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 87/12A

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION
Seventeenth Session
Rome, 29 June - 10 July 1987

REPORT OF THE NINETEENTH SESSION OF THE CODEX COMMITTEE ON FOOD ADDITIVES
The Hague, 17 - 23 March 1987

TABLE OF CONTENTS

APPENDICES

ABBREVIATIONS USED IN THE REPORT

ADI	-	Acceptable Daily Intake (mg/kg Body Weight)
CAC	-	Codex Alimentarius Commission
CCCPL	-	Codex Committee on Cereals, Pulses and Legumes
CCFA	-	Codex Committee on Food Additives
OCFH	-	Codex Committee on Food Hygiene
CCFL	-	Codex Committee on Food Labelling
CCFO	-	Codex Committee on Fats and Oils
CCFSDU	-	Codex Committee on Foods for Special Dietary Uses
CCPFV	-	Codex Committee on Processed Fruits and vegetables
COP	-	Carry Over Principle
FNP	-	Food and Nutrition Paper
GL	-	Guideline Level
HMT	-	Hexa Methylene Tetramine
INS	-	International Numbering System
JECPA	-	Joint FAO/WHO Expert Committee on Food Additives
JFCMP	-	Joint FAO/WHO Food Contamination Monitoring Programme
MPL	-	Maximal Permitted Level
NS	-	Not Specified
PMTDI	-	Provisional Maximum Tolerable Daily Intake
WG	-	Working Group

REPORT OF THE NINETEENTH SESSION OF THE CODEX COMMITTEE ON FOOD ADDITIVES
The Hague, 17 - 23 March 1987

INTRODUCTION

1. The Codex Committee on Food Additives held its Nineteenth Session in The Hague, The Netherlands, from 17 - 23 March, 1987, by courtesy of the Government of The Netherlands. Mr. A. Feberwee (The Netherlands) acted as Chairman. The Session was attended by 200 participants. They represented 37 member and observer countries and 30 international organizations (See Appendix I for the List of Participants, including the Secretariat).

EXTRACT OF THE OPENING SPEECH BY MR. J. P. VAN ZUTPHEN, DIRECTOR-GENERAL OF THE MINISTRY OF AGRICULTURE AND FISHERIES OF THE NETHERLANDS

2. In his welcoming speech the Director-General reminded the Committee of the nuclear accident in Chernobyl, April last year. Food contamination with nuclides, following this accident gave wide spread concern among consumers and raised tremendous barriers to international trade. This interruption in trade mainly was a result of widely differing opinions on what would be acceptable levels of Cesium 137 and 134 in food. The maximum levels deemed acceptable by governments may vary by as much as 100-fold factor.

3. No other experience in the last few decades had indicated with such clarity the necessity for global agreement on maximum acceptable levels of certain contaminants, including various nuclides, in foods. These limits must, of course, take into consideration consumption patterns and groups who are at risk.

4. In July 1986 the Netherlands Minister of Agriculture and Fisheries stressed the need for harmonization work on nuclides by the Codex Alimentarius, through CCFA. It was hoped that the discussions would be based on a joint (FAO/WHO/IAEA) Expert Group on the subject. The Director-General said he was looking forward to the progress that CCFA would make at this meeting. He was aware, on the other hand, that there were other important subjects on the agenda, additives as well as contaminants. He underlined the need for additional studies of food additive and contaminant intake, which together with toxicological data, could be used as the basis for regulation of levels in foods.

5. In view of the increasing emphasis on contaminants (such as environmental contaminants, migrants from packaging material and nuclides) in food, the Director-General suggested changing the name of the Committee to "Codex Committee on Food Additives and Contaminants". This name would be in conformity with the terms of reference of the Committee. The Director-General made it clear that he was not under estimating the great amount of work that still has to be done on food additives. Also the major task for CCFA will continue to be food additives intentionally added to food However, he felt that the topicality of the contamination of food with radionuclides and the urgency for action by this Committee could not be overemphasized.

6. Once again Mr. Van Zutphen stressed the value the Netherlands attaches to the work of Codex Alimentarius in protecting the consumer, harmonizing food law and promoting free international trade. The Government of The Netherlands emphasizes this by hosting this Committee and the Codex Committee on Pesticide Residues on a regular

basis. The Director-General wished the CCFA a productive meeting and looked forward to the results.

APPOINTMENT OF RAPPORTEURS

7. Mr. R. Ronk (USA) was appointed as rapporteur. The Committee agreed with the proposal of the Chairman not to appoint a French and Spanish rapporteur due to the fact that qualified expertise from FAO was present at this Session.

ADOPTION OF THE AGENDA

8. The Committee decided to treat item 11 "Consideration of Food Grade Salt" after agenda item 5 "Matters of Interest arising from Codex Sessions".

9. The Committee added the "Report of the Thirty-first Meeting of JECFA (summary and conclusions)" as agenda item 5(a)(iii) and "Request from OECD for the Establishment of Codex Maximum Limits for Certain Chemical Substances on Various Fruits and Vegetables" as agenda item 15(f).

10. The Committee adopted the provisional agenda (CX/FA 87/1) including these changes.

CONSIDERATION OF REPORTS OF JECFA

11. The twenty-ninth, thirtieth, and thirty-first reports of the Joint FAO/WHO Expert Committee on Food Additives (JECFA) were introduced by the Joint Secretariat of JECFA (Dr. A. Randell, FAO and Dr. J. L. Herman, WHO). It was noted that the twenty-ninth report had been published by WHO as Technical Report Series № 733. Summary reports of the thirtieth and thirty-first meetings were available to the participants of the Codex Committee on Food Additives. It was anticipated that the full report of the thirtieth meeting would be published in April 1987.

12. At its twenty-ninth meeting, JECFA evaluated many substances that were on the Codex Priority List. Substances evaluated at the meeting included enzyme preparations, flavouring agents, food acids and their salts, food colours, sweetening agents, and thickening agents. The report contained an annex on matters concerning Codex arising directly from previous sessions of CCFA. It was noted that, beginning with the toxicological monograph prepared at the twenty-ninth meeting, the monographs will be published by the Cambridge University Press. The monographs from the 29th JECFA will be published as NO 20 in the WHO Food Additive Series.

13. Specifications prepared from the 29th JECFA were published in FAO Food and Nutrition Paper № 34. It was noted that for a number of substances, especially salts, insufficient data had been available to allow the preparation of adequate specifications for the food-grade materials. When salts are referred to JECFA as salts of the same anion, it is not always known whether all the types of salts are commercially available.

14. It was also noted that the FAO/WHO Food Additives Data System had been amended by the publication of an addendum to FAO Food and Nutrition Paper № 30/Rev. l, to reflect the evaluations of the thirtieth meeting of JECFA.

15. Substances which were evaluated at the thirtieth meeting included antioxidants, flavouring agents, food colours, sweetening agents and thickening agents. Lead was also evaluated as a contaminant, especially as it related to infants and children. The report included an extensive description of the problem of lead exposure and information on sources of this exposure. Sulfur dioxide was also evaluated. A group ADI had previously been allocated to the antioxidants BHA, BHT, and TBHQ; but the JECFA at

the thirtieth meeting concluded that it would be more appropriate to evaluate them separately.

16. Similarly, the gallates were evaluated separately. Several items were included in the report under "general consideration", one of them relating to natural items in food, and an annex addressed matters arising from the eighteenth session of CCFA. The JECFA also approved a document about the principles for the safety assessment of food additives and contaminants in food. This document (in press) is being published by the International Programme on Chemical Safety as № 70 in the Environmental Health Criteria Series. This document was intended to provide guidance to Member States and the food industry as to the types of data required by JECFA for various types of food additives and to provide JECFA consistent basis for decision-making.

17. The specifications arising from the meeting had been published as FAO Food and Nutrition Paper No 37. It was noted that several specifications referring to "natural" substances had been prepared, but that JECFA had found it difficult to define these specifications fully. Also, new "tentative" general methods for analysis had been proposed and JECFA had requested information on the adequacy of these methods.

18. The thirty-first meeting of JECFA was held in late February 1987. Many substances were evaluated that were on the Codex Priority List. Substances evaluated included enzyme preparations, flavouring agents, food colours and aflatoxins. Glutamic acid and its salts were also evaluated.

19. It was noted that the ADI for canthaxanthin was lowered and made temporary, based upon the finding of crystalline deposition in the eye. It was also noted that different conclusions were made with those enzymes derived from A. oryzae than those derived from A. niger This related to the fact that A. orizae species was a micro-organism that was traditionally accepted as a constituent of food while A. niger was a non-pathogenic micro-organism which is not normally a constituent of food. Therefore, it is treated as a food additive requiring toxicological data from which an ADI was derived.

20. It was noted that JECFA had recommended a review of the "General Specifications for Enzymes used in Food Processing".

21. The Secretariat noted that all items on the previous Codex Priority List had been evaluated by JECFA. The Secretariat continued by stating that the special concern for tin, with respect to the intake of 200 mg/kg tin over a short period of time may result in acute gastric irritation, had also been reconsidered by JECFA. JECFA observed that this should be considered ancillary information. The Committee also observed that the withdrawals of ADIs for dodecyl and octyl gallate would have an impact on the food standards in which they have been endorsed.

22. The delegate of Egypt asked whether there could be a universal standard for contaminants and radionuclides for well fed v. s. undernourished populations. The Secretariat will bring this request forward to JECFA to determine whether this question could be addressed.

MATTERS OF INTEREST ARISING FROM CODEX AND OTHER SESSIONS

23. The Committee had before it document CX/FA 87/4 containing Matters of Interest arising from Codex and other sessions and Conference Room Document 10 containing a Sampling Plan for Food Grade Salt. The Committee noted that there were a number of matters of interest in the document CX/FA 87/4 which would be discussed under other

agenda items and agreed to defer discussion on them until the particular agenda item was presented.

Establishment of a Codex Committee on Environmental Contaminants

24. The Committee postponed its final consideration about the need for establishment of a new Codex Committee on Environmental Contaminants to agenda item 17 "Other Business".

Regular Reviews of Food Additive Provisions in Codex Standards

25. The Committee agreed in principle with the need to institute a system of regular reviews of the food additive provisions in Codex Standards as proposed by CCGP and asked the Secretariat to prepare a paper for discussion at its next session on procedures that should be adopted for carrying out such an exercise. The Committee also agreed that this matter should be brought to the attention of the Commission.

Considerations relative to the use of Karaya and Xanthan Gums in certain Cheese and Cheese Products at CCMDS (Milk Committee)

26. The Committee noted that the CCMDS at its last session did not consider it necessary to make any change in the maximum levels for Karaya and Xanthan gums included in the various standards and expressed the view that information included in Appendix IV of the report (CX 5/70-21st Session) would resolve the question on maximum permitted levels raised by CCFA. The Committee was informed by the Secretariat that a paper on the subject would be prepared for discussion at it next session.

Technical Justification for the use of Hexamethylenetetramine in Provolone Cheese

27. The Committee agreed to defer discussion of the subject to a future session since IDF did not make available the document that it agreed to prepare.

Sampling Plan for Food Grade Salt

28. The Committee noted that an informal meeting was held in Rome with the attendance of the former Chairman of CCFA's Working Group on Methods of Analysis and Sampling, the Codex Secretariat and representatives of the European Committee for Studies on Salt from France, Spain and Italy. The meeting revised the Sampling Plan for Food Grade Salt taking into consideration the "Instructions on Codex Sampling Procedures" elaborated by CCMAS and the comments from USA and France made at the 13th Session of CCMAS. The Committee agreed that the Method for Sampling of Food Grade Salt for Compositional Criteria, appended to the Conference Room Document should be referred to CCMAS for endorsement.

Matters arising from the 15th Session of CCFSDU (ALINORM 87/26)

Intolerance to Food Additives (Paras 52-59)

29. The Committee noted that in the report of the CCFSDU the proposal that allergenic substances should be considered on a case by case basis should be attributed to the delegation of the USA attending the 18th CCFA, rather than the CCFA itself.

Misleading information concerning the use of food additives in food

30. The Committee had before it a Conference Room Document CX/FA 87/16 on the subject, prepared by CIAA. In introducing the document, the observer from CIAA informed the Committee about misleading information concerning the use of food

additives being spread among consumers and gave as examples the Villejuif tract, certain articles in the press and propaganda made through radio and television broadcasts. He brought to the attention of the Committee action taken by scientists, governments, industries and consumer organizations to counteract such misleading information and expressed the view that a positive statement by the Codex Alimentarius Commission would help in this regard.

31. A number of Delegations expressed concern about the misleading information on food additives being spread among consumers. The representative of IOCU expressed the opinion that, apart from the question of misleading information about food additives, there was genuine concern by consumers about food additives and a desire for adequate information. The practice by Industry of claiming that food additives were not presenting certain foods (negative claims) helped to increase such concern. This view was supported by several delegations.

