPOSED DRAFT STANDARD FOR CASHEW KERNELS

- 103. The Committee had before it the Proposed Draft Standard for Cashew Kernels, contained in document CX/PFV 82/8. The proposed draft standard had been drawn up by Kenya.
- 104. In the absence of representatives from the author country (Kenya) and from other principal producer countries of cashew kernels, the Committee decided that it would not be profitable to proceed with an examination of the proposed draft standard. The Committee requested the Secretariat to consult with the author country with a view to bringing the proposed draft standard more into line with the Codex format. The Committee also requested the Secretariat, in consultation with the author country, to bring the draft standard into conformity with any relevant general decisions taken by the Committee.
- 105. The Committee expressed the hope that it would be possible for the author country (Kenya) and for other producer countries of cashew kernels to send experts on .

this commodity to the Committee's next session, in order to allow the development of the standard to proceed. The Committee requested the Secretariat to bring this matter to the attention of the main producer countries of cashew kernels.

Status of the Proposed Draft Standard for Cashew Kernels

106. The Committee agreed that, after the proposed draft standard had been reworded, in accordance with paragraph 104 above, it should be sent to governments for a second round of comments at Step 3.

REVISION OF METHODS OF ANALYSIS INCLUDED IN CODEX STANDARDS ON PROCESSED FRUITS AND VEGETABLES

- 107. The Committee had before it document CX/PFV 82/4(6) prepared by the Secretariat and the report of the <u>ad hoc</u> Working Group on Analysis, established during the Session (CX/PFV 82/4(6)) Add.1). Dr. W. Horwitz (USA), Chairman of the Working Group introduced the subject.
- 108. Following discussion, the Committee adopted the recommendations included in the report of the Working Group. As regards the procedures relating to visual inspection, the Committee noted that these had been included in square brackets, since it had been agreed that these were not methods of analysis proper and should not be listed under the heading "Codex methods of analysis".
- 109. The delegation of France indicated that, for a number of the provisions for which AOAC methods had been selected, appropriate ISO methods also existed. The Secretariat pointed out that where an ISO method was identical to an AOAC method chosen as Codex method, or vice versa, both references would be inserted in the Codex standard. However, where these methods differed it was up to Governments to propose the methods of their choice in accordance with the Codex Step Procedures.
- 110. It was agreed that the recommendations of the Working Group should be appended to this Report and submitted to Governments at Step 3 of the Codex Procedure for the Amendment of Codex Standards (see Appendix VI).

AMENDMENT TO THE SAMPLING PLANS FOR PREPACKAGED FOODS (CAC/RM 42-1969)

- 111. The Committee had before it a paper prepared by the Secretariat containing Government comments on the proposed amendment to the above Sampling Plans (CX/PFV 82/10). This task had been entrusted to the Committee by the Fourteenth Session of the Commission.
- 112. In introducing the paper, the Secretariat informed the Committee that all countries which had replied were in agreement that the sampling rate included in the Codex Sampling Plans had to be reduced and that there was general agreement with the proposed new sampling rates included in Appendix I to document CX/PFV 82/10. Some Governments had suggested that the title and scope of the Sampling Plans should be adjusted in order to make it clear that the Plans applied only to certain criteria (e.g., visual defects) in Codex standards. The Secretariat expressed the opinion that the purpose of the two levels of inspection included in the Sampling Plans should be clarified. The Committee also noted that the exact purpose of Codex Sampling Plans would be discussed by the Codex Committee on Methods of Analysis and Sampling in order to see what obligation would fall on governments accepting Codex standards containing provisions for sampling procedures.
- 113. The delegation of Thailand expressed the opinion that the Sampling Plans in question applied only to visual defects. In discussing the reduced sampling rate, the Committee noted that, in the opinion of statisticians as evidence in Governments' comments, lowering in the level of confidence would be negligible. It was also noted that only the sample sizes related to large size lots were affected by the amendment.

Status of the Amendment

114. The Committee agreed that the amendment to the Sampling Plans (see Appendix IX) as contained in Appendix I to CX/PFV 82/10 should be sent to the Commission at Step 5 of the Codex Procedure. The Codex Committee on Methods of Analysis and Sampling was

requested to express its opinion on the exact scope of the Sampling Plans and also to consider the question of the role of two levels of sampling in relation to its consideration of the role of Codex Sampling Plans in general.

CONSIDERATION, AT STEP 4, OF PROPOSED DRAFT WORLD-WIDE STANDARD FOR HONEY

- 115. The Commission, at its fourteenth session, had agreed that there was a need to amend the European Regional Standard for Honey and had decided that the Standard should be developed as a world-wide standard by the Codex Committee on Processed Fruits and Vegetables. The Commission had also agreed that the European Regional Standard should be sent to Governments for comments at Step 3.
- 116. In view of the extensive comments received, the Committee decided to establish an <u>ad hoc</u> Working Group to consider the comments and to report back to the Committee (para 3 of this Report).
- 117. The Working Group was chaired by Mr. C.P. Erridge (Canada) and representatives of the following countries participated in the work: Argentina, Australia, France, The Netherlands, New Zealand, Switzerland, United Kingdom and the United States of America. Observers from the European Economic Community (EEC) and from South Africa also participated.
- 118. The Chairman of the Ad Hoc Working Group, in reporting back to the Committee, stressed that the text of the Proposed Draft World-wide Standard for Honey as given in Appendix IX, which the Working Group had agreed to place before the Committee, represented a considerable amount of compromise on the part of the representative who took part in the deliberations of the Working Group. He reported that the view of the majority in the Working Group was that there should be a careful review of each of the provisions of the standard to decide whether they would meet the present needs of honey producers and importers throughout the world rather than merely throughout a particular region. He reported that the representative of Australia had expressed the view that, even if no other changes were made, the European Regional Standard would need updating in any case, in order to bring it into line with present methods of presenting standards, e.g., by introducing a new section covering the scope of the standard.
- The Working Group had, therefore, reviewed each provision of the European Regional Standard. Many members of the Working Group had expressed strong reservations with regard to various parts of the revised draft, and in particular, as regards the provisions for moisture, hydroxymethylfurfural (HMF) content and diastase activity. However, in view of the fact that work on a world-wide standard was still at an early stage, the Group had agreed that the draft should be prepared on a compromise basis for consideration by Governments.
- 120. The Chairman of the Ad Hoc Working Group reported that as the Working Group did not have before it adequate technical data at this time, the figures for the various criteria in the revised draft had to be placed in square brackets, as a basis for consideration by Governments. He concluded by stressing the need for countries to back up their comments with detailed technical data.
- During the course of the discussions in plenary, the observer from the European Economic Community (EEC) stated that, whilst not being opposed to the revisions of the European Regional Standard for Honey, she was not able, at present to take a position concerning the different technical criteria. The European Regional Standard was, for the moment, satisfactory from the point of view of the Community. Furthermore, the principles in that standard had been incorporated by the Community in its legislation. The EEC had imported, in 1980, close on 105,000 tons of honey from countries outside the EEC, the Federal Republic of Germany being the biggest importer in the world with imports in 1980 in the order of 65,000 tons. Up to now, the exporters had always conformed to the requirements of the regulations of the Community. The observer from the EEC, nevertheless, recognized that it was correct to say that there were products which did not conform as regards certain criteria, but these products were in a minority. She asked that if some countries wished to change certain criteria they must make available analytical and technical justifications to serve as a solid basis for discussion.

- The observer from the EEC stressed that it would be important for a Working Group of Specialists to meet for a day, or two, between now and the next session of the Committee. She concluded by expressing the opinion that comments in accordance with the Steps Procedure in the manner of those contained in document CX/PFV 82/9 would be too succinct and that a discussion in depth was necessary. The Committee did not enter into discussion of this suggestion.
- 123. The Chairman of the Ad Hoc Working Group informed the Committee that the European Regional Standard did not entirely conform to the Codex format and that the revised text had been put into that format. He indicated that some members of the Working Group had thought that the meaning of the words "and ripen (or mature)" in Section 2.1 was not entirely clear and for that reason, these words had been placed in square brackets for Governments to comment on.
- 124. Concerning Section 2.3.4 colour classification, the Committee was informed that most members of the Working Group thought that this provision should be optional, while one member thought that it should be mandatory. Also, there were differences of opinion among the members of the Working Group as regards the figures provided for. For the moment, the Committee agreed to retain colour classification as an optional provision.
- 125. Concerning <u>Section 3.1 compositional criteria</u>, it was noted that it would be necessary to include, in due course, the correct botanical names for all the various honeys listed.
- 126. As regards Section 3.1.7 Diastase Activity and Hydroxymethylfurfural content, the Committee agreed, on the suggestion of the delegation of The Netherlands, that it would be useful to Governments to indicate, in the present report, the provisions of the European Regional Standard on the subject. The relevant provisions in the European Standard reads as follows:-
 - "2.1.7 Diastase activity and hydroxymethylfurfural content

Determined after processing and blending

diastase figure on Gothe scale:

not less than 8

Provided the hydroxymethylfurfural content is:

not more than 40 mg/kg

Honeys with low natural enzyme content,

e.g., Citrus, diastase content on Gothe scale:

not less than 3

Provided the hydroxymethylfurfural content is:

not more than 15 mg/kg"

127. Concerning the various figures placed in square brackets in the standard, the Committee agreed that, in submitting technical information concerning these figures, countries should also indicate what methods of analysis were used in obtaining that information.

Status of the Proposed Draft Worldwide Standard for Honey

128. The Committee decided to return the proposed Draft World-wide Standard for Honey to Step 3 of the Procedure (will be distributed in due course).

CONSIDERATION OF THE REPORT OF THE WORKING GROUP ON CONTAMINANTS

129. The Committee had before it the report of the Ad Hoc Working Group on Contaminants, CX/PFV 82/11. The Chairman of the Working Group, Mr. L.J. Erwin (Australia) introduced the report. He expressed his satisfaction at the good participation by governments in the second international survey organized by Australia aimed at generating data on the basis of which the Committee could arrive at meaningful recommendations for maximum levels for contaminants. In reaching agreement on maximum levels on the basis of data available (Report prepared by Australia for the Working Group), the Working Group had taken into account the origin of the contaminants and had recommended maximum levels only for those contaminants the presence of which could be related to manufacturing practice. It was up to the Codex Committee on Food Additives to consider the acceptability of the maximum levels from a safety point of view on the basis of appropriate intake data and toxicological guidelines.