32. Noting the discussion above, the Committee agreed that issuing of statements counteracting misleading information on the use of food additives was not in its terms of reference and that it was the responsibility of governments to take appropriate action. The Committee reiterated that in carrying out its task it adhered to the General Principles for the Use of Food Additives adopted by the Codex Alimentarius Commission. The General Principles were aimed at protecting the health of the consumer, by ensuring that food additives were used only where technologically justified and the lowest levels in conformity with good manufacturing practices are used. Furthermore, they required food additives to be adequately tested in order to ensure their safety-in-use.

33. The Committee noted that several documents emanating from Codex and JECF provided adequate information on the safe use of food additives and that government should use this information in the appropriate way. It was informed that a booklet would be issued shortly from FAO and directed to the public and interested persons in order to inform them about Codex work, including work on food additives. Governments are invited to refer to information on the safe use of food additives and the general principles for their use in FAO/WHO Food and Nutrition Paper № 30/Rev. I, Codex Alimentarius Vol. XIV and the Procedural Manual (6th Edition).

REVIEW OF LABELLING SECTION OF THE CODEX STANDARD FOR FOOD GRADE SALT

34. The Committee reviewed the labelling provisions in the standard for Food Grade Salt with a view to aligning them with the recently adopted General Standard for the Labelling of Prepackaged Foods, having regard to the guidelines on labelling provisions in Codex standards.

Section 7. Labelling

35. The Committee noted that the Secretariat had included in this document minor editorial amendments in the preamble. The CCFL decided that the sections referred to in the General Standard were applicable to all prepackaged foods and should be included in all Codex Standards. The Committee agreed to the editorial changes.

The name of the food

36. The guidelines recommended the use of the phrase "The name of the food to be declared on the label shall be "**. . .**". The Committee noted that section 7.1 and subsections 7.1.1 to 7.1.4 allow the declaration of the name of the food as Food Grade

Salt, cooking salt, table salt, dendritic salt, salt fluoridated, iodized, salt fortified with iron or salt fortified with vitamins. This covers the needs of all governments.

List of Ingredients

37. The Committee noted that the Standard for Food Grade Salt contained provisions for food additives which should be declared in the List of ingredients and agreed that the standard required a full declaration of ingredients in accordance with section 4.2 of the General Standard.

Net Contents

38. The Committee noted that section 4.3 of the General Standard required a mandatory declaration of the net contents in metric units. The additional declaration in other units of measurements was still possible and countries requiring a declaration of net contents in only metric units would have to indicate a specified deviation when adopting the standard. The Committee recommended declaration of net contents in accordance with section 4.3 of the General Standard.

Name and Address, Country of Origin and Lot Identification

39. The above provisions in the Standard for Salt were identical to the provisions in the General Standard. The Committee agreed to express them by reference to the General Standard.

Date Marking and Storage Instructions

40. The Committee noted that the General Standard for Prepackaged Foods had indicated that the date of minimum durability was not required for food grade salt. However, this standard requires date of minimum durability for food grade salt, used as a carrier of nutrients and sold as such for public health reasons.

The Committee agreed that in such cases, date of minimum durability and storage instructions shall be declared in accordance with sections 4.7.1, 4.7.2 and 4.8 of the General Standard. Therefore, the Committee made an editorial deletion of section 7.7.2 of the Food Grade Salt Standard and added the phrase "and any special instructions for storage" to section 7.7.1 after the sentence beginning "The date of minimum durability".

Exemptions from Mandatory Labelling Requirements

41. The Committee noted that Section 6 of the General Standard provided for exemption from terms of the labelling requirements on small packages (largest areas less than 10 cm^2).

The Committee recommended the introduction of this provision in the Salt Standard, since such small package sizes move in international trade.

Labelling of Non-Retail Containers

42. The Committee noted that the General Standard did not refer to the labelling of non-retail containers. However, the Guidelines on Labelling Provisions contained a definition of non-retail containers as well as the wording of such a provision. The Committee had to take a decision on the type of information to be provided and on the place where it was to appear.

43. The Committee noted that the Milk Committee and the CCFO requested the CCFL tore consider the definition of non-retail containers which included both the outer container for pre-packaged foods as well as ship containers or tanks. In particular the

Milk Committee and CCFO had held the view that the date of minimum durability was unsuitable for large bulk containers and the date of manufacture was more informative. In contrast the Milk Committee decided that the outer containers of prepackaged foods should carry the same date marking as the prepackaged units.

44. The Committee agreed that in the case of Salt, the same consideration applied. In the case of outer containers, the same labelling requirements as for prepackaged foods applied, and these should be given in accordance with provision 5.3 in the General Standard. This would mean that the name of the food, the name and address and the lot identification have to be declared on the container. The latter two provisions could be replaced by an identification mark provided it was suitably explained in the accompanying documents. The other provisions applying to the prepackaged food could either appear on the outer container or in the accompanying documents.

45. The Committee requested the CCFL to reconsider the definition of non-retail containers since it was impracticable to require the above provisions for large bulk containers (freight containers).

Instructions for use

46. The Committee held the view that instructions for use were needed only where salt was used as a carrier of nutrients and agreed to include instructions for use in such cases by referring to section 4.8.1 of the General Standard.

Quantitative Labelling of Ingredients

47. The revised General Standard contained specific requirements for the quantitative declaration of ingredients under specified conditions, e.g. where special emphasis was placed on a valuable or characterising ingredient or on the presence or absence of certain ingredients (Section 5.1).

48. The Committee noted that the introduction of such a provision was useful to regulate the quantitative declaration of those specified ingredients in case manufacturers wish to make claims for them on the label.

Labelling of Irradiated Foods

49. The Committee noted that the revised General Standard contained provisions for the labelling of first and second generation irradiated foods, requiring an appropriate declaration of the fact of irradiation on the label.

Since food grade salt moving in international trade was never irradiated the Committee agreed that no specific provisions were needed concerning irradiated foods.

The Committee agreed that the labelling provisions in the Codex Standard for Food Grade Salt should be amended in light of its discussions as above and submitted to CCFL for endorsement. The amended labelling provisions are included in the report as Appendix II.

CONSIDERATION OF INTAKE OF FOOD ADDITIVES AND CONTAMINANTS

50. The Committee had before it the report of the ad hoc Working Group on Intake of Food Additives and Contaminants chaired by Mr. M. Fondu (Belgium) (CX/FA 87/5 - Add.3, Room doc). It also had before it documents CX/FA 87/5, document CX/FA 87/5 - Add.1 "Dietary Intake of Cadmium and Lead" and document CX/FA 87/18 - Add.2 "Mercury in Fish and Fishery Products".

51. The Chairman of the Working Group introduced the report of the Working Group on the basis of which the Committee reached the following conclusions:

Intake of Tin

52. The Committee agreed that information from four countries suggested an intake of tin ranging between 0.5 - 15 mg/day which indicated that the tolerable daily intake of 2 mg/kg b. w. would not be exceeded in these countries. However, the Committee agreed that a CL should be sent to governments requesting information on levels of tin ingested from cans stored in hot climates, with special attention to intake by children and total intake of tin from more countries.

Migration of Tin

53. The Committee discussed the advantages and disadvantages of using various types of cans (simple tin plated, lacquered and soldered). It agreed that the FAO Guidelines for Can Manufacturers and Food Canners (FAO Food and Nutrition Paper No 36) should betaken into consideration, especially in relation to non-lacquered cans. The Working Group recommended the general use of lacquered cans but the delegate of Australia reminded the Committee that it could no recommend one type of can over another because it was not technically justified. Codex Commodity Committees were requested to set limits for the migration of tin from cans as low as technologically possible.

Acute Effects Due to Tin

54. The Committee agreed that JECFA should again be requested to provide information on the level of tin in food at which no acute effects (e.g. gastric irritation) are observed, taking into consideration the possible combined effects of acidity and presence of high levels of iron. Information on the acceptability of levels of tin in food regarding such acute effects were needed in order to judge the acceptability of maximum levels of tin in food.

High Levels of Tin in Foods

55. The Committee noted that randomly high levels (up to 600-700 mg/kg) had been found in some foods in a number of countries. It was noted that these high levels might cause acute gastric irritation and that action has to be taken to avoid such high migration figures. The Committee was informed that the Joint FAO/WHO Food Contamination Monitoring Programme would continue to collect information on levels of tin in food and on dietary intakes.

Intense Sweeteners

56. The Committee agreed that available information should be sought on the intake of intense sweeteners from food and table top uses, including, if possible, information on intake by special groups (e.g. diabetics). The Committee noted that the generation of the full information requested by the Working Group might for some countries require considerable resources (financial and manpower). It agreed that it would be useful to continue to obtain information on national regulations (or modifications to regulations) on intense sweeteners (saccharin, aspartame, acesulfame, cyclamates and thaumatin).

Annatto (Bixin)

57. The Committee noted that the ADI for annatto was rather low and was expressed as bixin (0.065 mg/kg b. w.). It also noted that the CCFO had, at its last session, expressed the use level for annatto in terms of bixin. Other provisions for annatto in milk

products and other Codex standards would be revised in a similar manner. The Committee agreed that information was needed on levels of bixin in foods in which this colour was permitted (especially fats and oils and milk products). It also agreed that maximum levels should be set in the appropriate standards in terms of bixin.

Amaranth

58. Noting that very little information was available to the Committee on the intake of Amaranth (ADI = 0.5 mg/kg b. w.), it was agreed that governments should be requested to examine this matter and to make information available to the Committee.

Mercury

59. The Committee noted that predatory fish and some shell fish and products made from them were the main dietary sources of mercury and that methyl-mercury represented at least 90% of total mercury in fish (except crustaceans). While there was much information available on levels of mercury in fish and shellfish there Was less information on dietary intake of this contaminant. The Committee agreed to repeat its request for information on dietary intake, including intake by vulnerable groups, such as pregnant women. This information will be sent to Dr. Gorchev, WHO.

60. The Committee noted that the last evaluation of mercury by JECFA took place in 1978 (PIWI of 0.005 mg/kg b. w. for total mercury and 0.003 mg/kg b. w. for methyl mercury and that new toxicological information may be available. The Joint Secretary of JECFA agreed to solicit such information on mercury and to refer any new information to JECFA for evaluation.

Benzoic Acid

61. The Committee noted that there were a limited number of uses for benzoic acid in Codex Standards. It, therefore, agreed with the conclusion of the Working Group that the exercise on investigating the effect of acceptance by governments of Codex maximum levels for benzoic acid on the intake of this additive need not be continued.

Monosodium Glutamate

62. The Committee noted that at the 31st session, JECFA had set an ADI "not specified" for MSG and had considered the question of single high intakes in relation to intolerance reactions. In addition JECFA no longer made reference to the ADI not applying to infants under 12 weeks of age. However it still maintained its general recommendation regarding the use of food additives in foods for infants. The JECFA Secretariat explained that new data submitted to JECFA showed that infants metabolize glutamates in a manner similar to adults, but nevertheless the JECFA report will state that it believes that the use of these substances should be used in infant foods with caution.

63. As regards the question of large single intakes especially from table top uses and by infants, the representative of IOCU expressed the opinion that some of its members were deeply concerned.

64. The Committee agreed that there was no longer any need to evaluate the intake of MSG from its permitted uses as a flavour enhancer; however, JECFA was requested to keep under consideration any possible acute effects.

BHA, BHT

65. The Committee noted that the Working Group had reconsidered the possible intake of BHA and BHT on the basis of the new (and lower) ADIs set for these

antioxidants by the 30th JECFA. Taking a per capita intake of 71 g visible fat per day (40% of a daily intake of total fat of 177 g) and the lower maximum levels proposed by the CCFO, the Working Group had calculated that the respective ADIs for BHT and BHA were not exceeded. As this represented an exaggerated estimate, the WG considered that other products containing BHA and BHT would also be covered.

66. It was pointed out that other foods not containing fats and also chewing gum or potato flakes represented a source of these antioxidants. The Committee agreed that the ADIs of BHA and BHT were unlikely to be exceeded from fats and oils and foods containing fats and oils. However, it also agreed that further information should be sought on intake of BHT and BHA from chewing gum and other foods containing BHA and BHT.

Lead, Cadmium

67. The Committee received a report (CX/FA 87/5-Add.1) by WHO (Dr. Galal Gorchev) on the dietary intake of lead and cadmium. The report showed that intake of cadmium by adults occasionally approached the PIWI, while lead intake by adults were usually below the PIWI (except where drinking water contained excessive concentrations of lead). As regards infants, children and adolescents the PIWI for cadmium and lead were sometimes exceeded.

The Committee decided:

- to ask governments to send information on the intake of lead and cadmium to the Joint UNEP/FAO/WHO Food Contamination Monitoring Programme, including in their documents information of the foodstuffs which are the most highly contaminated and the level of intake of these foodstuffs;
- to ask governments to pay special attention to the intake of cadmium and lead by infants and children; and
- to ask JECFA to re-evaluate cadmium (evaluation was done in 1972).

Guidelines for Simple Evaluation of Food Additive Intake

68. The Committee noted that the above guidelines had been available only at the beginning of the meeting of the Working Group. It agreed that the chairman of the Working Group should prepare a revised version on the basis of comments received from interested persons during the present session. The new draft of the Guidelines should be circulated for comments and discussed at the next Session of the Working Group on the basis of comments received.

Issue of Request for Information

69. The Committee requested the Secretariat to issue a circular requesting comments and information on the matters specified above.

Establishment of an ad hoc Working Group on Food Additive Intake

70. The Committee reappointed Belgium as Chairman of the Working Group. The following countries and organizations indicated their interest to participate in the Working Group: Austria, Belgium, Canada, Cuba, Denmark, Finland, Fed. Rep. of Germany, France, India, Israel, Italy, Japan, Norway, Rep. of Korea, Sweden, Switzerland, the Netherlands, Thailand, UK, USA, EEC, CIAA, MARINALG, IGTC, ISA, Int. Food Additives Council, FAO and WHO.

RADIONUCLIDE CONTAMINATION OF FOODS

71. The Committee had before it a report prepared by an FAO Expert Consultation on Recommended Limits for Radionuclide Contamination of Foods (ESN/MISC/87/1) which had also been sent to Codex Contact Points. Circular Letter CL 1987/6-FA which had been sent to Contact Points at the same time, had proposed that the report be discussed with a view to its adoption by the Commission. The Committee agreed to such a discussion.

72. The Committee also had before it CX/FA 87/4 which contained relevant extracts from the report of the Codex Committee on General Principles (8th Session) and information on a meeting organized by the International Atomic Energy Agency (IAEA) concerning radio-nuclide fall out monitoring in food and the environment. Conference Room Document No 21 contained an extract from the draft report of the Codex Coordinating Committee for Latin America and the Caribbean. Also available to the Committee was an unnumbered conference room document describing WHO planned activities in regard to Derived Intervention Levels (DIL's) for radionuclide contaminated food.

73. The representative of IAEA, Dr. Mrs. A. Salo, described the Agency's activities in regard to controlling radionuclide contamination of foods and related methods. She noted that, pursuant to the Agency's statutory obligations, a number of radiation protection standards and guidelines had been prepared over the years, some jointly with FAO and WHO. Basic Safety Standards for Radiation Protection (IAEA Safety Series No 9) had been published in 1982 but was concerned with situations when the radiation source was under control. For the protective action needed under accident conditions, principles for establishing intervention levels were published in 1985 (IAEA Safety Series № 72) which provided guidelines in terms of radiation dose to individuals and to population She drew attention to the problem of introducing counter measures and the consideration of balancing the cost of such intervention against the detriment which would result from failing to take counter-measures. By a process of optimization, the detriment avoided by the counter-measure would be balanced by the cost.

74. In practical terms Derived Intervention Levels applying to food and other sources of contaminants were needed in order to carry out control measures. A document entitled "Derived Intervention Levels for Application in Controlling Radiation Doses to the Public in the Event of a Nuclear Accident or Radiological Emergency" (IAEA Safety Series № 81) had been published in December 1986. This took into account some of the earlier experience gained as a result of the Chernobyl accident. Dr. Salo noted that a number of examples had been calculated, : but that except for a few cases, these were not intended for general application.

75. In February 1987 an IAEA review group had confirmed that the basic principles described above remained valid but that a number of clarifications and amplifications were necessary. These related to i) the criteria applying to levels used for reducing stochastic effects; ii) the need for special requirements for special groups; and iii) criteria for a longer-term approach applicable to trade problems.

76. In regard to trade in foods the IAEA review group pointed out that the basic. "non-intervention" level of 5 milliSieverts for the first year used by the FAO Consultation was not inconsistent with the approach of IAEA, but could be reviewed; that guidance for an internationally harmonized approach was needed to study the balance between detriment and cost as described above; and that it would be preferable not to use

pessimistic assumptions which could lead to departures in the approaches used by various experts.

77. Dr. Salo expressed IAEA's willingness to cooperate with FAO and WHO in further activities in this area.

78. Dr. P. Waight, representing WHO, presented a summary report of that Organisation's activities. This report is attached as Appendix III to the present report, and is not summarized here. He noted, however, that the approach taken by WHO would be similar to those used by IAEA, the International Commission on Radiological Protection (ICRP) and related organizations.

79. The representative of FAO, Dr. A. Randell, described the background to the Expert Consultation on Recommended Limits for Radionuclide Contamination of Foods, which had been convened by FAO in response to enquiries on levels of contamination of foods moving in international trade. The Expert Consultation had recommended the adoption of Interim International Radionuclide Action Levels for Foods (IRALF's); levels below which there would be no need for export or import restrictions of any kind. These were based on the primary dose levels recommended by ICRP, but in extending these to foods moving in international trade a number of conservative assumptions had been made which would ensure that the most sensitive population groups would be adequately protected. One of these assumptions was that 100 percent of the food intake would be contaminated. The IRALF's were particularly intended for application by food and health authorities in countries where food control infrastructures were limited, and therefore it had been considered important that they be simple and easily understood and applied.

80. The FAO Expert Consultation had recommended that there should be provisional international acceptance of the recommended IRALF's with a view to full adoption at a later stage.

81. In response to a question concerning the difference in approach between the FAO report and the work being undertaken by WHO and IAEA, the representative of WHO explained that the approach taken would depend on the objective to be achieved. In the case of FAO this was the facilitation of international trade, and in the case of WHO it was to determine the level of exposure where the health risk was acceptable. These were not the same and the assumptions used in the approaches would determine the output. He stated that it was not yet clear which specific assumption would be taken in determining the WHO guideline values.

82. In response to a question by the delegation of the USA, the representative of WHO stated that it was not possible to say if the approach which would be followed would be similar to that outlined in the US Federal Register of 24 October 1982. He noted that the philosophy of managing accident situations was constantly developing, and that prior to the Chernobyl accident "far-a field" i.e., away from accident site situations had not been considered.

83. The representative of IAEA noted that the work of the Agency had mainly been concerned with the early and intermediate phase after an accident and mainly described the methodology used. She noted that IAEA had difficulty with the description of the FAO approach, and that the assumption that 100 per cent of the intake would be contaminated was not in accord with the philosophy of the Agency.

84. In response to a question of the delegation of the Netherlands concerning the uniform application of the IRALF's to all foods, it was noted that this was proposed in the

interest of simplicity of their application even though it would be possible to use, for example, lower levels for some high-intake foods such as milk and therefore allow much higher levels for lower-intake foods. It was also noted that the dose conversion factors used in calculating the IRALF's were different than those recommended by some national governments. The representative of IAEA pointed out that conversion factors for children had not yet been agreed internationally but that work was underway.

85. The observer from the EEC stated that he was pleased that the CAC should attempt to make progress in this area, and that there were good commercial reasons for this. He noted that the delegations of the EC member states present at CCFA did not include experts with detailed knowledge in this area. He also noted that a scientific seminar was to be convened by the Commission of the European Communities, after which the position of the EC would be clearer. He suggested that the report of the FAO Expert Consultation should be considered by government experts and their advice sought before it could be adopted by the CAC.

86. The delegation of the USA and Sweden commended the report of the FAO Expert Consultation and noted that national authorities responsible for food control had to be able to make rapid decisions when accidents occurred. Although noting that the approach used in the FAO report was very conservative, the Delegation stated that it would be very useful as an interim approach while long-term approaches were being developed. It would also be of benefit world-wide, especially where governments were using or considering even more conservative approaches. The delegation recommended that the Committee endorsed the concept of the report, but stated that the calculations leading to the derived IRALF's could be refined further before it was considered by the Commission.

87. The representative of WHO stated that the IRALF figures did not present any acceptable hazards to health, but noted the differences in approaches used by the different experts. He stated that the IRALF's had been developed on an interim basis and that they could be reviewed and revised on the basis of further information, particularly once the work of WHO and IAEA referred to above had been completed.

88. The delegation of Italy expressed approval of the actions taken by the international organizations, and noted lack of harmonization which had arisen after the Chernobyl accident. The delegation stated that it would be most useful to have guideline levels below which governments need not take action. These should be based on accepted guideline values for dose, be realistic, and take into account dietary levels. Other requirements to be considered were, for example, the available infrastructure for monitoring, sampling and certification as pointed out in the FAO report. There was also a need for accurate information related to an accidental release of radionuclides to be transmitted to other countries which may be exposed to the hazards involved. The delegation noted that the CCFA was not the best forum for technical discussions in this field.

88 a. The delegation of France congratulated FAO and WHO for looking into the matter. However, it expressed the wish that the document should be examined by a more specialized expert group in order to choose from the various assumptions proposed.

89. The delegation of Canada supported in principle the approach taken by the FAO Expert Consultation and applauded FAO's initiative and timeliness in making the report available. Although the position regarding radionuclide contaminated food in Canada had not been finalized the delegation expressed the need for guidelines for food in

international trade. It was noted that the FAO Expert Consultation had recognized that national authorities may wish to apply different levels for foods in their own territories. The delegation recognized the limitations of the FAO report, but urged general support be given to its recommendations recognizing the possibility of reconsidering the situation as the WHO and IAEA work became available.

90. The delegations of Australia supported the opinions expressed by those of the USA and Canada.

91. The delegation of Austria drew attention to an interim report prepared by the Austrian Ministry of Health and Environmental Protection, which provided inter alia an estimation of the total exposure by combining information on the total exposure to radionuclides through food and air. Thereby data on the external exposure were calculated from air contamination levels monitored by the early warning system operating in Austria. Unfortunately this report is available only in the German language.

92. The delegation of the UK expressed appreciation of the work carried out by FAO but had strong reservations about submitting the conservative proposals contained in there port of the FAO Expert Consultation to the Commission, before they had been reviewed by government experts. Also the relationship between FAO and WHO in this matter was not clear to the delegation. When considering that the two organizations are responsible for the Joint FAO/WHO Food Standards Programme, their positions should be harmonized before CCFA was asked to recommend a position to the CAC.

93. The delegation of the Netherlands expressed its agreement in principle with the approach used by the FAO Expert Consultation, and supported the proposal that the recommendations should be forwarded to the Commission for adoption, provided that they be reviewed by a meeting of government experts prior to the CAC meeting.

94. The delegation of Egypt stated that the report of the FAO Expert Consultation had already been of great usefulness in that country. The delegation noted that this was a sensitive matter and that perhaps more weight should be placed on health as health and nutritional status of the populations exposed to foods containing radionuclide contamination should be taken into account.

95. The delegation of Switzerland took note with great interest of the principles of the FAO Report and the explanation of the derivation of "non-intervention" levels. The delegation agreed with the delegation of Egypt that health matters should be considered together with economic matters. The delegation referred to the interim nature of the recommendations contained in the report of the FAO Expert Consultation and noted that these would have to be reviewed at some time in the future.

96. The delegation of Thailand expressed the view that the discussion of the recommendations of the FAO Expert Consultation by the Commission would be premature, and that they seemed to be based on trade and not on health. The delegation supported the views expressed by the delegations of France and the UK.

97. The representative of WHO confirmed that the levels proposed by the FAO Expert Consultation presented no unacceptable hazards to health.

98. The delegation of Brazil stated that there was a need for levels, and that the recommendations of the FAO Expert Consultation should be reviewed by government experts and then discussed by CAC.

99. The delegation of Belgium noted that the report of the FAO Expert Consultation proposed interim levels for use in international trade pending other standards to be

established. The delegation was of the opinion that these proposals would have to be reviewed by a meeting of government experts before they could be considered by the Commission.

100. The Committee agreed that the report of the FAO Expert Consultation should be submitted to the next session of the CAC, to be held from 29 June - 10 July 1987, for consideration and recommended that a meeting of government experts be convened during the course of the Commission to advise the Commission on the technical aspects of there port. Such a meeting would need to be of two day's duration, and governments would need to be advised in advance that such a meeting was foreseen. In the meantime the Secretariat would invite comments on the report of the FAO Expert Consultation by means of a Circular Letter.

ENDORSEMENT OF FOOD ADDITIVE PROVISIONS IN CODEX STANDARDS

101. The Committee had before it documents CX/FA 87/10-Part I, Part I-Add.1, Part I-Add.2, Conf. Room Document 9 and 1. The decisions of the Committee concerning the endorsement, temporary endorsement or postponement of the endorsement of food additive provisions are indicated in Appendix IV (Part I) to this report.

1. Codex Committee on Processed Fruits and Vegetable

Draft Standard for Mango Chutney (ALINORM 87/20, Appendix VI)

Draft Standard for Canned Mangoes (ALINORM 87/20, Appendix V)

101a. The Committee noted that JECFA elaborated a single specification for "Pectins" that would be' applicable to Pectin and Amidated Pectin and agreed that the food additive provision should read as "Pectins".