- 130. As regards the United States paper on questions relating to sampling for contaminants, the Committee noted that the Working Group had not addressed this question and had decided to await further developments in the Codex Committee on Food Additives in the light of Government comments.
- 131. The Committee had detailed discussion on the recommendations of the Working Group as contained in para 13 of the Report of the Group (see Appendix XI). Noting that the maximum levels recommended by the Group for lead and tin had been based on extensive data, it was agreed that they should be adopted as proposed amendments to the various Codex standards. The maximum levels in question are tin 250 mg/kg and lead 1 mg/kg.
- 132. A number of delegations expressed the opinion that a maximum level of 1 mg/kg for lead for tomato concentrate would cause difficulties in trade since levels in excess of 1 mg/kg had been found in significant quantities of tomato concentrates moving in trade. The Committee also noted that lead occurred in the raw material from environmental contamination and that lead level could be raised through concentration of the paste above 1 mg/kg. The Committee discussed maximum levels of 1.5 or 2 mg/kg for lead in tomato concentrate. The delegation of the United Kingdom pointed out that the task of this Committee in relation to lead was to set such maximum levels as would result in a reduction of the lead content of processed fruits and vegetables.
- 133. On the suggestion of the delegation of The Netherlands, the Committee agreed to recommend a maximum level of 1.5 mg/kg for lead in tomato concentrate on a temporary basis. The Chairman of the Committee expressed the view that the maximum levels recommended by the Committee should relate to lot average rather than to individual containers. In this respect, the delegation of The Netherlands indicated that food regulations, including maximum levels for contaminants, applied to food as sold, i.e., to each can. The delegation of the United Kingdom indicated that the question of the interpretation of maximum levels in relation to lots should be clarified. Until this was done, it was difficult to see the significance between the different maximum levels applied by Governments.
- 134. The Committee adopted the recommendations of the Working Group except for the maximum level for lead in tomato concentrate (para 133). The report of the Working Group is attached, as Appendix X, to this Report. It was agreed that Governments should be requested to comment on the maximum levels for lead and tin as an amendment of the Codex Standards for processed fruits and vegetables at Step 3.

OTHER BUSINESS

- 135. The Committee wished to reiterate its views expressed in connection with the various standards of particular interest to developing countries, that it was essential that producing countries attend sessions of the Committee at which products of interest to them were discussed. This was so, since the Committee needed to have available the expertise of producing countries in order to enable the Committee to have fruitful discussions.
- 136. The Committee wished to place on record its appreciation to the Government of Australia, and in particular, to Mr. L.J. Erwin (Australia) for the excellent work he had done during the Session in acting as Chairman of several technical working groups and providing the Committee with the necessary information on the basis of which the Committee could reach conclusions.

FUTURE WORK

137. The Committee noted that it would have before it for consideration at its next session the following items arising from the present Session:

- (1) Draft Standard for Canned Palmito
 (2) Draft Standard for Canned Mangoes
 (3) Draft Standard for Mango Chutney
 (at Step 7)
 (at Step 7)
- (4) Draft Standard for Canned Chestnuts
- and Chestnut Puree (at Step 7)
- (5) Draft Standard for Cashew Kernels (at Step 4)

- (6) Draft Standard for Honey (World-wide (at Step 4) Standard)
- (7) Amendments (at Step 4) to Codex Standards for Processed Fruits and Vegetables; relating to:
 - (a) Carry-over Principle
 - (b) General Provision for Styles
 - (c) Drained Weight
 - (d) Packing Media
 - (e) Date Marking
 - (f) Methods of Analysis
- (8) Amendment to the Sampling Plans for Prepackaged Foods (at Step 4)
- (9) Consideration of Proposals to amend the (at Step 4) 1/
 Codex Standard for Tropical Fruit
 Salad
- 138. It was agreed that the Committee should not undertake any additional future work. In this respect, the Committee also decided not to embark on the possible elaboration of a standard for fruit mix (see para 42) not covered by the standard for fruit cocktail or tropical fruit salad.

DATE AND PLACE OF NEXT SESSION

139. The Committee noted that the next Session would, like the previous ones, probably be held in Washington, D:C: As regards the date of the Session, this would be determined by the host Government in consultation with the Secretariat.

CLOSURE OF THE SESSION

140. The Committee thanked the Chairman of the Committee, Dr. R.M. Schaffner for the excellent way he had chaired the Fifteenth Session of the Committee.

^{1/} See paragraph 38 of this Report.

LIST OF PARTICIPANTS* LISTE DES PARTICIPANTS LISTA DE PARTICIPANTES

Chairman

Dr. Robert M. SCHAFFNER
Associate Director for Physical Sciences
Bureau of Foods
Food and Drug Administration
Department of Health & Human Services
Washington, D.C. 20204, USA

USA Secretariat

Mr. Gerald R. PARLET
Assistant to the Director
Fruit and Vegetable Division
Agriculture Marketing Service
Department of Agriculture
Room 2066 South Building
Washington, D.C. 20250, USA

FAO Representatives
Representants de la FAO
Representantes de la FAO

Dr. Leslie G. Ladomery Food Standards Officer Joint FAO/WHO Food Standards Programme Food Policy and Nutrition Division Food and Agriculture Organization Via delle Terme di Caracalla 00100 Rome, Italy

Mr. Henry J. McNally Senior Officer Joint FAO/WHO Food Standards Programme Food Policy and Nutrition Division Food and Agriculture Organization Via delle Terme di Caracalla 00100 Rome, Italy

^{*} The Heads of delegations are listed first. Les chefs de délégations figurent en tête. Figuran en primer lugar los jefes de las delegaciones.

ARGENTINA ARGENTINE

Mrs. Liliana Arauz de ALFARO Second Secretary (Economic & Commercial) Embassy of Argentina 1600 New Hampshire Avenue, N.W. Washington, D.C. 20009

AUSTRALIA AUSTRALIE

Mr. Laurie J. ERWIN
Principal Executive Officer
Codex Section
Department of Primary Industry
Canberra, Australia

BRAZIL BRESIL BRASIL

Dr. Agide Gorgatti-NETTO
Executive Director
Empress Brasileira de Pesquisa
Agropecuaria - EMBRAPA
Edif. Venancio 2000 90
70.333 Brasilia, D.F. Brazil

CANADA

Mr. C.P. ERRIDGE
Assistant, Processed Products Section
Dairy, Fruit and Vegetable Division
Food Production and Inspection Branch
Agriculture Canada
Halldon House
2255 Carling Avenue
Ottawa, Ontario KIA 0Y9, Canada

Mr. Carl J. ROSS Research Manager Canadian Food Processors Association Canadian Canners Limited Research Department 1101 Walker's Lane Burlington, Ontario L7N 2G4, Canada

ECUADOR EQUATEUR

Dr. Gonzálo Salvador First Secretary Embassy of Ecuador 2535 - 15th Street, N.W. Washington, D.C. 20009

FRANCE FRANCIA

Mrs. Claudine MUCKENSTURM
Inspecteur de la Direction de la
Consommation
Ministère de la Consommation
44 Boulevard de Grenelle
Paris XV, France

Mr. Guy NOYELLE Director Adjoint et Ingénieur Chimiste à l'Institut Appert 44/46 Boulevard de Grenelle Paris XV, France

Mr. Georges GUILMAIN
Premier Vice-Président
Chambre Syndicale Nationale des
Industries de la Conserve
3, rue de Logelbach
75847 Paris, France

IRAQ IRAK

Dr. Abid A. MAHDI Assistant Professor Department of Food Science College of Agriculture Abu Ghraib, Iraq

JAPAN JAPON

Mr. Naoki SATO
Assistant Director of Fruits and
Flower Division
Agricultural Production Bureau
Ministry of Agriculture, Forestry
and Fisheries
Tokyo, 100, Japan

Mr. Mitsukuni MORI Director, Research Laboratory The Canners Association of Japan Yakohama, Japan

Dr. Takatomo HORIO Director, Research Division Tokyo Institute of Food Technology Kawanishi, Hyogo, Japan

Mr. Michiru OKUMA Second Secretary (Agriculture) Embassy of Japan 2520 Massachusetts Avenue, N.W. Washington, D.C. 20008

Mr. Kunio MIZUTA Second Secretary (Health & Welfare) Embassy of Japan 2520 Massachusetts Avenue, N.W. Washington, D.C. 20008 The NETHERLANDS PAYS-BAS PAISES BAJOS

Mr. W.G. ALDERSHOFF
Public Health Officer
Ministry of Public Health and
Environmental Hygiene
P.O. Box 439
2260 AK Leidschendam
The Netherlands

Mr. J.P. TRIPPLAAR
Agricultural and Emigration Counselor
Embassy of The Netherlands
4200 Linnean Avenue, N.W.
Washington, D.C. 20008

NEW ZEALAND NOUVELLE ZELANDE NUEVA ZELANDIA

> Mr. Nigel MITCHELL Second Secretary (Commercial) Embassy of New Zealand 37 Observatory Circle, N.W. Washington, D.C. 20008

NORWAY NORVEGE NORUEGA

Dr. P.A. ROSNESS
Deputy Director
Quality Control Division
Processed Fruits and Vegetables
Ministry of Agriculture
Gladengveien 3 B
Oslo 6, Norway

OMAN, Sultanate of OMAN, Sultanat d' OMAN, Sultanato de

> Mr. Ibrahim Saleh Al-GAYLANI Director of Agriculture Marketing Ministry of Agriculture and Fisheries Muscat, Oman

THE PEOPLE'S REPUBLIC OF THE CONGO LA REPUBLIQUE POPULAIRE DU CONGO LA REPUBLICA POPULAR DEL CONGO

Dr. Jean Pierre N-GOTH
Directeur de l'Hygiène et de
l'Assainissement
Ministère de la Santé et des Affaires
Sociales
Brazzaville, People's Republic of the
Congo

THE PHILIPPINES
LA REPUBLIQUE DES PHILIPPINES
LA REPUBLICA DE FILIPINAS

Mrs. Nemesia B. BELLO Supervising Food Technologist Bureau of Plant Industry Manila, Philippines

SAUDI ARABIA L'ARABIE SAOUDITE LA ARABIA SAUDITA

> Mr. Badr ALSAAD Head of Food and Agriculture Section Saudi Arabian Standards Organization P.O. Box 3437 Riyadh, Saudi Arabia

Mr. Ibrahim A. ALASGAH Head, Food Laboratories Saudi Arabian Standards Organization P.O. Box 3437 Riyadh, Saudi Arabia

SPAIN L'ESPAGNE ESPAÑA

> Mr. José Luís SAINZ Counselor (Agriculture) Embassy of Spain 2700-15th Street, N.W. Washington, D.C. 20009

SWITZERLAND LA SUISSE SUIZA

> Mr. P. ROSSIER Head of Codex Section Federal Office of Public Health Haslerstrasse 16 CH-3008 Bern, Switzerland

THAILAND LA THAILANDE TAILANDIA

> Professor Amara BHUMIRATANA Assistant Rector Kasetsart University Bangkhaen, Paholyothin Road Bangkok, Thailand

Mrs. Dara BUANGSUWON
Chief of Seed and Post Harvest
Pathology Branch
Division of Plant Pathology
Department of Agriculture
Bangkhaen
Bangkok 9, Thailand

THAILAND (contd.)

Mr. Prasert CHUAPHUDI
Commodity Standards Technical Officer
Office of Commodity Standards, Foreign
Trade Department
Ministry of Commerce
Rajdamnern Avenue
Bangkok 2, Thailand

UNITED KINGDOM ROYAUME-UNI REINO UNIDO

Mr. P.G. LACKENBY
Higher Executive Officer
Ministry of Agriculture, Fisheries and
Food
Room 432
Great Westminster House
Horseferry Road
London SW 1P 2AE, UK

Mr. K.J. DALE
Senior Scientific Officer
Ministry of Agriculture, Fisheries and
Food
Room 441
Great Westminster House
Horseferry Road
London SW 1P 2AE, UK

UNITED STATES OF AMERICA ETATS-UNIS D'AMERIQUE ESTADOS UNIDOS DE AMERICA

> Mr. Howard W. SCHUTZ, Head, Standardization Section Processed Products Branch Fruit and Vegetable Division Agricultural Marketing Service Room 0714 South Building U.S. Department of Agriculture Washington, D.C. 20250

Dr. Robert W. WEIK
Assistant to the Director
Bureau of Foods
Food and Drug Administration
Room 1009-HFF-4
200 C Street, S.W.
Washington, D.C. 20204

Dr. Melvin R. JOHNSTON
Plant and Protein Technology Branch
Division of Food Technology
Bureau of Foods
Food and Drug Administration
Room 3029 - HFF-214
200 C Street, S.W.
Washington, D.C. 20204

UNITED STATES OF AMERICA (contd.)

Mr. Owen M. ECKER
Statistics Branch
Marketing Research and Development
Division
Agricultural Marketing Service
Room 0607 South Building
U.S. Department of Agriculture
Washington, D.C. 20250

Mr. Romeo V. VILLALUZ Standardization Section Processed Products Branch Fruit and Vegetable Division Agricultural Marketing Service Room 0716 South Building U.S. Department of Agriculture Washington, D.C. 20250

Mr. Lowrie M. BEACHAM National Food Processors Assoc. 1133 20th Street, N.W. Washington, D.C. 20036

Mr. Frank A. MOSEBAR DFA of California P.O. Box 270-A Santa Clara, California 95052

Dr. William HORWITZ
Acting Director
Science Policy Staff
Food and Drug Administration
200 C Street, S.W.
Washington, D.C. 20204

Dr. F. Leo KAUFFMAN Food and Drug Administration 200 C Street, S.W. Washington, D.C. 20204

Dr. Frank ROBINSON Secretary 13637 N.W., 39th Avenue Gainesville, Florida 32601

VENEZUELA

Dr. Luís Miguel Ecarri HENRIQUEZ
Chief of the Horticulture Programme
Ministry of Agriculture and
Livestock
13th Floor, North Tower
Centro Sión Bolívar
Caracas, Venezuela

OBSERVER COUNTRIES PAYS OBSERVATEURS PAISES OBSERVADORES

SOUTH AFRICA AFRIQUE DU SUD SUDAFRICA

Mr. Peet J. WESSELS
Director, Product Standard Division
Department of Agriculture and
Fisheries
Private Bag X 258
Pretoria 0001, Republic of South Africa

Mr. Attie VAN WYK
South African Fruit and Vegetable Canners'
Association
P.O. Box 3484
Cape Town 8000, Republic of South Africa

INTERNATIONAL ORGANIZATIONS ORGANISATIONS INTERNATIONALES ORGANIZACIONES INTERNACIONALES

COMMISSION OF THE EUROPEAN COMMUNITIES (EEC/CEE)

Ms. Olga DEMINE
Administrator, General Directorate
of Internal Marke and Industrial Affairs
200 rue de la Loi
1049 Brussels, Belgium

PAN AMERICAN HEALTH ORGANIZATION/WORLD HEALTH ORGANIZATION (PAHO/WHO)

Dr. Harold B. Hubbard Food Consultant, Food Protection Division of Environmental Health Programme 525-23rd Street, N.W. Washington, D.C. 20037

PROPOSED DRAFT AMENDMENT TO CODEX STANDARDS FOR CANNED PROCESSED FRUITS AND VEGETABLES PECARDING A GENERAL PROVISION FOR STYLES 1/

REGARDING A GENERAL PROVISION FOR STYLES 1/ (at Step 3 of the Procedure)

- 1. The Codex Alimentarius Commission at its Thirteenth Session (December 1979) considered the inclusion of a general provision for styles in Codex standards for processed fruits and vegetables. The Commission had agreed at its Eleventh Session, that the question of other styles was not for general and automatic application to all Codex standards but should be considered by Codex Committees on a commodity by commodity basis.
- 2. The following is the text of the general provision for styles as adopted by the Codex Committee on Processed Fruits and Vegetables for incorporation into Codex standards for processed fruits and vegetables, as appropriate:
 - (a) For standards which do not prescribe limits for defects:

"Other Styles

Any other presentation of the product shall be permitted provided that the product:

- (a) is sufficiently distinctive from other forms of presentation laid down in this standard;
- (b) meets all other requirements of this standard;
- (c) is adequately described on the label to avoid confusing or misleading the consumer."
- (b) For standards which prescribe limits for defects, amend (b) above to read:
 - "Meets all relevant requirements of this standard, including requirements relating to limitations on defects, drained weight, and any other requirements in this standard which are applicable to that style in the standard which most closely resembles the style or styles intended to be provided for under this provision."

						_
1	/ See	paras	20-26	of	this	Report.

ALINORM 83/20 APPENDIX III

0

PROPOSED DRAFT AMENDMENT TO CODEX STANDARDS FOR CANNED PROCESSED FRUITS AND VEGETABLES REGARDING PACKING MEDIA, COMPOSITION AND LABELLING 1/ (at Step 3 of the Procedure)

1. The Codex Committee on Processed Fruits and Vegetables, at its Fifteenth Session (March 1980) agreed to inform the Commission that the Committee would, at its next Session (16th) consider standards for canned fruits already adopted by the Commission for possible amendments to incorporate where practicable, the same provisions for packing media (composition and labelling) as contained in the Standard for Canned Apricots (ALINORM 81/20, paras 139-145 and Appendix V).

^{1/} See paras 27-28 of this Report.

ALINORM 83/20 APPENDIX III (contd.)

In the light of these developments, it is proposed that all Codex canned fruit standards which include edible packing media provisions should be aligned with the relevant packing media provisions (composition and labelling) of the Codex Standard for Canned Apricots (ALINORM 81/20, Appendix V). The Standards which require amendment are as follows:

	Previous Reference	New Reference
Canned Peaches	CAC/RS 14-1969 Rev. 1	CODEX STAN. 14-1981
Canned Grapefruit	CAC/RS 15-1969	CODEX STAN. 15-1981
Canned Pineapple	CAC/RS 42-1970 Rev. 1	CODEX STAN. 42-1981
Canned Plums	CAC/RS 59-1972	CODEX STAN. 59-1981
Canned Raspberries	CAC/RS 60-1972	CODEX STAN. 60-1981
Canned Pears	CAC/RS 61-1972	CODEX STAN, 61-1981
Canned Strawberries	CAC/RS 62-1972	CODEX STAN. 62-1981
Canned Mandarin Oranges	CAC/RS 68-1974	CODEX STAN, 68-1981
Canned Fruit Cocktail	CAC/RS 78-1976	CODEX STAN. 78-1981
Canned Tropical Fruit Salad	CAC/RS 99-1978	CODEX STAN. 99-1981

3. The relevant sections of the Standard for Canned Apricots are attached as Annex I to this Appendix. The levels specified for ${}^{\circ}$ Brix have been placed in square brackets since the Committee will need to decide if these can be made uniform for all canned fruits. At present, variations in Brix of the packing media do occur and these are detailed in Annex II to this Appendix.

APPENDIX III ANNEX I

- ESSENTIAL COMPOSITION AND QUALITY FACTORS
- Packing Media
- Where a packing medium is used, it may consist of:
 - in which water is the sole packing medium; 2.1.1.1 Water
 - Fruit Juice $\frac{1}{2}$ in which [apricot juice] $\frac{2}{2}$ or any other compatible fruit juice is the sole packing medium; 2.1.1.2
 - Mixed Fruit Juices $\frac{1}{2}$ in which two or more compatible fruit juices which may include [apricot] juice, are combined to form the packing medium;
 - Water and Fruit Juice(s) in which water and [apricot]
 juice, or water and any other single fruit juice or water 2.1.1.4 and two or more fruit juices are combined in any proportion to form the packing medium.
- 2.1.2 Any of the foregoing packing media may have one or more of the following nutritive sweeteners as defined by the Codex Alimentarius Commission added: sucrose, invert sugar syrup, dextrose, dried glucose syrup, glucose syrup, fructose, fructose syrup, honey.
- 2.1.3 Dry nutritive sweeteners namely sucrose, invert sugar, dextrose and dried glucose syrup, may be added to solid packs without added liquid but with such slight amounts of steam, water or natural juice as occur in the normal canning of the product.