102. The delegation of Canada and France inspite of its recognition of the rational for making food additive provisions in Codex Standards, expressed concern for the inclusion of sorbates, benzoates and parahydroxybenzoates together in the standard for Mango Chutney since they could have synergistic toxic effect. The Committee noted that JECFA had not directly addressed the problem and that there was no scientific data to look at synergism for toxicological reasons.

2. ECE/Codex Group of Experts on Fruit Juices

Draft General Standard for Fruit Juices Preserved Exclusively by Physical Means (ALINORM 87/14, Appendix III)

103. The Chairman of the Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices informed the Committee that the use of carbon dioxide in fruit juices is technologically justified in that it provides an anaerobic atmosphere, imparts flavour and thirst quenching properties, preserves ascorbic acid and also acts as antimould agent.

3. Codex Coordinating Committee for Europe

Draft European Regional Standard for Mayonnaise (ALINORM 87/19, Appendix III)

104. The Committee postponed endorsement of the provisions for α-tocopherol and mixed tocopherol concentrates since the maximum levels in the final product were not specified. The Committee noted that where a numerical ADI exists maximal levels in the final product should be specified.

105. The Committee expressed the view that the maximum levels of BHA and BHT should be reviewed in light of decisions of the 30th meeting of JECFA which reduced

their ADIs. CCFA requested the Coordinating Committee for Europe to make new proposals on the use of these two additives. The Committee noted that the Coordinating Committee for Europe could derive some guidance from the recommendation made by CCFO at its 13th Session.

106. The Committee discussed the need for calcium disodium EDTA in the standard. The delegation of the Fed. Rep. of Germany, Switzerland, Poland, Finland, Austria, Denmark and Italy expressed their reservation concerning the provision. The delegation of Belgium informed the Committee that it could be quite effective as an antioxidant and expressed the view that it could even be considered for use in place of BHA and BHT.

The Committee endorsed the use of calcium disodium EDTA.

107. The Committee did not endorse the provision for annatto extracts since the maximum level of the food additive was not expressed in terms of bixin.

108. The Committee temporarily endorsed the provision for curcumin since the ADI is temporary.

109. The delegations of Italy, Austria, Fed. Rep. of Germany and Yugoslavia expressed their general concern for the use of the food colours in Mayonnaise which contains egg products.

110. The delegation of Finland commented on the level of the food colours and expressed their technological need should be reconsidered.

111. The delegations of Norway and Sweden expressed their reservation on the use of tartrazine and sunset yellow. They disagreed with the opinion of the Regional Coordinating Committee for Europe that these food colours were justified since curcumin and carotenes fade when exposed to sunlight. The delegations questioned why mayonnaise should be exposed to sunlight.

112. The Committee noted that the 31st Meeting of JECFA did not establish an ADI for Natural Beta Carotene and endorsed the provision for synthetic Beta Carotene. The Committee endorsed all the provisions for food colours except annatto extract.

113. The Secretariat recommended that the individual artificial flavouring substances suggested for use should be identified, and only those artificial flavouring substances which have an ADI could be endorsed. It would be difficult to endorse en bloc all artificial flavouring substances defined by the CAC.

114. The representative of IOFI asked the Committee to consider the possibility of including all the artificial flavouring substances listed in Codex List A and which have an ADI.

115. The delegate of the Netherlands held the view that an individual approach for endorsing artificial flavourings is not appropriate due to the great number of flavouring substances and asked the Committee whether it could temporarily endorse them like the nature-identical flavours.

116. The delegate of Denmark held the view that all chemically defined flavouring substances should be treated in the same way, for example, all the nature identical and artificial flavourings should be specified and they should be named in the standard.

117. The Committee agreed with the recommendation of the Secretariat and will ask the Coordinating Committee for Europe to specify the individual artifical flavours used in mayonnaise.

118. The Committee noted that only those chemically modified starches, which were toxicologically cleared by JECFA could be endorsed for use and asked the Coordinating Committee to identify the individual chemically modified starches that were proposed for use in the standard. The Committee was aware that JECFA with drew the ADI of starches modified by the use of the cross linking agent epichlorhydrin.

4. Report of the 54th Session of the International Olive Oil Council

Revised Standard for Table Olives

119. The delegation of France informed the Committee that the use of thickening agents like sodium alginate is justified for use only in stuffed table olives.

5. Committee of Government Experts on the Code of Principles Concerning Milk and Milk Products

Draft Standard for Anhydrous Butter, Butteroil and Ghee (CX 5/70-21st Session, Appendix

120. The delegation of Switzerland informed the Committee that the CCFO at its recent meeting set the maximum level of ascorbyl palmitate at 500 mg/kg. The Committee endorsed the provision for ascorbyl palmitate and agreed to draw the attention of the Milk Committee to the recommendations of the CCFO at its 13th Session for inclusion of a provision for ascorbyl palmitate in all Codex Standards for Fats and Oils at a maximum level of 500 mg/kg.

121. The Committee agreed with the recommendations of the Secretariat that the maximum level of some antioxidants in the finished product should be reviewed in light of the fact that no ADI had been allocated to octyl and dodecyl gallates and that the ADI of BHA and BHT were lowered by the 30th JECFA. The Committee did not endorse the provision for dodecyl and octyl gallate, BHA and BHT. Guidance should be obtained from the deliberations of the 13th Session of CCFO on this subject.

6. Codex Committee on Cereals, Pulses and Legumes (CX/FA 87/10-Part I-Add.1)

Codex Standard for Wheat Flour

122. The Committee reconsidered proposals for the use of monocalcium phosphate, azodicarbonamide and potassium bromate as flour-treatment agents. It also considered the proposed use of bleaching agents (benzoyl peroxide, chlorine dioxide and chlorine) as food additives rather than as processing aids. It noted that the Commodity Committee had provided extensive information on the technological justification for their use (Appendix IX, Annex 1 and Annex 2, ALINORM 87/29). There was strong opposition by a number of countries against the use of these additives, while others considered that an international standard should include provisions for food additives used in some Countries in the production of flours intended for special bakery products. The delegation of Belgium suggested that the Committee endorsed the use of flour-treatment agents, bearing in mind that it is possible to deviate from the Codex standard during its acceptance.

123. As regards monocalcium phosphate some delegations were of the opinion that the quantity provided in the standard was too high. Regarding the two additional enzymes proposed to be included in the standard for wheat flour, a number of delegations indicated that they could accept these though they had reservations on all the other food additive provisions. Other delegations reserved their position on all the proposed additives.

124. It was noted that it might be possible to distinguish between flours intended for different baking purposes by developing separate standards for these flours Alternatively the food additives section might be redrafted indicating the type of flour in which the additive was permitted. The Committee agreed that it was not in a position to undertake the task and invited CCCPL to reconsider the matter before further consideration could be given to the food additives included in Appendix VIII to ALINORM 87/29.

7 Codex Committee on Foods for Special Dietary Uses

Draft Standard for Follow-up Formula (ALINORM 87/26, Appendix X

125. The Secretariat informed the Committee that the technological justification for the use of all additives proposed in this standard was given in Conference Room Document 1. Almost all of the additives listed in this standard had already been endorsed in the Codex Standard for Infant Foods. The Committee did not endorse, however, the provisions for L (+) Lactic Acid and L (+) Lactic Acid Producing Cultures, as these had not been considered by JECFA. The food additive provision Pectin (amidated and non-amidated) should read as "Pectins".

126. The delegation of Norway expressed a reservation on the use of all these additives.

127. The delegation of Fed. Rep. of Germany expressed concern on the inclusion of thickening agents in the standard, as these did not seem technologically justified in a liquid food product.

128. The delegations of Austria, Finland, France and Poland also expressed reservations with regard to the total number of additives proposed as they felt that too many additives were used. This view was supported by the delegation of Italy, who expressed special concern with regard to the use of carrageenan.

129. The Delegation of Switzerland reserved its position on the use of flavours.

130. The Committee endorsed the additive provisions of the Draft Standard for follow-up foods with the exception of L (+) Lactic Acid and L (+) Lactic Acid Producing Cultures.

8 Codex Committee on Fats and Oils

Draft Standard for Specified Vegetable Fat Products

Draft Standard for Specified Animal or Mixed Animal and Vegetable Fat Products (ALINORAM 87/17 - Appendix IV)

131. The Secretariat proposed to the Committee to endorse temporarily curcumin, canthaxanthine and the antioxidants TBHQ, BHA and BHT since these food additives have a temporary ADI. The Secretariat further informed the Committee that the ADI of monoglyceridecitrate is included in the Group ADI (N. S.) of citric and fatty acid esters of glycerol and recommended that the provision for the food additive be endorsed.

132. The delegation of Italy expressed reservations on the technological justification of the colouring substances used, as well as a reservation for the use of the antioxidants BHA, BHT and TBHQ.

133. In reply to a question from the delegation of the Fed. Rep. of Germany, the Secretariat informed the Committee that the CCFO wanted to elaborate a standard for hardened vegetable oil, a product that is being marketed as Vanaspati in some countries Since that name was not acceptable for many countries it was changed to read as

Specified Vegetable Fat and Specified Animal or Mixed Animal and Vegetable Fat Product.

134. The Committee fully endorsed all the food additive provisions with the exception of curcumin, canthaxanthine, BHA, BHT and TBHQ, which were temporarily endorsed.

Action needed by CCFA resulting from change in ADI status of food additives

135. The Committee had before it documents CX/FA 87/10-Part II and CX/FA 87/10-Part II-Add.1, prepared by the Secretariat. The Committee also had before it Conference Room Document 14 containing comments from the USA. The document explained the actions needed to be taken by CCFA resulting from changes in the ADI status of the different food additives. The decisions of the Committee were tabulated in Appendix IV-Part 2 of this report.

136. The Committee was informed that JECFA at its 29th meeting allocated a full ADI for i) caramel III (Ammonia Process), ii) caramel IV (Ammonium sulphite Process), iii) Hydrogenated Glucose Syrup and iv) Isomalt which had only a temporary ADI.

137. The representative of INEC brought the attention of the Committee to the allocation by JECFA at its 30th meeting of an ADI not specified to Tara gum. He informed the Committee that Tara gum is a new stabilizer for the food industry which can be used to modify and stabilize the texture of food and suggested that provision for the use of Tara gum be added in all Codex Standards which already have a provision for Carob bean and guar gum. The Committee expressed the view that INEC should bring this request to the attention of the appropriate commodity committees to make provision for Tara gum in Commodity Standards where appropriate.

Non-allocation of ADI by JECFA for i) certain substances for which no specifications exist and ii) certain substances for which specifications exist but which have no known food use

138. The Committee noted that JECFA at its 29th Meeting expressed the view that it had difficulty in evaluating a number of substances due to the absence of specifications of food grade material or the absence of information on actual food use. The US delegation although pointed out that no public health reasons had been voiced and some substances had group ADIs expressed for their anion and cation components, ADIs had not been allocated to the ionizable salts.

139. The Committee supported the views of the USA and agreed that it was premature to withdraw the endorsement for such substances as had been proposed by commodity committees without further obtaining their advice.

140. The Committee agreed that the additives should be "temporarily endorsed" and that further information should be requested from commodity committees.

Furthermore, for some of the additives evaluated by JECFA which were on its agenda because the CCFA had expressed the wish for an evaluation, a similar situation applied. The Secretariat suggested a procedure which would make it possible to avoid the apparent inconsistency between the JECFA opinion and the views of the CCFA.

141. Firstly, the Secretariat would consult JECFA on how they might resolve the problem within the terms of reference of JECFA. Secondly, the Secretariat would ensure that when JECFA was asked to review technological data, information would be obtained either through the appropriate Commodity Committee or through the sponsoring government or international organization that there was indeed an intended

or actual use. JECFA should not assume that there is no food use simply in the absence of a reply to its written request for information.

Need for JECFA evaluation of Na, K and Ca Salts of i) Capric, ii) Caprylic, iii) Lauric and iv) Oleic Acids

142. The Committee noted that the above subject was already discussed by the Working Group on Priorities and would be considered under a later agenda item (see Para 256).

ENDORSEMENT OF CONTAMINANT PROVISIONS

143. The Committee had before it document CX/FA 87/10 - Part III, containing provisions for contaminants in several Codex standards. The decisions of the Committee were tabulated in Appendix IV - Part III of the report.

1 Codex Committee on Processed Fruits and Vegetables

Draft, Standard for Canned Mangoes (ALINORM 87/20, App. V)

Draft Standard for Mango Chutney (ALINORM 87/20, App. VI)

144. The Committee discussed the proposed levels for lead and tin. The delegation of France was opposed to the high levels of lead and tin in canned mangoes. The delegation of France was also opposed to the high level of lead. The delegation of Finland and Cuba made a reservation on the level of tin only. The delegation of Sweden inquired what the proposed levels meant in relation to sampling procedures. The Committee was informed by the Chairman of the Joint ECE/Codex Alimentarius Expert Committee on Fruit Juices, Prof. Pilnik, that that Committee had developed similar provisions for lead and tin in fruit juices, but that a sampling plan had not yet been elaborated. The Committee decided, therefore, to temporarily endorse these provisions for lead and tin until there was no more information about sampling plans.

2 Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices

Draft General Standard for Fruit Nectars Preserved Exclusively by Physical Means . (ALINORM 87/14, App. II)

Draft Standard for Fruit Juices Preserved Exclusively by Physical Means (ALINORM 87/14, App. III)

Lead

145. The delegation of Canada reminded the Committee of the latest evaluation of lead by JECFA which established a PIWI for young children. The delegation expressed the view that there was a need for a study of the lead levels in fruit juices in the light of the PIWI for young children and reserved its position.

146. The Chairman of the Group of Experts explained to the Committee that this Group of Experts had proposed lead levels of 0.3 mg/kg in fruit juices, but that JECFA's latest opinion with regard to the PIWI of lead was not available to it at that time. The provision for lead in fruit juices in his view should be under review. The Committee decided to temporarily endorse the provision for lead.

Tin

147. The Committee discussed the proposed level of 200 mg/kg. The delegations of Finland, the Fed. Rep. of Germany, France, Austria, Switzerland, Italy and Poland were

opposed to this provision, since they found the proposed level still too high. The delegations of Australia and Thailand, however, were of the opinion that the level should be maintained at 250 mg/kg. The Committee decided to endorse temporarily a level of 200 mg/kg. The Committee also decided not to differentiate between the types of packaging materials used, since products may have been repacked from metal containers for shipping into other types of container for sale to the consumer.

3. Codex Coordinating Committee for Europe (ALINORM 87/19, Appendix III)

Draft Regional Standard for Mayonnaise

148. The Committee endorsed the proposed contaminant provisions.

4 Codex Committe on Processed Fruits and Vegetables (ALINORM 85/20)

Provision for Lead and Tin in Codex Standards for Canned Fruits and Vegetables

149. The Secretariat informed the Committee that the CCPFV had now proposed levels for lead and tin that would be applicable to all the standards that it had elaborated; CCFA had previously not endorsed these proposals, and had advised the Commodity Committee to set specific limits for the different products. However, CCPFV did not find it appropriate and confirmed the general limits. There was some concern in the Committee that the levels were too high in view of these types of foods which might be consumed in relatively large quantities. The Committee therefore decided to endorse temporarily these provisions, and to keep the proposed figures under review.

5 Review of the Status of CCFA Endorsements on the Maximum Levels of Tin and Lead in different commodities and suggested action to be taken by CCFA

Tin

150. The Committee decided to endorse temporarily a level of 250 mg/kg of tin in all the standards for processed fruits and vegetables. It also decided to endorse temporarily a level of 200 mg/kg of tin in all fruit juice and fruit nectar standards Prof. Pilnik, observer for IPPA, speaking in his capacity as Chairman of the Joint ECE/Codex Alimentarius Group of Expert on Fruit Juices said that the recommendation of the Secretariat regarding a general level of 200 ppm tin in section V of CX/FA 87/10-Part III was correct on the basis of the report at the last meeting of the Group of Experts on Fruit Juices (ALINORM 87/14). That Group had accepted a recommendation of a contaminants WG for this figure. Prof. Pilnik said that unfortunately the report did not make it clear that the WG only considered the possibility of lowering the level of 250 to 200 and not the raising of the 150 level to 200. While there were excellent technological reasons not to go lower than 200, however, there was no reason to raise the level of 150 to 200 ppm in these particular fruit juices named in the standards. This view was confirmed by the Chairman Dr. Ronk of the ad hoc Working Group on Contaminants at the Fruit Juice Meeting. The Committee therefore decided to endorse temporarily a level of 200 mg/kg in all the fruit juice standards proposed, except those where a level of 150 mg/kg had already been indicated.

Lead

151. The Committee decided, in line with its earlier decision (see para 149) to endorse temporarily all the proposed maximum levels of lead in the different commodities.

CONSIDERATION OF CLASS NAMES AND THE INTERNATIONAL NUMBERING SYSTEM OF FOOD ADDITIVES (INS)

152. The Committee had before it the report of a WG that considered the documents CX/FA 87/9, CX/FA 87/9-Add.1 and Conference Room Document 17. The report of the WG, included as Appendix V, was presented by the Chairman of the Working Group, Mr. L. J. Erwin. He informed the Committee that the WG considered the documentation for this agenda item and made recommendations on: a) the Proposed International Numbering System, b) the suitability of the class name "Artificial Sweetener" for Labelling Purposes, c) the need for additional class names for Labelling purposes, d) the method for declaring chemically modified starches, e) the adequacy of the range of technological functions for each of the additives in the draft INS and f) General Considerations.

Proposed International Numbering System

153. The Chairman explained that the WG had agreed that all additives that have been allocated numbers by EEC, as listed in Annex 1 of document CX/FA 87/9, should be included in the INS. The WG had agreed that the draft INS should contain no reference to flavours and flavourings and that the E prefix to the numbers should be deleted The Committee agreed to these recommendations of the WG.

Suitability of Class names and the Need for Additional Class Names

154. The Committee noted that the WG was of the opinion that the class name "Artificial Sweetener" was not appropriate for labelling purposes, and that it recommended the class name "sweetener" instead. The Committee agreed with this recommendation although several delegations commented on the recommendation. The delegation of Australia reserved its position.

155. The observer of the EEC pointed out that the EEC Labelling Directive required the use of the name "artificial sweetener" as a class title and that this directive showed full conformity with the Codex Labelling Standard.

156. The delegation of Thailand expressed concern on the inclusion of nutritive and non-nutritive sweeteners under one heading as this might be confusing for persons who need to restrict consumption of sugars, e.g. diabetics. The Chairman of the WG pointed out that the sweeteners involved were all "intense" sweeteners and would be identified by number on the label. Information would need to be provided by national authorities in pamphlets to enable consumers to interpret the significance of the numbers. The delegation of Thailand wished to reserve its position.

157. The delegation of the Republic of Korea pointed out that the name "artificial sweetener" did not describe a technological function.

158. Regarding the need for additional class names for labelling purposes the WG had considered a proposal of the delegation of the USA. In this proposal Codex Class Names had been given a range of technological functions as sub-classes. The Committee noted, that Annex I of CX/FA 87/9-Add.1 would restrict the number of class names for labelling purposes to a small number of terms which were easily understood by consumers. It was stressed that this list was only a tentative one for consideration at the next meeting of the Committee.

159. It was further recommended by the WG that "bulking agents, foaming agents and humectants" should be included as separate class names. The Committee agreed with this recommendation.

160. The Committee was informed that the WG had not reached a decision on whether packing gases should be considered as processing aids rather than food additives. However, the Committee did not reach a conclusion on this matter and would consider the problem at its next meeting.

161. The delegation of Bahrain noted that Food Grade activated vegetable carbon was listed as a food additive, whereas it had not been allocated a class name. This problem will also be considered at the next meeting of the Committee.

162. The observer of the EEC noted that a revised list of class names had been prepared and questioned the status of this list. It was explained by the Chairman of the WG that all entries should be subject to further review.

163. The delegation of the Netherlands questioned the decision of the WG on the inclusion of the term "colour preservatives", as this is similar to "colour fixatives "mentioned under the class name "stabilizers". The Committee decided to put the term "colour preservatives" between square brackets.

164. The delegation of Switzerland pointed out that phosphates were not included as a class name and requested clarification of the meaning of the term "colouring adjuncts" The Chairman of the WG explained that phosphates, like alginates, are chemical names and not technological functions and that the WG had included them as a sub class "Moisture Retaining Agents" under class name "Humectants". Inclusion as a separate entry should be considered at the next session. The term "colour adjunct" was derived from a JECFA classification which could be found in Food and Nutrition Paper № 30.

165. The Committee agreed with the conclusions of the WG on this matter noting the reservations expressed. It was agreed that Annex 1 of CX/FA 87/9-Add.1 should be sent out with a CL for further consideration by governments and international organizations.

Modified Starches

166. The WG recommended that modified starches need to be declared only under the general class name of "Modified Starches". The numbers allocated to each particular substance would be maintained in the INS in order to make identification possible.

167. The delegations of Finland, Norway and Sweden were of the opinion that modified starches should be declared under the class name "Thickeners" rather than as "Modified Starches" as required by the present Standard for Labelling of Prepackaged Foods.

168. The delegation of Thailand explained to the Committee that in their country modified starches were classified as additives.

169. The Committee endorsed the recommendations of the WG.

The Adequacy of the Range of Technological Functions for each of the Additives in the Draft INS

170. The Committee agreed with the proposal of the WG that technological functions should be included in the INS to distinguish them from the functional classes used for labelling. It was agreed that the technological functions proposed in CX/FA 87/9 be included in the INS. The Committee agreed to include "flavour enhancer" as another technological function of aspartame.

General Considerations

171. The Chairman of the WG explained to the Committee that numbers had been allocated to all additives cleared by JECFA.

172. The WG further agreed that enzymes listed in Annex III of document CX/FA 87/9 could not be allocated numbers since it was not clear whether they should be considered as processing aids or additives. There was general agreement that all immobilized enzymes should be considered as processing aids. The delegation of the OSA had no objection to a classification of functional enzymes as food additives and immobilized enzymes as processing aids. Only a few enzymes have to be considered as food additives.

173. The WG did not have time to review all the additives proposed for inclusion in the INS. the Committee accepted an offer of the Chairman of the WG to prepare a comprehensive list for the next session.

174. The Committee noted that the food additives in Annex II of CX/FA 87/9-Add.1 would be incorporated into the INS and distributed with a CL for further comments.

175. The Committee thanked the Chairman and reinstated the Working Group under the Chairmanship of Mr. L. J. Erwin (Australia). The membership of the Working Group is as follows: Australia, Bahrain, Belgium, Canada, Denmark, France, Fed. Rep. of Germany, Finland, The Netherlands, New Zealand, Portugal, Sweden, Switzerland, Thailand, United Kingdom and USA and observers from AMFEP, EEC, European Starch Ass., CIAA, FAO, IFAC, IFG, IFGMA and IOCU.

CODEX LIST B

176. The Chairman of the CCFA informed the Committee that no updated Codex List B had been prepared for this Session, since only two proposals for revision were received. He proposed to consider List B as a working list for the Secretariat.

177. The Secretariat referred to the large number of flavours in List B. The Chairman of the Working Group on Flavours, Dr. Goddijn, informed the Committee that the recommendation of his Working Group is to leave the list in its present form awaiting a final evaluation of flavours.

178. The delegation of the USA suggested that in the near future some additional working the field of flavours had to be done and recommended maintaining the list.

179. The Secretariat informed the Committee about financial problems which made it difficult to include the list as an Appendix to the final report of this Session.

180. The Committee decided to retain List B as it is and to postpone a decision about additions to it until next session.

STATUS OF CODEX LISTS OF FOOD ADDITIVES

181. The Committee had before it document CX/FA 87/3 prepared by the Secretariat and Room Document 11 containing the comments from the USA. The Committee noted that the document gave a history of the Codex Lists of Food Additives. Additives are listed in Codex List A1 and A2 by name and in Codex List B and C by reference. Codex List A contains all the food additives toxicologically cleared by JECFA while Codex List C, which is the negative list contains all food additives which in JECFA's view should not be used in food. Codex List B contains food additives which have a potential use in food

and in which governments and international organizations have shorn interest. It is a working list of substances pending evaluation by JECFA.

182. The Secretariat recommended that Codex Lists A and C should have a mandatory status since that would make the situation clear in international trade and since member governments may or may not follow the advice of JECFA.

183. The delegation of the USA drew the attention of the Committee to the fact that Codex Lists A and C represent essentially decisions of JECFA on food additives. JECFA is an independent expert body and is not a forum for international agreements by governments. For this reason it was of the view that Codex Lists of Food Additives could not be mandatory. The Committee supported the view that the status of Codex Lists A and C should remain advisory.

Advisory List of Food Additives used in Soft Prinks

184. The Committee had before it document CX/FA 87/3-Add.1, CL 1986/9-FA and Room Document 12 containing the comments received from the USA.

185. The Secretariat reminded the Committee of the decision taken by it at its last session to update the Advisory List of Food Additives used in Soft Drinks. The Secretariat analysed the comments received from member governments and prepared a Room Document 22 containing a list of food additives suggested by different governments for addition to the existing advisory list.

186. The delegation of the USA gave a brief history of the development of this advisory list. This list was developed many years ago in an attempt to make a list of additives used in soft drinks in order to estimate food additive intake from soft drinks. The list which had been shortened to contain only those additives that had been given an ADI by JECFA was published in CAC/FAL 1979 Guide to the Safe Use of Food Additives. This document was made obsolete when Codex Alimentarius Volume XIV was published.