^{1/} Fruit juice may be pulpy, turbid or clear as stated in the Codex

standard for the juice involved.
Each square bracket to be replaced by the appropriate product name, or number from Table 1, Annex II, attached.

2.1.4 Classification of packing media when nutritive sweeteners are added

2.1.4.1 When nutritive sweeteners are added to fruit juice(s) the packing media shall be not less than [160] Brix and shall be classified on the basis of the cut-out strength as follows:

Lightly sweetened fruit juice(s) - Not less than $[16^{\circ}]$ Brix Heavily sweetened fruit juice(s) - Not less than $[21^{\circ}]$ Brix

2.1.4.2 When nutritive sweeteners are added to water or water and fruit juice(s) or water and nectar the liquid media shall be classified on the basis of the cut-out strength as follows:

Slightly sweetened water)
Water slightly sweetened)
Extra light syrup)
Not less than[100] Brix
but less than[160] Brix

Light syrup - Not less than[16°] Brix but less than[21°] Brix

Heavy syrup - Not less than[210] Brix but less than[250] Brix

Extra heavy syrup - Not less than [250] Brix

- 2.1.4.3 When nutritive sweeteners are added to water and fruit juice(s) and the minimum fruit juice content of the packing medium is not less than 40% m/m, the packing medium may be classified as a nectar provided the cut-out strength is not less than[16] Brix
- 2.1.4.4 The cut-out strength for any packing medium shall be determined on average, but no container may have a Brix value lower than that of the next category below.

7. LABELLING

In addition to Sections 1, 2, 4 and 6 of the General Standard for the Labelling of Prepackaged Foods (Ref. CODEX STAN. 1-1981), and subject to endorsement by the Codex Committee on Food Labelling, the following specific provisions apply:

7.1 The Name of the Food

7.1.1												
7.1.2												
7.1.3												

- 7.1.4 The packing medium shall be declared as part of the name, or in close proximity to the name, as appropriate.
- 7.1.4.1 When the packing medium is composed of water, the packing medium shall be declared as:

"In water" or "Packed in water".

7.1.4.2 When the packing medium is composed of a single fruit juice, the packing medium shall be declared as:

"In juice" or "In[apricot] juice"

where [apricot] juice has been used; or

"In (name of fruit) juice"

for all other fruit juices.

7.1.4.3 When the packing medium is composed of two or more fruit juices, which may include[apricot] juice, it shall be declared as:

ANNEX I (contd.)

```
"In (name of fruits) juice"; or "In fruit juices", or "In mixed fruit juices".
```

7.1.4.4 When nutritive sweeteners are added to[apricot] juice, the packing medium shall be declared as:

"Lightly sweetened juice"; or
"Lightly sweetened[apricot] juice"; or
"Heavily sweetened juice"; or
"Heavily sweetened[apricot] juice"

as may be appropriate.

7.1.4.5 When nutritive sweeteners are added to a single fruit juice (not including[apricot juice]) or mixtures of two or more fruit juices (which may include[apricot juice]), the packing medium shall be declared as:

"Lightly sweetened (name of fruit) juice"; or "Lightly sweetened (name of fruits) juices"; or "Lightly sweetened fruit juices" or "Lightly sweetened mixed fruit juices"

as may be appropriate, or the same for "Heavily sweetened" juice(s).

7.1.4.6 When nutritive sweeteners are added to water, or water and a single fruit juice (including[apricot] juice) or water and two or more fruit juices, the packing medium shall be declared as:

"Slightly sweetened water"
"Water slightly sweetened"
"Extra light syrup"
"Light syrup"
"Heavy syrup"
"Extra Heavy syrup",

7.1.4.7 When nutritive sweeteners, water and fruit juice(s) are combined to form a nectar, the packing medium shall be declared as:

"In nectar" or "In[apricot] nectar"

where the juice component is solely apricot, or

"In (name of fruit) nectar"
"In (name of fruits) nectar"
"In fruit nectars", or
"In mixed fruit nectars"

for all other cases as may be appropriate.

7.1.4.8 When the packing medium contains water and[apricot] juice or water and one or more fruit juice(s), the packing medium shall be designated to indicate the preponderance of water or such fruit juice as may be the case, for example:

"[Apricot] juice and water"
"Water and[apricot] juice"
"(name of fruit(s) juice(s)) and water"; or
"Water and (name of fruit(s)) juice(s)".

7.1.4.9 The fruit juice component of any packing medium shall not be declared in the name of the food if it comprises less than 10% m/m of the total packing medium but it shall be declared in the list of ingredients.

- 7.1.4.10 When the name of the fruits in a mixed fruit juice or mixed fruit nectar is listed individually in the packing medium, they shall be declared in descending order of proportion.
- 7.1.4.11 When the packing medium contains no added sweetening agents, the term "no added sugar" or other words of similar import may be used in association with, or in close proximity to the name of the food.

TABLE 1
CODEX STANDARDS FOR CANNED FRUITS CLASSIFICATION OF PACKING MEDIA WHEN SUGARS ARE ADDED

Codex Standard	Minimum Cut-out Strength	Lightly Sweetened Juice in	Heavily Sweetened Juice in		Syrup ngths	Ontio	nal Dac	kina Medi	a			
codex Beandard	for	Brix	Brix	Light	Heavy		Optional Pack Extra		Extra			
	Sweetened	DIIX	DIIX	Syrup in	Syrup in	Light		Heavy				
	Juice in Brix	L	4	O Brix	o Brix	o in	n ix	in	ix L			
	<	*	*	≮	*	≮but		> or	· 4			
CANNED PEACHES (CODEX STAN.14-1981)	14 ⁰	14 ⁰	18 ⁰	14 ⁰	18 ⁰	10 ⁰	14 ⁰	220	-			
CANNED GRAPEFRUIT (CODEX STAN.15-1981)	-	-	<u>-</u>	16 ⁰	18 ⁰	12 ⁰	-	-				
CANNED PINEAPPLE (CODEX STAN 42-1981)	-	· <u>-</u>	-	14 ⁰	18 ⁰	10 ⁰	-	-	22 ⁰			
CANNED PLUMS (CODEX STAN.59-1981)	15 ⁰	15 ⁰	19 ⁰	15 ⁰	19 ⁰	11 ⁰	15 ⁰	25 ⁰	-			
CANNED RASPBERRIES (CODEX STAN.60-1981)	15 ⁰	15 ⁰	20 ⁰	15 ⁰	20 ⁰	11 ⁰	15 ⁰	26 ⁰	· 			
CANNED PEARS (CODEX STAN.61-1981)	14 ⁰	14 ⁰	18 ⁰	14 ⁰	18 ⁰	10 [°]	14 ⁰	220	-			
CANNED STRAWBERRIES (CODEX STAN.62-1981)	14 ⁰	14 ⁰	18 ⁰	14 ⁰	18 ^O	10 ⁰	14 ⁰	22 ⁰	-`			
CANNED MANDARIN ORANGES (CODEX STAN.68-1981)	14 ⁰	14 ⁰	18 ⁰	14 ⁰	18 ⁰	10 ⁰	14 ⁰	220	-			
CANNED FRUIT COCKTAIL (CODEX STAN.78-1981)	-	14 ⁰	18 ⁰	14 ⁰	18 ⁰	10 ⁰	14 ⁰	_	22 ⁰			
CANNED APRICOTS (App.VIII,ALINORM 78/20)	16 ⁰	16 ⁰	210	16 ⁰	21 ⁰	10 ⁰	16 ⁰	-	25 ⁰			
CANNED TROPICAL FRUIT SALAD (App.III,ALINORM 78/20)	14 ⁰	14 ⁰	18 ⁰	14 ⁰	18 ⁰	10. ^O	14 ⁰	-	22 ⁰			

Symbols



not less than less than more than

ALINORM 83/20 APPENDIX IV

PROPOSED DRAFT AMENDMENT TO CODEX STANDARDS FOR PROCESSED FRUITS AND VEGETABLES

REGARDING DATE MARKING 1/ (at Step 3 of the Procedure)

The following text is proposed for inclusion in all Codex Standards for Processed Fruits and Vegetables:

DATE MARKING AND STORAGE INSTRUCTIONS

- (a) The "date of minimum durability" (preceded by the words "best before") shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelf-life of more than three months, the month and year will suffice. The month may be indicated by letter in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year only, 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.
- (b) In addition to the date of minimum durability, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.
- (c) Where practicable, storage instructions shall be in close proximity to the date marking.

1/ See paras 29-33 of this Report.

APPENDIX V

REPORT OF THE AD HOC WORKING GROUP ON THE POSSIBLE AMENDMENT OF THE CODEX RECOMMENDED INTERNATIONAL STANDARDS FOR CANNED FRUIT COCKTAIL AND CANNED TROPICAL FRUIT SALAD 1/

- 1. The meeting was chaired by Mr. L.J. Erwin, Australia, and the countries represented were: Argentina, Brazil, Canada, France, Iraq, Japan, Netherlands, Saudi Arabia, South Africa, Switzerland, Thailand, United Kingdom, United States of America and Venezuela.
- 2. The Chairman outlined the history of the development of the two standards, explaining that in the light of trade figures the Codex Committee on Processed Fruits and Vegetables had decided not to accede to proposals that additional fruits be allowed in these commodities. However, the Codex Coordinating Committees for Europe and Asia had both proposed certain amendments to these standards and the Working Group was convened to consider what action was necessary. The Working Group had before it document CX/PFV 82/3, CX/PFV 82/3 Addendum 1 and CX/PFV 82/12.
- 3. The Chairman suggested that the two commodities should be considered separately and proposed that Canned Fruit Cocktail be looked at first. The proposal to be considered was to provide in the standard for selection of fruits from among similar groups to those currently permitted, e.g., the use of apples in place of pears, apricots instead of peaches, etc.

^{1/} See paras 34-42 to this Report.

ALINORM 83/20 APPENDIX V (contd.)