187. Several sessions ago the UK delegation requested that the advisory list be published in Volume XIV. The US proposed to update the list with those additives that had received clearance from JECFA since 1979. At the last CCFA this list was available but since no other delegation had an opportunity to comment on it, it was sent out as a CL for comments with the US update attached containing only those additives which had received an ADI. The delegate pointed out that since the CAC had indicated that there is no need for a Standard for Soft Drinks, the purpose of developing a list of food additives for use in soft drinks is not clear.

188. Since any list that can be drafted as a result of this exercise cannot be comprehensive, and since the purpose for such a list is not clear, the delegation of the USA proposed that further work on development of a list of food additives in soft drinks be discontinued. The proposal of the USA received the agreement of the Committee.

CONSIDERATION OF FLAVOURS

189. The Committee had before it document CX/FA 87/6, Proposed Draft General Requirements for Natural Flavour, and document CX/FA 87/6-Add.1 containing comments, Conference Room Document 18, and the report of the Working Group on Flavours CX/FA 87/6-Add.3. The Working group met under the chairmanship of Mr. J. P. Goddijn (The Netherlands).

General Requirements for Natural Flavourings

190. The Committee decided that the General Requirements should be advisory and that it need not be elaborated further in the Codex step procedure. The text would have to be editorially amended to remove the "mandatory" language. On the basis of the recommendations of the Working Group the Committee adopted the following modifications:

1. Scope
This section was deleted since the description of the product was thought to define adequately the products covered by the standard.

2. Description

2.1 Definition

2.1.2 Natural Flavours and Natural Flavouring Substances
The Committee adopted the following extended definition: "Natural Flavours and Natural Flavouring Substances are preparations and single substances respectively, acceptable for human consumption, obtained exclusively by physical, microbiological or enzymatic processes from material of vegetable or animal origin either in the raw state or after processing for human consumption by traditional food-preparation processes (including drying, roasting and fermentation)."

191. The delegation of Finland was of the opinion that this definition required further clarification since it was not clear as to what biotechnical processes were meant. It was noted that it was not the intent of the General Requirements to be specific in laying down each requirement concerning the preparation of natural flavours

192. It was noted that during the discussion in the Working Group, several questions on the interpretation of borderline cases had been raised. It had been pointed out that international agreement on such border line cases would be difficult to obtain and that some latitude for national interpretation was acceptable in an advisory document.

2.1.3 Adjuncts and 3. Food Additives

193. It was decided to maintain this section unchanged as it was not deemed necessary to list the individual food additives or ingredients which may be used in the preparation of natural flavourings.

4 Biologically Active Substances

194. The Committee agreed that, with the exception of natural quinine and quassine isolates, none of the other substances listed in this section should be permitted to be added as such. The delegation of Thailand questioned whether the maximum levels for coumarin and saffrol included in the General Requirements were safe in view of the conclusions of the 25th Session of JECFA. It was noted that JECFA at its 25th session had concluded that the levels arising from the presence of these substances in natural raw materials should be kept to a minimum in accordance with GMP. The Committee agreed that there was no need to ask JECFA for a reevaluation of the limits for the biologically active substances included in the General Requirements. The delegations from Argentina and Thailand reserved their positions on the provision for biologically active substances. The modified text of the introduction to this section reads as follows: "With the exception of quinine and quassine, the following biologically active substances should not be added as such to food and beverages. They may be presented only as a

result of the use of natural flavourings in foods and beverages provided that the maximum levels specified below in mg/kg of the final product ready for consumption are not exceeded".

5. Hygiene

195. The Committee adopted the following modified text of Section 5.2.(a): "shall be free from micro-organisms of public health significance which are capable of . . .". It was noted that the words underlined did not appear in the standard text used in Codex Food Standards. It was also noted that the section on hygiene would have to be endorsed by the CCFH.

6 Labelling

196. The Committee noted that the Working Group had discussed additional comments raised at the meeting dealing with consumer information and labelling. The delegation of the Fed. Rep. of Germany had asked whether a flavouring containing 20% natural flavours and 80% adjuncts (such as solvents) could still be labelled as "natural" The Committee agreed that it was natural. Because the document was only advisory, the Committee agreed there was no need to include a section on labelling, therefore, it was deleted.

7. Methods of Analysis

197. Several additional references for methods of analysis were accepted for inclusion without further discussion. It was noted that the methods had been included purely for information and not intended for use as reference methods, thus they would not have to be referred to the CCMAS for endorsement.

APPENDIX I

198. On the proposal of the USA, the Committee adopted the following additional footnote to the title of Appendix I:

> "It should be understood that the references contain potential sources for natural flavours without any reference to the safety or acceptability for human consumption of any specific source."

Status of the General Requirements for Natural Flavourings

199. The Committee agreed that the General Requirements should be referred to the CAC for endorsement and publication in the appropriate Codex document as an advisory text The Secretariat and the Chairman of the Working Group were requested to prepare the revised text for inclusion in the report of the Committee (Appendix VI). It was agreed that there would be little to be gained by an additional round of government comments.

Priority setting for the safety evaluation of flavouring substances

200. The following documents were distributed to the participants:

a. Consumption Ratio and Food Predominance of Flavouring Materials. Third Cumulative Series. February 1987 by J. Stofberg and F. Grundshober.

b. A Codex Flavour Priority Ranking System by A. M. Rulis, R. L. Hall, R. A. Ford, J. Stofberg and O. D. Easterday.

These papers were presented in detail by the respective authors J. Stofberg and O. D. Easterday to the Working Group.

201. The Committee was informed about several aspects of the priority ranking system proposed by the US delegation. The system is based on structure-activity relationship and human exposure, with adjustments for Consumption Ratio and existing toxicity data During the discussion it was pointed out that the ranking order is strongly influenced by exposure, where as the Consumption Ratio adjustments influence the result to a lesser extent. The paper was presented as an interim paper and the US delegation offered to reconsider the relative weight of different parameters for priority setting on the basis of comments received. Several delegations agreed with the proposal of the Swiss delegation to give weight to the Consumption Ratio for the final ranking.

202. The question was raised as to how the Priority Ranking System would be elaborated further. It was suggested that a CL would be sent out to obtain the views of Governments. JECFA would be asked to evaluate the approach proposed by the US for ranking flavouring-substances in order of priority. EEC and IOFI offered to participate in this evaluation. This was generally supported by the Committee. It was also pointed out that following the approach to ranking being agreed upon it would be necessary for an international group of experts to validate priority ranking process and to make its advice to CCFA. Such a group should include experts competent in structure-activity relationship. The delegations of the UK and Thailand suggested that an international seminar on the approach to priority ranking would be useful and should involve interested industries, international organizations and regulatory authorities.

203. The Committee agreed that the priority ranking approach should be placed on the Codex Priority List and referred to JECFA for its views. Governments should also be requested to comment on the priority ranking approach and these views and those of JECFA should be considered by the CCFA at a future session. The question of how to proceed further in performing the actual priority ranking could also be discussed at that session. The Committee recalled that it had already recommended several times that a special expert meeting be organized by FAO/WHO for this purpose.

Updating of Codex List B of flavours

204. The Committee noted that no change to list B would be made at this session. The UK delegation informed the Group that the correct identity of thioguaiacol included in list B is o-methoxy-thiophenol (2-methoxybenzenethiol).

Establishment of an ad hoc Working Group on flavours

205. The Committee reappointed Mr. J. P. Goddijn (The Netherlands) as Chairman of the Working Group and also decided to reinstate the Working Group with the following membership: Belgium, Canada, Denmark, Finland, Fed. Rep. of Germany, France, Italy, Japan, The Netherlands, Switzerland, Thailand, UK, USA, Bureau de Liaison, Commission of European Communities, CIAA, FAO, FIVS, IOFI and ISO.

CONSIDERATION OF PROCESSING AIDS

206. The Committee had before it documents CX/FA 87/12 - An Inventory of Processing Aids - CX/FA 87/12-Add.1 (Room Document) - which contained Government Comments on the inventory and CX/FA 87/12-Add.2 the report of the Working Group.

207. In introducing the report, the hairman of the Working Group emphasized the character of the inventory of Processing Aids, which was not intended to be a complete and "Positive list" of permitted processing aids. The purpose of the inventory was to

identify substances, which left residues in the food and which should be brought to the attention of JECFA for evaluation.

208. The Working Group had considered all the comments received and had made the necessary adjustments, in this way updating the inventory.

209. The Working Group recommended to the Committee for practical reasons rather than from any particular safety considerations to select Washing and Peeling Agents as a first category for consideration on a future priority list for JECFA review.

210. The delegation of France was of the opinion that it would be useful to draw up a General Priority List of processing aids and inquired why the Working Group had selected a category instead of substances. The Chairman of the WG explained that the WG had selected one category instead of individual substances because it is easier for JECFA to gather information about an entire class of substances than to evaluate them individually since there is information common to all of them. The selection of the category of Washing and Peeling Agents was made after the Chairman of the CCFO was consulted about catalysts and solvents as classes for evaluation. He replied that these categories were not ready for evaluation due to lack of information about residues.

211. The Committee agreed with the recommendation of the WG and decided to send out a CL requesting information on Washing and Peeling Agents.

212. The Committee also followed the recommendation of the Working Group to continue updating the inventory and to send out another CL requesting information on substances and residue levels.

213. The Committee acknowledged the fact that some of this information might be considered as trade secrets and therefore suggested that information of this nature could be sent directly to JECFA, in that way keeping the information confidential.

214. The Committee also confirmed the deletion of flour treatment agents from the inventory and from Appendix A. It also deleted modifying agents from the inventory and Appendix A on the basis cited in CL 1986/40-FA.

215. The Committee thanked the chairman of the Working Group and decided to reinstate it under the chairmanship of Mr. R. J. Ronk (USA). The membership is as follows: Belgium, Brasil, Canada, Denmark, Finland, France, Fed. Rep. of Germany, Italy, The Netherlands, Norway, Spain, Switzerland, Sweden, Thailand, United Kingdom, USA, Yugoslavia, AMFEP, CIAA, IFG, IGTC, FAO, WHO.

CONSIDERATION OF SPECIFICATIONS OF IDENTITY AND PURITY OF FOOD ADDITIVES

216. The Committee had before it document CX/FA 87/7 (Room Document) containing the report of the Working Group on Specifications. In introducing the report Dr. J. P. Modderman, Chairman of the Working Group, reminded the Committee of its specific responsibilities with regard to the elaboration of specifications for identity and purity of food additives. Draft Codex Specifications are circulated, requesting comments which are discussed by the Working Group and advice provided to the Committee. Although 15 comments had been received from governments and international organizations, the WG felt that there had been insufficient time to send comments since FAO Food and Nutrition Paper 34 had been received only 3 months before the 19th Session of this Committee. The Working Group had therefore postponed its review of this document to the next Session of CCFA and proposed to send out a new CL requesting comments on both FNP 34 and 37.

217. The Working Group felt, however, that sufficient replies were received to indicate to JECFA which specifications were provisionally identified as being in need of review. The Working Group indicated the following substances:

Bone phosphate	
Insoluble polyvinylpyrrolidone	
Isomalt	(along with other bulk sweeteners as a group)
Modified starches	(information requested by JECFA had now been provided by the European Association of Starch Manufacturers)
Nitrous oxide Saccharin	
Salts of fatty acids	
Sorbitan mono-oleate	
Sorbitol	
Xanthan gum	

218. The Committee noted that the Executive Committee of the CAC had not yet been able to respond to the recommendations made by CCFA at its last Session that Codex Advisory Specifications be published. The Committee recalled the reasons which have led to its recommendations and considered that they remained valid and compelling. The Committee repeated its request. The Secretariat informed the Committee that the issue will be again put on the agenda of the Executive Committee at its coming Session in June 1987. He also informed the Committee of an updated version of Volume XIV which will be available shortly and that in this version a cross reference is made to Codex Advisory Specifications.

219. The Committee agreed with a proposal of the Chairman of the Working Group to have that Working Group review this list of cross references at its next meeting.

220. The Committee further noted that a number of substances in the Codex Advisory List of Mineral Salts for Use in Foods for Infants and Children CAC Volume IX did not contain references to Codex Advisory Specifications and that in some instances the publications that were referred to did not, in the view of the Working Group, contain adequate specifications of the substances concerned.

221. The Committee agreed with the Working Group that all Codex Advisory Specifications should be subject to a review procedure to ensure the same quality. The Committee also noted that the Working Group was, in principle prepared to do the work.

222. The delegation of the Fed. Rep. of Germany drew to the attention of the Committee that the CCFSDU has started work in this field. The Committee decided therefore to inform the CCFSDU about its deliberations and also to seek advice from the Executive Committee on this matter.

223. The Committee thanked the Chairman of the Working Group and decided to reinstate the Working Group under the Chairmanship of Dr. J. P. Modderman (USA). The Group will have the following members: Canada, Denmark, Fed. Rep. of Germany, Finland, France, Switzerland, Thailand, United Kingdom, EEC, IFAC, IFG, IGTC, MARINALG and FAO.