- 4. The delegate of The Netherlands, supported by South Africa, USA and the United Kingdom, expressed the view that Fruit Cocktail was a well-established quality product whose name was meaningful to the consumer as to composition and style of presentation. He considered that there was no desire, on behalf of the consumer, for change. Other mixtures of fruits and other presentations should be the subject of another standard to be elaborated by the Committee. The delegate of the USA proposed that other mixtures of fruits and other forms of presentation could be referred to as fruit salads or fruit mixes.
- 5. The observer from South Africa felt that consumers would be confused if the composition and style of presentation of Fruit Cocktail were altered in any way and this would, undoubtedly, have an adverse effect on trade.
- 6. The delegate of Switzerland agreed that the designation 'Fruit Cocktail' was specific to a known product and would not wish to suggest any changes but he was concerned that the right to use other fruits, for example apples, in suitably named products should be allowed.
- 7. The Chairman, in summarizing the views of the Group, proposed that as unanimity existed for no change to the existing standard for Canned Fruit Cocktail, this then be the Working Group's first recommendation to the Committee. The second recommendation would be a proposal that the Committee should consider the need for a new general standard which would provide for the use of other temperate climate fruits and for presentation in other styles. Any decision to proceed with the elaboration of such a standard would, of course, depend on the need being demonstrated by a survey of the international trade in such products.
- 8. The Working Group then considered proposals to amend the permitted fruits and the designation of Canned Tropical Fruit Salad. The delegate of Thailand, speaking on behalf of the Coordinating Committee for Asia, proposed that the list of fruits listed in the standard be extended to include those fruits specified in document CX/PFV 82/12 and that the standard be amended to allow the use of the term "cocktail" in place of "salad".
- 9. The delegate of Iraq noted that his country had furnished comments which had not been included in document CX/PFV 82/3 Addendum 1. He explained that in his, and other Middle East countries, the term "salad" had a particular meaning and, therefore, was not appropriate to describe a canned fruit mixture. However, terms such as "Tropical Fruit Cocktail" and "Tropical Fruit Mix" were appropriate and could be used for this commodity.
- 10. The delegate of The Netherlands felt that no confusion would arise between Fruit Cocktail and Tropical Fruit Cocktail, and therefore, the Group should be sympathetic to the proposal of the Coordinating Committee for Asia. The delegation of the Philippines expressed support of a standard for Tropical Fruit Cocktail. This idea was supported by Canada who proposed that the term "Cocktail Style" could be used in conjunction with the name of the product with the proviso that if the term was used then the fruit must be diced. The observer from South Africa felt that it would be more appropriate for the style of presentation, i.e., sliced or diced, to be included in the designation in preference to describing this product as a "cocktail".

The delegates of Thailand and Iraq accepted that if the term "cocktail" was used then the fruit must be diced. Other designations for other presentations would need to be agreed on a local basis because of different meanings applied to words in Middle East countries.

- 11. The delegate of the USA suggested that the difficulties caused by Iraq could be overcome by amending the designation of Tropical Fruit Salad to Tropical Fruit Mix or other similar terms.
- 12. The Group agreed that the following recommendations be put to the Codex Committee on Frocessed Fruits and Vegetables:

- (i) The Standard for Fruit Cocktail be left as it is;
- (ii) The Standard for Tropical Fruit Salad be amended to provide for an alternative name of the product, e.g., Canned Tropical Fruit Mix and to allow for an increase in the list of fruits and provide for the use of the term "cocktail style" for the diced presentation;
- (iii) To arrange for a survey of Codex Member Countries to establish the extent of trade and the designations of products similar to "Fruit Cocktail" but not conforming to the Standard and to establish the types of fruit used and their presentation;
- (iv) Depending on the outcome of this survey, a decision could then be taken on the need to elaborate a new general standard for canned temperate climate fruits presented in a number of different styles.

ALINORM 83/20 APPENDIX VI

REPORT OF THE WORKING GROUP ON CLASSIFICATION AND REVIEW OF CODEX METHODS OF ANALYSIS FOR PROCESSED FRUITS AND VEGETABLES 1/

- This Working Group was established to review the current methods of analysis specified in Codex Standards for processed fruits and vegetables, particularly, in response to the request of the Codex Committee on Methods of Analysis and Sampling to reconsider the approved methods on the basis of the revised General Principles for the Establishment of Codex Methods of Analysis and Sampling (Appendix II, ALINORM 79/23 and paras 41-45, ALINORM 81/23).
- 2. The Group consisted of participants from the United States, United Kingdom, France and the European Economic Community (EEC). Dr. William Horwitz, USA, served as Chairman with the assistance of Dr. L.G. Ladomery, FAO, of the Secretariat. The list of participants is as follows:

Name	Country/Organization
William Horwitz (Chairman) L.G. Ladomery (Secretary) Miss Olga Demine Mrs. Claudine Muckensturm G. Noyelle K.J. Dale L.M. Beacham	USA FAO EEC France France UK USA
Frank A. Mosebar M.R. Johnston	USA

- 3. The Secretariat (see document CX/PFV 82/4(6), December 1981) had compiled a list of methods of analysis in Codex Standards for Processed Fruits and Vegetables, had updated the references with the assistance of AOAC, had provided a tentative classification of the methods on the basis of the revised General Principles, and had pointed out the questions that needed to be settled.
- 4. The recommendations of the Working Group are as follows:
 - (a) The updated references to the methods of analysis for processed fruits and vegetables and their classification are given in Annex I to this Appendix. The footnotes are intended to explain any changes made and are not to be

^{1/}See paras 107-110 of this Report.

APPENDIX VI (contd.)

included in the standards. Certain tests are recommended for deletion from this list as more of the nature of visual inspection than the application of a set of laboratory instructions. The Group recommends revising the Codex Standards to correspond with the changes made in Annex I. No problems regarding the technical applicability of these methods have come to the attention of the individual members of the Group or to the Secretariat.

- (b) The Group noted, and calls to the attention of the Codex Committee on Methods of Analysis and Sampling, the fact that a single method can be both a Type I Defining Method and a Type II Reference Method. For example, the Kjeldahl determination of nitrogen can be a "reference" method, but if the nitrogen is converted to protein through an arbitrary factor, the protein part becomes a "defining" method. Some members of the Group pointed out that problems may arise because some Organizations accept methods on the basis of technical judgements and in some countries methods of analysis are incorporated into legislative standards.
- (c) The Group noted that the Codex Committee on Methods of Analysis and Sampling will be discussing the obligation falling on Governments in the application of methods incorporated into Codex Standards.

ANNEX I

PROPOSED DRAFT AMENDMENTS TO

METHODS OF ANALYSIS INCLUDED IN CODEX STANDARDS FOR PROCESSED FRUITS AND VEGETABLES

(at Step 3 of the Procedure)

(ALL AOAC REFERENCES HAVE BEEN UPDATED)

	Parameter to be measured	Method		Type of Method
(1)	Drained weight	Codex method I	(CAC/RM 36-1970)	I
(2)	Drained weight	Codex method II	(CAC/RM 37-1970)	Ί
(3)	Drained weight, washed	Codex method	(CAC/RM 44-1972)	I
(4)	Alcohol-insoluble solids	Codex method	(CAC/RM 47-1972)	I
(5)	Mineral impurities (sand)	Codex method	(CAC/RM 49-1972)	I
(6)	Mineral impurities in raisins (sand test)	Codex method	(CAC/RM 51-1974)	ı
(7)	Mineral oil	Codex method	(CAC/RM 52-1974)	II <u>1</u> /
(8)	Moisture in raisins	Codex method AOAC (1980), 13th	(CAC/RM 50-1974) n ed. 22.013	$\begin{array}{c} \text{I } \frac{2}{3}/\\ \text{II } \frac{3}{3}/\\ \end{array}$
(8a)	Moisture in pistachio nuts	AOAC (1980), 13th		$\overline{11} \ \overline{4}'$
(9)	Proper fill (in lieu of drained weight)	Codex method	(CAC/RM 45~1972)	I

^{1/} The Codex method should be revised to include the updated reference, AOAC(1980), 13th ed. 14.117-14.120.

 $[\]frac{2}{1}$ This method is not applicable to pistachio nuts as is implied in CX/PFV 82/4(6) APPENDIX I, item (8).

^{3/} The electrical conductance method must be calibrated in terms of a Type II (reference) method. The AOAC vacuum oven method, 22.013, is proposed for this purpose.

^{4/} If needed, the AOAC vacuum oven method for moisture in nuts is proposed.

APPENDIX VI ANNEX I (contd.)

	Parameter to be measured	Method	Type of Method
[(10)	Tough string test	Codex method (CAC/RM 39-1970)	I] <u>1</u> /
[(11)	Type of peas	Codex method (CAC/RM 48-1972)	1 1/
(12)	Water capacity of containers	Codex method (CAC/RM 46-1972)	I
(13)	Calcium	Codex method (CAC/RM 38-1970)	II <u>2</u> /
(14)	Sorbitol	Codex method (CAC/RM 53-1974)	II <u>3</u> /
(15)	Mold count	AOAC(1980) 13th ed. 44.096	I <u>4</u> /
(16)	Syrup measurement	AOAC(1980) 13th ed. 31.011 Solids by means of refractometer	I <u>5</u> /
(17)	Total soluble solids	AOAC(1980) 13th ed. 31.011 Solids by means of refractometer	I <u>5</u> /
(18)	Salt (NaCl)	AOAC(1980) 13th ed. 32.025-32.030	II <u>6</u> /
(19)	Mineral impurities	AOAC (1980) 13th ed. 44.091	I <u>7</u> /
(20)	Salt content of brine (table olives and pickled cucumbers)	AOAC(1980) 13th ed. 32.025-32.030	II <u>8</u> /
(21)	Acidity of brine (Table Olives)	Codex method CAC/RS 66-1974 Section 9.1.3	II
(22)	pH of brine (Table Olives)	Codex method CAC/RS 66-1974 Section 9.1.4	II
(23)	Sulphur dioxide	AOAC(1980) 13th ed. 20.109-20.111	II
(24)	Proportion of fruit (in canned fruit cocktail and tropical fruit salad)	Codex method CAC/RS 78-1976 Sections 8.1.1.1, 8.2 and CAC/RS 99-1978 Sections 8.1.2.1, 8.2	
(25)	Soluble solids (in jams and jellies)	AOAC (1980) 13th ed. 22.024 and 31.011	I
(26)	Total solids content (mature processed peas)	AOAC(1980) 13th ed. 32.010	I
(27)	Total acidity	AOAC(1980) 13th ed. 22.060	II
(28)	Volume fill (by displacement) of pickled cucumbers	Codex methods I and II, App.III ALINORM 79/20	I
	Closeness of pistachio nuts Emptiness and unripeness of pistachio nuts	Codex method, App.IV, ALINORM 81/20	I] <u>9</u> / I] <u>9</u> /
[(31)	Pest and disease damage of pistachio nuts))	I] <u>9</u> /
(32)	Size classification of pistachio nuts	Codex method, App.IV, ALINORM 81/20 section 8.2.3	I

- 1/ Proposed for deletion as visual inspection techniques.
- 7/ The Codex method should be revised to include the updated reference, AOAC(1980) 13th ed. 32.020-32.022.
- 3/ The Codex method should be revised to include the updated reference, AOAC(1980) 13th ed. 22.080-22.082; 20.151-22.156.
- 4/ The internal cross reference was deleted as unnecessary.
- 5/ Both methods should be designated as "Solids by means of refractometer expressed in degrees Brix". The unnecessary internal cross references were deleted.
- 6/ The reference to the same method in lesser detail was omitted.
- 7/ References to two methods were given; the method specifically referring to frozen fruits and vegetables is recommended.
- 8/ References to two methods were given; the general method applicable to all foods is recommended.
- 9/ Proposed for deletion as visual inspection techniques.

ALINORM 83/20 APPENDIX VII

DRAFT STANDARD FOR DATES

(Advanced to Step 8 of the Procedure)

1. SCOPE

This standard applies to commercially prepared whole dates in pitted or unpitted styles packed ready for direct consumption. It does not apply to other forms such as pieces or mashed dates or dates intended for industrial purposes.

2. DESCRIPTION

2.1 Product Definition

Dates are the product prepared from sound fruit of the date tree (Phoenix dactylifera L.), which fruit:

- (a) is harvested at the appropriate stage of maturity;
- (b) is sorted and cleaned to remove defective fruit and extraneous material;(c) may be pitted and capped;

(d) may be dried or hydrated to adjust moisture content;

(e) may be washed and/or pasteurized; and

(f) is packaged in suitable containers to assure preservation and protection of the product.

2.2 Varietal Types

Varietal types are classified as:

- Cane sugar varieties (containing mainly sucrose) such as Daglat Nuur (Deglet Noor) and Daglat Beidha (Deglet Beidha).
- Invert Sugar varieties (containing mainly invert sugar glucose, and
 fructose) such as Barhi (Barhee), Saiidi (Saidy), Khadhraawi (Khadrawy),
 Hallaawi (Halawy), Zahdi (Zahidi), and Sayir (Sayer). (b) 3-

2.3 Styles

Styles may be classified as:

- (a) unpitted; and
- (b) pitted.

2.4 Sub-styles

Sub-styles are as follows:

- (a) Pressed dates which are compressed into layers using mechanical force.
- (b) Unpressed or Loose dates which are free-flowing or packaged without mechanical force or compression.
- (c) Clusters dates with the main bunch stem attached.

Size Classification (Optional) 2.5

Dates may be designated as to size names in accordance with the following charts:

(a) Unpitted dates (b) Size No. of dates in 500 g

more than 100

80 to 100

less than 80

Size	No. of dates in 500 g
Small	more than 110
Medium	90 to 110
Large	less than 90

Pitted dates

з. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Quality Factors

Small

Large

Medium

3.1.1 General Requirements

Dates shall be prepared from such fruit and under such practices that the finished product shall possess a characteristic colour and flavour for the variety and type, be of proper stage of ripeness, be free of live insects and insect eggs and mites and meet the following additional requirements:

(a)	Moisture content	Maximum
	Cane Sugar varieties	26%
	Invert Sugar varieties	30%

(b) Size (minimum)

Unpitted dates - 4.75 grammes Pitted Dates - 4.0 grammes

- (c) Pits (Stones) (in Pitted Style) Not more than two pits or 4 pieces of pit per 100 dates.
- (d) Mineral impurities Not more than 1 g/kg

3.1.2 Definition of Defects

- (a) <u>Blemishes</u> Scars, discoloration, sunburn, dark spots, blacknose or similar abnormalities in surface appearance affecting an aggregate area greater than that of a circle 7 mm in diameter.
- (b) Damaged (Unpitted dates only) dates affected by mashing and/or tearing of the flesh exposing the pit or to such an extent that it significantly detracts from the visual appearance of the date.
- (c) Unripe dates Dates which may be light in weight, light in colour, have shrivelled or little flesh or a decidedly rubbery texture.
- (d) Unpollinated Dates Dates not pollinated as evidenced by thin flesh, immature characteristics and no pit in unpitted dates.
- (e) Dirt Dates having embedded organic or inorganic material similar to dirt or sand in character and affecting an aggregate area greater than that of a circle 3 mm in diameter.
- (f) Insects and Dates damaged by insects or mites or contaminated by the mites damage and contami- nation Dates damaged by insects or mites, fragments of insects or mites, fragments of insects.
- (g) Scouring Breakdown of the sugars into alcohol and acetic acid by yeasts and bacteria.
- (h) Mould Presence of mould filaments visible to the naked eye.
- (i) <u>Decay</u> Dates that are in a state of decomposition and very objectionable in appearance.

3.1.3 Allowances for Defects

The maximum allowances for the defects defined in 3.1.2 shall be:

- A total of 7% by count of dates with defect (a)
- A total of 6% by count of dates with defects (b), (c) and (d)
- A total of 6% by count of dates with defects (e) and (f)
- A total of 1% by count of dates with defects (g), (h) and (i)

3.2 Lot Acceptance

A lot will be considered as meeting the quality criteria requirements of the standard when:

(a) there is no evidence of live infestation; and

(b) the sub-sample, as taken in conformity with sub-section 9.1.2 meets the general requirements of sub-section 3.1.1 and does not exceed the allowances for the respective defects in sub-sections 3.1.2 and 3.1.3, except that, with respect to size requirements, 5% by count (5 dates out of 100) may weigh less than the specified minimum.

4. FOOD ADDITIVES

None permitted.

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 Dried Fruits recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 3-1969).
- 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 substances originating from microorganisms in amounts which may represent a hazard to health.

6. WEIGHTS AND MEASURES

Containers shall be as full as practicable without impairment of quality and shall be consistent with a proper declaration of contents for the product.

7. LABELLING

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

7.1 The Name of the Food

- 7.1.1 The name of the product shall be "Dates".
- 7.1.2 The style shall be indicated as "pitted" or "unpitted", as is applicable.
- 7.1.3 The name of the product may include the name of the varietal type, such as "Hallawi", "Saher", "Khadhrawi", "Daglat", "Noor", "Barhee", or others, the sub-style as "pressed" or "unpressed", and the size designation as "small", "medium" or "large".

7.2 List of Ingredients

No ingredient listing required inasmuch as no ingredients or additives other than dates are permitted.

7.3 Net Contents

The net contents shall be declared by weight in either the metric ("Système international" units) or avoirdupois or both systems of measurement, as required by the country in which the product is sold.

7.4 Name and Address

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

7.5 Country of Origin

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

7.6 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

- 7.7.1 The "date of minimum durability" (preceded by the words "best before") shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelf-life of more than three months, the month and 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 only, 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.
- 7.7.2 In addition to the date of minimum durability, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.
- 7.7.3 Where practicable, storage instructions shall be in close proximity to the date marking.

8. METHODS OF SAMPLING, ANALYSIS AND EXAMINATION

8.1 Sampling

8.1.1 Gross Sample

Select at random not less than 2 individual packages per each 1,000 kg portion of the lot. From each individual package draw a sample of 300 g and in any case sufficient to obtain a gross sample of not less than 3,000 g. Use the gross sample for checking carefully for live infestation and general cleanliness of the product prior to its examination for compliance with other provisions of the standard.

8.1.2 Sub-samples for Examination and Testing

Mix the gross sample well and take small quantities at random from many different places as follows:

For moisture test - 500 grams
For pits (in pitted style) - 100 dates
For specified defects and
size requirements - 100 dates

8.2 Test Procedure

8.2.1 Determination of Moisture Content

- 8.2.1.1 Moisture shall be determined in accordance with the AOAC (1975) Method (Official Methods of Analysis of the AOAC, 1975, 12th Ed., 22.013, Moisture in Dried Fruits).
- 8.2.1.2 As an alternate to the method in 8.2.1.1 the moisture may be determined in accordance with the FAO/WHO Codex Alimentarius Method CAC/RM 50-1974 (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables, Third Series, CAC/RM 50/53-1974, Moisture Determination Electrical Conductance Method). However, in cases of dispute, the method in 8.2.1.1 will be the referee method.

8.2.2 <u>Internal Defects</u>

Examine each date carefully for internal defects using a strong light. If the dates are pitted, open up the flesh so that the internal cavity can be viewed. If the dates are unpitted, slit the date open so as to expose the pit, remove the pit and examine the pit cavity.