CONSIDERATION OF INDUSTRIAL AND ENVIRONMENTAL CONTAMINANTS IN FOOD

224. The Committee had before it the report of the Working Group on Contaminants (CX/FA 87/18-Add.3) and various documents which had been considered in detail by the Working Group. The WG met under the chairmanship of Dr. S. A. Slorach (Sweden) to discuss the following topics:

Present status of legislation by Governments to limit contaminant levels in food

225. The Committee noted that the limits for aflatoxins in foods and feeds and for mercury and methylmercury in fish and fish products in member countries differed considerably. It also noted that the documents CX/FA 87/18 - Part 2 and Add.1 and CX/FA 87/18 Part I contained the most up-to-date information on the subject of present status of legislation by governments to limit aflatoxins in foods and feeds and mercury and methylmercury in fish.

226 The Committee noted that certain data in documents CL 1986/30-FA and CX/FA 87/10 -Part II were erroneously attributed to the Peoples' Republic of China, the Committee made the necessary corrections. In order to keep the documents up-to-date Governments were requested to keep the chairman of the Working Group informed on any changes in regulations in their country.

Joint UNEP/FAO/WHO Food Contamination Monitoring Programme or GEMS/Food

227. The Committee was informed of the Programme's activities as described in document CX/FA 87/18-Add.1. At present, 35 countries are participating in GEMS/Food and periodically provide information on levels of selected organochloride and organophosphorus pesticides, PCBs, cadmium, lead and tin in individual foods and the total diet. In response to a CCFA request, mercury had recently been added to the Programme. The latest report covering the period 1980-1983 was made available to the WG. In addition, data on mercury in fish and on dietary intakes of cadmium and lead were collected from Codex Contact Points and made available to the Committee.

228. Dr. Gorchev stated that the Guidelines for the Study of Dietary Intakes of Chemical Contaminants (WHO Offset Publication № 87, 1985) prepared in cooperation with CCFA and CCPR were being used by an increasing number of countries to estimate consumers' exposure to chemical contaminants in the diet.

229. The Committee was also informed that the Technical Advisory Committee (TAC), which periodically reviews the progress of GEMS/Food, had recommended that special emphasis be given to including developing countries in the Programme. In its over all evaluation, TAC was of the opinion that GEMS/Food was useful in increasing the awareness of possible health hazards associated with chemical contamination of food as being a focal point for international cooperation and information exchange, and in providing support at the national level for strengthening food contamination monitoring programmes.

Sampling Plans and Compliance Criteria for Contaminants in Food

230. The Committee noted that the Working Group had concluded that a general approach to sampling in checking compliance for contaminants in food would not be feasible and that the matter would have to be dealt with on a contaminant-by-contaminant basis. It also noted that the CCMAS had elaborated sampling plans for Codex Committees. The WG was of the opinion that sampling criteria might be

elaborated, as a start, for those contaminants for which Codex maximum limits already existed.

231. The Committee was informed that the Working Group had recommended that, for environmental contaminants (Hg, Cd, Pb) and for aflatoxins, a practical sampling procedure involving the preparation of a laboratory sample from a composite sample and adopted by the Codex Committee on Pesticide Residues (CAC/PR 6-1985) should be submitted to governments for comment. Regarding other contaminants, such as those arising from canning and processing (e.g. As, Sn, Zn, Cu, Fe) a different sampling procedure might be necessary. Contaminants such as Pb and As, which were both environmental and technological contaminants, should be considered in relation to the source of the contamination.

232. The delegation of the Netherlands expressed doubts about the sampling plans elaborated by the CCPR being applicable for aflatoxins. The instructions elaborated by the CCMAS, in fact, suggested that for aflatoxins special sampling criteria might have to be elaborated. The Secretariat suggested that sampling plans should also be discussed in relation to the technological contaminants for which Codex maximum levels existed. It was pointed out that the problem can be approached either as sampling for quality assurance or health inspection. These two approaches required different sampling procedures.

233. The Committee agreed that it would restrict its consideration of sampling and lot acceptance criteria to the guideline levels for mercury and aflatoxins for the time being (see paras 236, 242).

Maximum levels for Mercury in Fish

234. A brief review of mercury levels and exposure reported in the literature, national/international regulations and recommendations, method of computing dietary intakes of mercury and a summary of data received from Codex Contact Points are given in document CX/FA 87/18-Add.2 presented to the Committee.

235. It was noted that thirty-eight countries had replied to the 1984/86 Circular Letters requesting data on levels of total mercury in fish and fishery products. The highest mean/median values were reported in shark (2.5 mg/kg). Perch had a tendency to show levels of mercury in the vicinity of 0.5 mg/kg; while median levels in cod, herring and salmon seemed lower, in the vicinity of 0.1 mg/kg. A substantial amount of data was received on mercury levels in tuna; median or mean values ranged from 0.01 to 1.5 mg/kg, the majority of the values being in the 0.1 - 0.5 mg/kg range. Median levels in molluscs and crustaceans seldom exceeded 0.1 mg/kg. Data collected in this special study conducted under the UNEP/FAO/WHO Food Contamination Monitoring Programme indicated that approximately 97% of the mean levels of mercury reported in a variety of fish and shellfish were at or below 0.5 mg/kg; and 99% of the values were at or below 1.0 mg/kg. It should be kept in mind that this data base is extremely limited in comparison to what is available worldwide.

236. The Committee noted that the Working Group had discussed the setting of maximum levels for mercury in fish in the light of comments received from the Codex Committee on Fish and Fishery Products, which said there was no need to set maximum levels. The WG agreed to establish guideline levels, rather than mandatory maximum levels which should not be exceeded.

Guideline Levels for Mercury in Fish and Fish Products

The Guideline levels recommended hereunder are intended for total mercury in fresh or processed fish and fish products moving in international trade. Lots should be considered as being in compliance with the guideline levels if the level of total mercury in the analytical sample, derived from the composite bulk sample, does not exceed 0.5 mg/kg, except for predatory fish, such as shark, swordfish, tuna and pike, for which the guideline for total mercury should be 1 mg/kg. Where these Guideline levels are exceeded, governments should decide, whether and under what circumstances, the food should be distributed within their territory of jurisdiction and what recommendations, if any, should be given as regards restrictions on consumption, especially by vulnerable groups such as pregnant women.

237. The Committee adopted the above recommendations of the Working Group and if the CAC agrees will submit them to Governments for comments. The Committee agreed that, governments should be requested to comment on the applicability of the sampling plans elaborated for pesticide residues to the Guideline levels for mercury.

Aflatoxins in foods and feeds

238. The Committee noted that the 19th and 20th Sessions of the Intergovernmental Group on Oilseeds, Oils and Fats had requested the CAC to complete, as soon as possible, the establishment of internationally agreed limits for aflatoxins in food and feed, together with recognized methods of analysis and sampling and methods for the reduction of contamination either at the production level or by detoxification.

239. The Committee noted that enough guidance in the form of guidelines and methods for the reduction of contamination with aflatoxin either at the production level or by detoxification, was available in FAO documents such ass

- FAO Food & Nutrition Paper № 10 - Prevention of Mycotoxins
- FAO Food & Nutrition Paper № 13 - Perspective on Mycotoxins
- FAO Food & Nutrition Paper № 21 - Mycotoxins Surveillance.

239a. The Committee also noted the existence of a Joint ISO/IDF/AOAC Committee on Dairy Products. That Committee is presently working on analytical methods for determination of aflatoxins in milk.

240. Regarding maximum levels for aflatoxins in food and feed, the Committee noted the conclusions of the 1987 Meeting of JECFA and also noted that insufficient data were available from monitoring for aflatoxins in food and feed. It had before it, however, an extensive survey of national limits for the various aflatoxins in food and animal feed stuffs. It agreed with the proposal of the WG that a proposal for guideline levels as indicated below be sent out for consideration and comments by governments:

Nuts, oilseeds, cereals and their products	15 µg/kg total aflatoxins B1, B2, G1, G2	
Milk and Milk Products	To be determined at a future session for aflatoxin Ml, when the method of analysis had been recommended by IDF/AOAC/ISO Tripartite Group on Methods of Analysis for Milk and Milk Products	
Various animal	- Straight feedingstuffs	50 µg/kg (B1)

feedstuffs as established by the EEC	- Complete feedingstuffs for cattle, sheep and goats (except dairy cattle, calves and lambs)	50 µg/kg (B1)
	- Complete feedingstuffs for pigs and poultry (except young animals)	20 µg/kg (B1)
	- Other complete feedingstuffs	10 µg/kg (B1)
	- Complementary feedingstuffs for cattle, sheep and goats (except dairy animals, calves and lambs)	50 µg/kg (B1)
	- Complementary feedingstuffs	30 µg/kg (B1)
	- Other complementary feedingstuffs	10 µg/kg (B1)
	- Groundnut, copra, palmkernel, cotton seed, babassu, maize and products derived from the processing thereof	200 µg/kg (B1)

241. It was agreed that the guideline levels should be subject to the same lot acceptance criteria and explanatory notes as mentioned above for mercury in fish (see above).

242. Regarding sampling plans and lot acceptance criteria for checking levels of aflatoxins in the above products, the Committee expressed preference for the sampling plans elaborated for pesticide residues. However, noting the remarks of the delegation of the Netherlands, (see para 232) the Committee agreed that governments be requested to express their views also on the other sampling plans included in document CX/FA 85/4 As regards methods of analysis for aflatoxins Bl, B2, Gl, G2 and Ml see paras 254, 255.

243. The Committee agreed that its future work in the field of contaminants should consist of:

a) finalization of sampling plans and lot acceptance criteria;
b) further elaboration of the guideline levels for aflatoxins and mercury in food/feeds; and
c) consideration of maximum levels for contaminants in Codex standards.

244. The Committee agreed that a paper should be prepared by the Secretariat on the role of the CCFA in connection with technological and environmental contaminants in food. The paper should take into account the question of foods subject to Codex Standards vs. unstandardized foods, the role of good manufacturing practice in influencing the maximum levels to be set for certain contaminants, that fact that some Codex Committees had adjourned sine die and other relevant considerations such as methods of sampling and lot acceptance criteria for contaminants. The paper should be distributed well in advance of the next session of the CCFA.

Establishment of a Working Group on Contaminants

245. The Committee reinstated the WG under the chairmanship of Dr. S. A. Slorach (Sweden). The membership of the Working Group is as follows: Austria, Australia, Belgium, Canada, Denmark, Finland, France, Fed. Rep. of Germany, Sweden, New Zealand, Norway, Rep. of Korea, Switzerland, Thailand, The Netherlands, United Kingdom, USA, EEC, WHO and FAO.

PRIORITIES, PACKAGING MATERIALS AND METHODS OF ANALYSIS FOR FOOD ADDITIVES

246. The Committee had before it the report of a Working Group that considered the documentation available for Agenda items 15 a) to 16 f) (CX/FA 87/1-Add.1). The report of the WG was presented by the Chairman of the Working Group Dr. (Mrs.) D. C. Kirkpatrick The WG established a Codex Priority List and made recommendations on the following subjects:

a. Approaches to limiting the occurrence of certain migrants in foods from food packaging material sources;
b. Methods of analysis of food additives in foods;
c. Methodology for determination of aflatoxins in foods;
d. Establishment of maximum limits for certain chemical substances on fruits and vegetables;
e. Procedures that member governments should follow for submission of data to JECFA.

Approaches to limiting the occurrence of certain migrants in foods from food packaging material sources

247. The WG considered a paper prepared in conjunction with comments from governments received in response to CL 1986/55-FA. The WG had considered five options for limiting the occurrence of migrants from food packaging materials. These options were:

- Option 1 Restricted level of migrant in foods
- Option 2 Restricted functional use level of migrant in food contact material
- Option 3 Restricted level of non-functional migrant in food contact material
- Option 4 Restricted level of extraction of migrant from food contact materials by food simulants
- Option 5 Restricted end-use of food contact materials in which migrant is present.

The Working Group recommended the following approaches to limiting the four migrants:

- Vinyl chloride — Option 3 plus option 1
- Acrylonitrile — Option 1 but options 3, 4 and 5 should not be dismissed and their applicability should be reconsidered further as developments in technology and methodology allow.
- Styrene — No specific limitation is necessary since for organoleptic reasons the presence of styrene is self-limiting. However, like all food contact materials, styrene polymer materials should be produced in accordance with good manufacturing practice which effectively limits residual styrene levels.
- DEHP — The Working Group was informed of additional studies pertaining to this substance since the last JECFA review. While some of these studies have been completed, others were underway. It therefore concluded that no action should be taken pending review by JECFA of toxicological studies recently completed and those currently underway.

The Committee agreed with the recommendations of the WG.

248. The delegation of Egypt believed that the problem posed by packaging materials was complex and the situation becomes more complex with different bodies (National and International) issuing different regulations which are contradictory to each other. The delegation commended the work of the Committee for clarifying the situation.