PROPOSED DRAFT STANDARD FOR CANNED CHESTNUTS AND CANNED CHESTNUT PUREE

ADVANCED TO STEP 5

- 1. DESCRIPTION
- 1.1 Product Definition
- 1.1.1 Canned chestnuts is the product (a) prepared from fresh, sound, mature chestnuts of varieties conforming to the characteristics of the species <u>Castanea crenata</u> Sieb. et Zucc. (Japanese chestnut) or <u>Castanea sativa Miller</u> (European chestnut), which shall be shelled and may be pellicled or unpellicled; 1/ (b) packed with water which may or may not contain sugars, seasonings and other ingredients appropriate to the product; and (c) processed by heat in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.
- 1.1.2 Canned chestnut puree is the product; (a) pureed by sieving, screening or other mechanical means from chestnuts, as defined in sub-section 1.1.1 (a); (b) packed with or without sugars and other ingredients appropriate to the product; and (c) heat processed by a procedure as defined in sub-section 1.1.1(c).
- 1.2 Styles
- 1.2.1 Canned Chestnuts

Canned chestnuts may be packed in the following styles:

- 1.2.1.1 Whole whole chestnut which is pellicled or unpellicled and/or trimmed into a practical tetrahedron.
- 1.2.1.2 Brokens $\frac{2}{}$ small pieces which may not be uniform in size and/or shape.
- 1.2.2 Canned chestnut puree
- 1.2.2.1 Sweetened with sugars; not less than 12 percent total soluble solids (12° Brix).
- 1.2.2.2 Unsweetened without sugars; not less than 10 percent total soluble solids $(10^{\circ} \text{ Brix})$.
- 1.2.3 Other Styles
- Any other presentation of the product shall be permitted provided that it: (a) is sufficiently distinctive from other forms of presentation laid down in this standard; (b) meets all other requirements of this standard; and (c) is adequately described on the label to avoid confusing or misleading the consumer.
- 2. ESSENTIAL COMPOSITION AND QUALITY FACTORS
- 2.1 Packing Media
- 2.1.1 Where a packing medium is used, it may consist of:
- 2.1.1.1 Water in which water is the sole packing medium;
- 2.1.1.2 Fruit Juice 3/- in which chestnut juice, or any other compatible fruit juice, is the sole packing medium;
- 2.1.1.3 Mixed Fruit Juices in which two or more compatible fruit juices which may include chestnut juice, are combined to form the packing medium;
- 2.1.1.4 Water and Fruit Juice(s) in which water and chestnut juice, or water and any other single fruit juice or water and two or more fruit juices are combined in any proportion to form the packing medium;
- 1/ In the case of unpellicled chestnuts, they should be previously processed by alcohol so as to remove the astringency of the pellicles.
- 2/ The term "Brokens" is translated into French as "Brisure".
- 3/ Fruit juice may be pulpy, turbid or clear as stated in the Codex Standard for the juice involved.

APPENDIX VIII (contd.)

- 2.1.2 Any of the foregoing packing media may have one or more of the following nutritive sweeteners as defined by the Codex Alimentarius Commission added: sucrose, invert sugar syrup, dextrose, dried glucose syrup, glucose syrup, fructose, fructose syrup, honey.
- 2.1.3 Classification of packing media when nutritive sweeteners are added
- 2.1.3.1 When nutritive sweeteners are added to fruit juice(s) the packing media shall be not less than 14° Brix and shall be classified on the basis of the cut-out strength as follows:

Lightly sweetened fruit juice(s) - Not less than 14_0° Brix Heavily sweetened fruit juice(s) - Not less than 18_0° Brix

2.1.3.2 When nutritive sweeteners added to water or water and fruit juice(s) or water and nectar the liquid media shall be classified on the basis of the cut-out strength as follows:

Slightly sweetened water) Not less than 10° Brix Water slightly sweetened) but less than 14° Brix Extra light syrup)

Light syrup - Not less than 14° Brix but less than 18° Brix Brix but less than 12° Brix but less than 22° Brix Extra heavy syrup - Not less than 22° Brix

- 2.1.3.3 When nutritive sweeteners are added to water and fruit juice(s) and the minimum fruit juice content of the packing medium is not less than 40% m/m, the packing medium may be classified as a nectar provided the cut-out strength is not less than 14° Brix.
- 2.1.3.4 The cut-out strength for any packing medium shall be determined on average, but no container may have a Brix value lower than that of the next category below.

2.2 Other Ingredients

Canned chestnuts and chestnut puree may contain: (a) "sugars", as listed in sub-section 2.1.1(b); they shall amount to not more than 2 percent of total net contents; (b) "salt" sodium chloride in an amount not exceeding 1 percent of total net contents.

2.3 Quality Criteria

2.3.1 Colour

Canned chestnuts or canned chestnut puree shall have a normal colour characteristic of the varieties used. Browning and discoloration (mainly caused by oxidation of polyphenolic compounds) shall be regarded as defects.

2.3.2 Flavour

Canned chestnuts or canned chestnut puree shall have a normal flavour and odour free from flavours and odours foreign to the products.

2.3.3 Texture

- 2.3.3.1 Canned chestnuts shall have a reasonably uniform thick texture and shall not be excessively firm nor unreasonably soft.
- 2.3.3.2 Canned chestnut puree shall have a uniform consistency and particle size.

2.3.4 Uniformity of Size

Whole - in 95 percent, by count, of units that are most uniform in size, the weight of the largest unit shall be no more than twice the weight of the smallest unit.

2.3.5 Defects and Allowances

The product shall be substantially free from defects such as harmless plant material, shell, pellicle (in pellicled styles), blemished units, split and broken units (in whole styles) and discoloured units. Slight syneresis in canned chestnut puree should not be regarded as a defect. Certain common defects shall not be present in amounts greater than the following limitations:

Not more than 14 percent by mass of chestnuts on the net drained weight; and

Not more than 20 percent of chestnuts which are not whole on the net drained weight for the style "whole".

2.3.6 Classification of "Defectives"

A container that fails to meet one or more of the applicable quality requirements as set out in sub-section 2.3.1 through 2.3.5 (except extraneous plant material which is based on an average of the entire sample) shall be considered a "defective".

2.3.7 Lot Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 2.3.5 when the number of "defectives" as defined in sub-section 2.3.6 does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the .FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (Ref. No. CAC/RM 42-1969).

3.	FOOD ADDITIVES	Maximum level in the final product
3.1	Chelating Agent	
3.1.1	Sodium polyphosphate	Limited by Good Manufacturing Practice
3.2	Firming Agent	
3.2.1	Alum	Limited by Good Manufacturing Practice
3.3	Antioxidants	
3.3.1 3.3.2	L-Ascorbic acid) Sodium ascorbate)	300 mg/kg expressed as ascorbic acid, singly or in combination
3.4	Acidifying Agents	
3.4.1 3.4.2 3.4.3	Citric acid) Malic acid) L-Tartaric acid)	Limited by Good Manufacturing Practice
3.5	Bleaching Agent	
3.5.1	Sulphur dioxide	30 mg/kg, calculated as SO ₂
3.6	Natural Colouring Agents	·
3.6.1 3.6.2 3.6.3	Tumeric (CI 75300)) Crocin (CI 75100)) Carthamus Yellow (CI75140)	Limited by Good Manufacturing Practice
3.7	Natural_Flavours	
	Extract of Vanilla Vanillin	Limited by Good Manufacturing Practice
3.8	Thickening Agents Pectin and Amidated Pectin	10 g/kg, singly or in combination
4.	CONTAMINANTS	
	Tin Lead	250 mg/kg, calculated as Sn 1 mg/kg

HYGIENE

- 5.1 It is recommended that the product covered by the provision of this standard be prepared in accordance with the International Code of Hygienic Practice for Canned Fruit and Vegetable Products (Ref. CAC/RCP 2-1969) and the International Code of Hygienic Practice for Low-acid and Acidified Low Acid Canned Food.
- 5.2 To the extent possible in good manufacturing practice the product shall be free from objectionable matter.
- 5.3 When tested by appropriate methods of sampling and examination, the product:
 - (a) shall be free from microorganisms capable of development under normal conditions of storage; and
 - (b) shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health.

6. WEIGHTS AND MEASURES

6.1 Fill of Container

6.1.1 Minimum Fill

The container shall be well filled with chestnuts or chestnut puree and the product (including packing medium) shall occupy not less than 90 percent of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

6.1.2 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of sub-section 6.1.1 shall be considered a "defective",

6.1.3 Lot Acceptance

A lot will be considered as meeting the requirement of sub-section 6.1.1 when the number of "defectives", as defined in sub-section 6.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan in the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (1969) (AQL-6.5) (Ref. CAC/RM 42-1969).

6.1.4 Minimum Drained Weight

6.1.4.1 The drained weight of the product shall be not less than the following percentages, calculated on the basis of the weight of distilled water at 20 C which the sealed container will hold when completely filled:

Not less than 300 ml of water capacity of the container ----- 60%

Less than 300 ml of water capacity of the container ----- 55%

6.1.4.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

7. LABELLING

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

7.1 The Name of the Food

- 7.1.1 The name of the product shall be "chestnuts" or "chestnut puree".
- 7.1.2 The style, as appropriate, shall be declared as a part of the name or in close proximity to the name:

"Whole"
"Brokens"
"Sweetened") in the case of chestnut puree only
"Unsweetened")

7.1.3 The term "unpellicled" [with seedcoat] $\frac{1}{2}$ shall be declared as appropriate, as part of the name or in close proximity to the name.

1/ Term to be developed.

- 7.1.4 The packing medium shall be declared as part of the name or in close proximity to the name:
- 7.1.4.1 When the packing medium is composed of water, the packing medium shall be declared as:

"In water" or "Packed in water",

7.1.4.2 When the packing medium is composed of a single fruit juice, the packing medium shall be declared as:

"In juice" or "In chestnut juice"

where chestnut juice has been used, or

"In (name of fruit) juice" for all other fruit juices.

7.1.4.3 When the packing medium is composed of two or more fruit juices, which may include chestnut juice, it shall be declared as:

"In (name of fruits) juice", or

"In fruit juices", or

"In mixed fruit juices".

7.1.4.4 When nutritive sweeteners are added to chestnut juice, the packing medium shall be declared as:

"Lightly sweetened juice" or

"Lightly sweetened chestnut juice", or

"Heavily sweetened juice", or "Heavily sweetened chestnut juice"

as may be appropriate.

7.1.4.5 When nutritive sweeteners are added to a single fruit juice (not including chestnut juice) or mixtures of two or more fruit juices (which may include chestnut juice), the packing medium shall be declared as:

"Lightly sweetened (name of fruit) juice", or

"Lightly sweetened (name of fruits) juices", or

"Lightly sweetened fruit juices" or

"Lightly sweetened mixed fruit juices"

as may be appropriate, or the same for

"Heavily sweetened" juice(s).

7.1.4.6 When nutritive sweeteners are added to water, or water and a single fruit juice (including chestnut juice) or water and two or more fruit juices, the packing medium shall be declared as:

"Slightly sweetened water"

"Water slightly sweetened"

"Extra light syrup"

"Light syrup"

"Heavy syrup"
"Extra Heavy syrup".

7.1.4.7 When nutritive sweeteners water and fruit juice(s) are combined to form a nectar, the packing medium shall be declared as:

"In nectar" or "In chestnut nectar"

where the juice component is solely chestnut, or

"In (name of fruit) nectar"

"In (name of fruits) nectar"

"In fruit nectars", or

"In mixed fruit nectars"

for all other cases as may be appropriate.

7.1.4.8 When the packing medium contains water and chestnut juice or water and one or more fruit juice(s), the packing medium shall be designated to indicate the preponderance of water or such fruit juice as may be the case, for example:

- "Chestnut juice and water"
 "Water and chestnut juice"
 "(Name of fruit(s) juice(s) and water" or
 "Water and (name of fruit(s)) juice(s)".
- 7.1.4.9 The fruit juice component of any packing medium shall not be declared in the name of the food if it comprises less than 10% m/m of the total packing medium but it shall be declared in the list of ingredients.
- 7.1.4.10 When the name of the fruits in a mixed fruit juice or mixed fruit nectar are listed individually in the packing medium, they shall be declared in descending order of proportion.
- 7.1.4.11 When the packing medium contains no added sweetening agents, the term "no added sugar" or other words of similar import may be used in association with, or in close proximity to the name of the food,

7.3 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2(b) and (c) of the Codex Standard for the Labelling of Prepackaged Foods, except that water need not be declared.

7.4 Net Contents

The net contents and net drained weight, as appropriate, shall be declared by weight in either the metric system ("Système International" units) or avoirdupois or both systems of measurement as required by the country in which the product is sold.

7.5 Name and Address

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

7.6 Country of Origin

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

7.7 Date Marking

- 7.7.1 The "date of minimum durability" (preceded by the words "best before") shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelf-life of more than three months, the month and 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 only, 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.
- 7.7.2 In addition to the date of minimum durability any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.
- 7.7.3 Where practicable, storage instructions shall 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.

8. METHOD OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described or referred to hereunder are international referee methods.

8.1 Method of Sampling

Sampling shall be in accordance with the FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (1969) (AQL-6.5) (Ref. CAC/RM 42-1969).

8.2 Determination of Drained Weight

In accordance with the FAO/WHO Codex Alimentarius Methods CAC/RM 36-1970 (FAO/WHO Codex Alimentarius Methods of Analysis for Prepackaged Fruits and Vegetables - First Series, CAC/RM 36/39-1970), Determination of Drained Weight - Method I.

Results are expressed as % m/m calculated on the basis of distilled water at 20° C which the sealed container will hold when completely filled.

8.3 Syrup Measurements (Refractometric Method)

In accordance with the AOAC (1970) method (Official Methods of Analysis of the AOAC, 1975, 31.011: (Solids) by Means of Refractometer (4), Official, Final Action (and 52.008 and $5\overline{2.009}$). Results are expressed as % m/m of sucrose ("degrees Brix"), with correction for temperature to the equivalent at 20° C.

8.4 Determination of Water Capacity of Containers

In accordance with the FAO/WHO Codex Alimentarius Method CAC/RM 46-1972 (FAO/WHO Codex Alimentarius Methods of Analysis for Processed Fruits and Vegetables - Second Series, CAC/RM 44/49-1972), Determination of Water Capacity of Containers. Results are expressed as volume of distilled water that the container holds.

APPENDIX IX

PROPOSED AMENDMENT TO THE SAMPLING PLANS FOR PREPACKAGED FOODS (CAC/RM 42-1969) (at Step 5)

SAMPLING PLAN 1a (Inspection Level I, AQL-6.5)

Net weight is equal to or less than 1 kg (2.2 lb)		
Lot size (N)	Sample Size (n)	Acceptance number (c
4,800 or less	6	1
4,801 - 24,000	13	2
24,001 - 48,000	21	3
48,001 - 84,000	29	4
84,001 - 144,000	38	5
144,001 - 240,000	48	6
more than 240,000	60	7

Net weight is greater than 1 kg (2.2 lb) but nor more than 4.5 kg (10 lb)		
Lot Size(N)	Sample Size (n)	Acceptance number(c)
2,400 or less 2,401 - 15,000 15,001 - 24,000 24,001 - 42,000 42,001 - 72,000 72,001 - 120,000 more than 120,000	6 13 21 29 38 48 60	1 2 3 4 5 6

APPENDIX IX (contd.)

Net weight greater than 4.5 kg (10 lb)		
Lot Size(N)	Sample Size(n)	Acceptance number(c
600 or less	6	1
601 - 2,000	13	2
2,001 - 7,200	21	3
7,201 - 15,000	29	4
15,001 - 24,000	38	5
24,001 - 42,000	48	6
more than 42,000	60	7

SAMPLING PLAN 2a (Inspection Level II, AQL = 6.5)

Net weight is equal to or less than 1 kg (2.2 lb)		
Lot Size(N)	Sample Size(n)	Acceptance number(c
4.800 or less	13	2
4,801 - 24,000	21	3
24,001 - 48,000	29	4
48,001 - 84,000	38	. 5
84,001 -144,000	48	6
144,001 -240,000	60	7
more than 240,000	72	8

Net weight is greate. 4.5 kg (10 lb)	ter than 1 kg (2.2 lb) but	not more than
Lot Size(N)	Sample Size(n)	Acceptance number(c)
2,400 or less 2,401 - 15,000 15,001 - 24,000 24,001 - 42,000 42,001 - 72,000 72,001 -120,000 more than 120,000	13 21 29 38 48 60 72	2 3 4 5 6 7 8

Net weight great	er than 4.5 kg (10 lb)	
Lot Size(N)	Sample Size(n)	Acceptance number(c
600 or less 601 - 2,000 2,001 - 7,200 7,201 - 15,000 15,001 - 24,000 24,001 - 42,000 more than 42,000	13 21 29 38 48 60 72	2 3 4 5 6 7 8

REPORT OF THE AD HOC WORKING GROUP ON CONTAMINANTS IN PROCESSED FRUITS AND VEGETABLES

- 1. The Working Group was chaired by Mr. L.J. Erwin, Australia and the countries represented were Brazil, Canada, France, Japan, Netherlands, Norway, Philippines, Switzerland, South Africa, Thailand, United Kingdom and the United States of America.
- 2. The Chairman acknowledged the excellent participation of a large number (21) of countries which had supplied data for the Second International Survey of Contaminants (tin, lead and cadmium) in Processed Fruits and Vegetables. As a result, it had been possible to prepare a very worthwhile report which provided a good basis for discussion. It was noted that all the analyses for the survey had been carried out on individual cans and not composited samples prepared from the contents of a number of cans.

Lead

- 3. The delegate of Thailand questioned the extent to which lead contamination of the raw material contributed to the level of contamination in the final product. The delegate of The Netherlands advised that unprocessed tomatoes grown in some parts of Europe had been found to contain lead levels of up to 0.23 mg/kg.
- 4. In discussing Table 1 on page (iii) of the Survey Report, the Group noted that most products had lead levels below 1 mg/kg. However, the survey suggested that, in regard to canned chillies, canned tomatoes and canned tomato concentrate significant percentages of samples contained tin levels in excess of 1 mg/kg. A number of members of the Group explained that these products were known to cause problems in regard to lead contamination.
- 5. It was agreed that a maximum lead level of 1 mg/kg was appropriate for most canned fruits and vegetables but considerable debate ensued as to whether an exemption should be included for these products mentioned above. A maximum level of 2 mg/kg was suggested. The delegate of the United States of America pointed out that the levels in tomato concentrate must be higher because of the concentration of the lead levels in the raw material. Consideration was given to establishing a level for the tomato concentrate when diluted to single strength but this was not agreed.
- 6. The Netherlands, supported by Switzerland and France proposed that the maximum level of lead for all products should be 0.5 mg/kg. It was eventually decided that the maximum level for all products should be 1 mg/kg. Switzerland, France and The Netherlands reserved their position in regard to this decision.
- 7. The Group noted that a maximum level of 1 mg/kg for all products could cause difficulties. However, it was considered that such a level was desirable for the protection of the health of the consumer. Further, alternate methods of canning were available which could reduce the level of lead contamination and, although these could well be more expensive, such action seemed necessary.

Tin

- 8. The Group reviewed the data for the contamination summarized in Table II, page (iv) of the Survey Report. It noted that a considerable number of samples of some products, including canned apricots, asparagus, green beans, tropical fruit salad, marmalade, peas, pineapple and tomato concentrate, contained tin levels in excess of 150 mg/kg.
- 9. Consideration was given to establishing maximum limits of 150 mg/kg and 250 mg/kg for the various products, as appropriate, from the point of view of good manufacturing practice. The delegate of the United Kingdom pointed out that it was very difficult to get below a level of 200 mg/kg of tin in canned asparagus. In addition, such levels of tin were necessary to develop the flavour and colour normally expected by the consumer.

- 10. The delegate from Switzerland noted that the tin levels should be differentiated according to the type of container and proposed 150 mg/kg for metal containers and 50 mg/kg for glass containers. The delegate of Japan and the observer from South Africa stressed the difficulties caused by high levels of nitrates in the raw material. Usually these levels of nitrates could not be controlled since they often resulted from climatic conditions. The delegate of Japan distributed extensive data relating to the nitrate problem.
- 11. The observer from South Africa and the delegate from the United States of America proposed that a maximum level of 500 mg/kg be established for tomato concentrate to cover the concentration of the raw material. This was not agreed. The Group decided that taking all factors into account the most appropriate action would be to establish an upper limit of 250 mg/kg for tin in all canned fruits and vegetables.

Cadmium

12. It was noted that cadmium contamination of canned fruits and vegetables almost invariably resulted from natural contamination of the raw material. Only very occasionally did any cadmium contamination occur during processing. The Group considered that it should not become involved in establishing levels for contamination which resulted from the raw material. It was also noted that the survey clearly showed that levels of cadmium in canned fruits and vegetables were not a cause for concern.

Consequently, the Group decided that there was no need to establish maximum levels for cadmium. The delegate of the United Kingdom also pointed out that the establishment of such a maximum level would infer acceptance of levels up to that level and this was not the case.

Summary

- 13. In summary, the Working Group recommended that:
 - (a) A maximum level for lead of 1 mg/kg should be established for all canned fruits and vegetables.
 - (b) A maximum level for tin of 250 mg/kg should be established for all canned fruits and vegetables.
 - (c) Continued emphasis should be placed on processing and canning technology with a view to further reducing the levels of tin and lead contamination of canned fruits and vegetables.
 - (d) Maximum levels for cadmium in canned fruits and vegetables need not be established as it does not arise from the canning process.