249. The WHO Secretary of JECFA informed the Committee that new toxicological data on Diethyl hexylphtalate (DEHP) was available since it was last evaluated by JECFA and agreed to include it in the agenda for discussion by JECFA at its next session.

250. The delegation of Italy did not agree with the recommendation of the WG and expressed the opinion that specific limitation of styrene in packaging materials was not necessary since it was self limiting due to organoleptic reasons. In its view both option 1 (restricted level of migrant in food) and option 3 (restricted level of non-functional migrant in food contact material) should be considered as possible approaches for limiting styrene migration from packaging materials into food.

251. The Committee agreed that a circular letter should be sent out. Member governments and international organizations will be asked to make specific proposals for limiting vinylchloride and acrylonitrile, migrating from packaging materials into food based on the options that the Committee had agreed to.

Methods of Analysis of Food Additives in Food

252. The Committee endorsed the five criteria considered by the WG for prioritizing food additives for validating methods of analysis. The five criteria are:

I. Toxicological assessment of the food additives in question, i.e. is there an ADI established, is it full, unconditional ADI, "non specified" or "not limited";

II. Extent of the use of a food additive - whether the additive is used in one or several food commodities and whether these commodities are major or minor constituents of the diet;

III. Availability of information on the levels of additives in a given commodity and the extent of any such levels;

IV. As a starting point those methods relating to additives for which maximum limits are established in Codex Standards;

V. Any indication of problems in trade because of the absence of a validated method.

253. The Committee agreed that the exercise on updating of validated methods for analysis of food additives should continue and that further information should be sought from member governments and international organizations. Canada agreed to begin the exercise on prioritization and to, report back to the Committee at its next session.

Methodology of the Determination of Aflatoxins in Food

254. The Committee noted that it had recommended guideline levels for nuts, oilseed, cereals and their products and that there was an immediate need for recommendation of a method for determination of aflatoxins in these products. The Intergovernmental Group on Oilseeds, Oils and Fats had also requested the CAC to recommend recognized methods of analysis for determination of aflatoxin B1, B2, G1 and G2 in oilseeds and their meals. The HG had concluded that there were validated methods in existence, which could be referred to the CCMAS.

255. It was noted that the determination of aflatoxin M1 in milk and milk products posed a special problem since aflatoxin M1 was present at nanogramme levels. It was noted that reliable methods were required which had been adequately tested, with information on their performance characteristics (e.g. limit of determination, coefficient of variation, etc.), before the Committee could consider Guideline levels for aflatoxin M1 in milk and milk products. The delegation of Canada agreed to prepare a Working Paper together with the USA on methods of analysis for determination of aflatoxin in nuts and grain products and in milk for consideration by CCMAS.

Codex Priority List of Food Additives and Contaminants for Consideration by JECFA

256. The Committee agreed to include the following food additives and contaminants in the Codex Priority List.

- Tin (proposed by Thailand and Australia)	
- Cadmium (proposed by Cuba)	
- Sucralose (proposed by UK, Ireland and CIAA)	
- Lipase from Mucro miehei	proposed by Denmark
- Glucose Isomerase from Streptomyces murinus	
- Protease from Bacillus licheniformis	
- Glycerol esters of wood resin (for specifications only)	proposed by USA
- Iodine (toxicologically acceptable upper limits of intake)	proposed by Canada
- Sodium, Potassium and Calcium Salts of Oleic Acid (for specifications only)	proposed by Denmark and Fed. Rep. of Germany

256a. The Codex Priority List as adopted by the Committee is given in Appendix VII. This had taken into account the priorities of the other Working Groups.

Procedures that member governments should follow for submission of data to JECFA

257. The WG noted that at its meeting the FAO/WHO Joint Secretariat had advanced the view that JECFA should only be asked to evaluate substances previously evaluated by other national or supra-national advisory bodies. The representative of the WHO Secretariat to JECFA outlined the evaluation procedure used by the Committee and the reasons why prior evaluation was useful. First evaluations of substances especially those with large data bases, usually require much communication and time to clarify, validate and complete the data base. The limited resources and time available to JECFA make it difficult to complete and validate the data bases of substances not previously reviewed which often results in JECFA's not being able to allocate ADIs at the first meeting where they are reviewed. On the other hand, the JECFA Secretariat recognizes that an important function of JECFA is to provide evaluations for those countries that do not have the capability to make their own evaluations, for example for the assessment of a product developed by a native industry in a developing country or for the evaluation of additives used in processes unique to these developing countries' needs In these situations, the JECFA Secretariat agrees that it may be appropriate that JECFA be the first to evaluate the substance.

258. The Committee noted that the document CX/FA 87/ll-Add.3 prepared by the Secretariat together with the clarification provided by the WHO Joint Secretary of JECFA

provided guidance to member governments as regards procedures that they should follow for submission of data to JECFA.

Establishment of Maximum Limits for Certain Chemical Substances on Fruits and Vegetables

259. The Committee agreed with the recommendations of the WG that assistance of the UNECE Working Party on Standardization of Perishable Produce and the proposed Codex Committee on Tropical Fruits and Vegetables will be sought to enable it to respond to the OECD request to establish maximum limits for certain chemical substances on fruits and vegetables. The USA expressed a reservation for the continuation of this activity by the Committee.

Establishment of Working Group on Priorities

260. The Committee thanked the Chairman and reinstated the WG under the Chairmanship of Dr. (Mrs.) D. . Kirkpatrick with the following members: Australia, Belgium, Canada, Denmark, Fed. Rep. of Germany, Finland, France, Ireland, The Netherlands, Norway, Rep. of Korea, Sweden, Switzerland, Thailand, United Kingdom, USA, AOAC, EEC, CIAA, EFLA, FAO, IFG, IFGMA, IGTC, IOCU, ISA, ISO, MARINALG International and WHO.

FUTURE WORK

Consideration of Vitamins and Minerals

261. The Committee recalled its decision taken at the last session to consider a paper prepared by the Fed. Rep. of Germany indicating the reasons for extending the definition of Food Additives to include vitamins and minerals. Such a paper was not available to the Committee for consideration at this session.

262. The delegation of the Fed. Rep. of Germany brought the attention of the Committee to the work of an ad hoc Working Group attached to CCFSDU on the Advisory Lists for vitamin compounds and mineral salts for foods for infants and children. The Committee agreed that this subject could be discussed at its next session under "Matters of Interest" from CCFSDU.

Procedures that could be followed by CCFA to express an opinion on use of Food Additives in Specific Foods for which there are no existing Codex Standards

263. The Committee had before it document CX/FA 87/19-Add.1 and Add.2 and CRD 15 containing the comments from the USA. The Committee noted that document CX/FA 87/19-Add l which identified the issues and suggested solutions to the problem was prepared by the FAO Secretariat and the Technical Secretariat of the Netherlands in response to the proposal of the Committee.

264. Introducing the paper the Secretariat informed the Committee that the subject came under its terms of reference. If it was the wish of the Committee work could be initiated either by selecting a food commodity and draft additive provisions (a vertical approach) or by selecting a category of food additives, e.g. antioxidants and draft proposals for their use in different foods (a horizontal approach). The needed information on the technological justification for the use of food additives indifferent foods could be requested from governments or could be gathered by a consultant.

265. The Secretariat informed the Committee that such an exercise as above will prove useful to many developing countries who look to Codex for guidance in food

additive matters and who have not been able to attend the Committee meetings to request assistance in this area.

266. The Committee noted from the comments received (CX/FA 87/19, Add.2 and CRD 15) that some member governments were in favour of such an activity. The USA, however, did not support the concept of this activity as described by the Secretariat and suggested that if needed, the activity could be carried out by an organization separate from the Joint FAO/WHO Food Standards Programme.

267. The delegation of Argentina expressed the view that there is a need for establishing food additive provisions in foods not covered by Codex Standards and proposed that such an activity should be undertaken on a food commodity basis (a vertical approach). However, the delegation of Canada reminded the Committee that this subject had been discussed at the last CCGP which made the decision that there was no need to standardize additional foods in international trades.

268. The delegation of the USA, however, foresaw many difficulties in initiating an exercise to establish food additive provisions in foods not covered by Codex Standards There would have to be international consensus on the list of permitted uses of food additives. Member states have their individual lists and when combined would result in a list of numerous different types of food to which each additive could be used. International consensus on technological need for all these uses including many foods which are difficult, to understand because of regional eating patterns of consumers would also have to be obtained. These different points of view on technological need are usually resolved in the Commodity Committees. In addition procedures to evaluate cumulative intake of additives based on a long list of additive uses would have to be developed.

269. The views of the USA were supported by the Committee which also recognized that the lack of a procedure for carrying out the activity is another reason not to commence work at this stage. The Committee, however, suggested that the views of the Codex Coordinating Committees on the subject should be sought and discussed at a future session. The Committee agreed with the suggestion that was made by Australia that the different texts on principles for the safe use of food additives be updated by the Secretariat and made available as a manual to the developing countries.

270. The delegations of Cuba, Argentina, Bahrain and Egypt appreciated the subject raised by the Secretariat in its paper and felt that this Committee should continue its efforts to aid the developing countries to solve their problems in this respect.

OTHER BUSINESS

271. The need for establishment of a new Codex Committee on Environmental Contaminants (including radionuclides and mycotoxins) was discussed.

272. Without in any way wishing to express dissatisfaction with the work of CCFA, the delegation of the UK informed the Committee that it would support the establishment of a Codex Committee on Environmental Contaminants and if that was agreed by the Commission, the UK would be prepared to host it. The delegations of Finland, Norway and Sweden also supported the creation of a separate Committee that would be able to devote more attention to the problems of environmental contaminants than the CCFA could. The delegation of Norway was also concerned about the present workload of the Committee, which in the future would increase if regular reviews of food additive provisions in Codex Standards is undertaken by the Committee.

273. The delegation of Belgium supported by the delegations of Italy, Portugal, Cuba, Bahrain and Poland expressed satisfaction in the way the environmental contaminants were treated by CCFA. At the present session considerable progress on the work on environmental contaminants resulted in specific proposals on the regulation of aflatoxins and mercury in certain foods being made. Indeed the workload was heavy but could be completed according to the schedule. Completion of some of the work on certain items such as flavours and the standard for salt would, however, result in considerable reduction in the workload of the Committee in future sessions. The delegations expressed the view that work on environmental contaminants was progressing well within the CCFA and that there was no need for establishing a new Codex Committee on Environmental Contaminants.

274. The delegations of the USA and The Netherlands expressed the view that the experience gained from the Codex Committee on Pesticide Residues would be an advantage for CCFA to continue its work on environmental contaminants.

275. The delegation of Egypt referred to the financial difficulties that it would face if it were to attend two different committees dealing with food additives and environmental contaminants and expressed the view that both activities should be retained by CCFA.

276. There was a consensus in the Committee with the reservations of UK, Norway, Sweden and Finland (Para 272), for the retention of activities on environmental contaminants within CCFA. The delegation of Canada proposed that CCFA could be renamed as the Codex Committee on Food Additives and Contaminants since the Committee was dealing with both the subjects.

277. The Chairman informed the Committee that the proposal of Canada could be discussed at the next session of the Committee on the basis of a document prepared by the Secretariat.

DATE AND PLACE OF NEXT SESSION

278. The Committee noted that its next session would be held in The Hague from March 8-14, 1988. The Secretariat agreed to make certain that the dates for the meeting would not clash with other Codex Committees.

LIST OF PARTICIPANTS *
LISTE DES PARTICIPANTS
LISTA DE PARTICIPANTES

Chairman of the Session:
President de la Session:
Presidente de la Reunion:

A. Feberwee
Ministry of Agriculture & Fisheries
Bezuldenhoutseweg 73
P. O. Box 20401
2500 EK The Hague
The Netherlands

ARGENTINA
ARGENTINE

D. Berazay
Diplomatico
Argentine Embassy
Catsheuvel 85
2517 KA The Hague
The Netherlands

AUSTRALIA
AUSTRALIE

L. J. Erwin
Principal Executive Officer, International Programs
Department of Primary Industry
Canberra ACT 2614

Dr. Gordon de Cean
Director of Food Administration
Department of Health
Furzer street
Woden
Canberra ACT 2606

J. J. Herron
Director, CSR International
66 Mark Lane
London EC 3R 7HS
United Kingdom

AUSTRIA
AUTRICHE

E. Plattner
Federal Ministry of Health and Environmental Protection
Radetzkystrasse 2
A-1030 Vienna

BAHRAIN

Alliath A. Ameer
Food Hygiene Technician
Public Health Directorate
P. O. Box 42
Manama

BELGIUM
BELGIQUE
BELGICA

Ch. Cremer
Inspecteur-Chef de Service
Ministère de la Santé Publique
Cité Administrative de l Etat
Quartler Vésale
1010 Bruxelles

P. Balduck
Director Food Law Department
LVN/FIA
Kortenberglaan 172
1040 Brussels

P. Demanet
74, Strombeeklinde
1820 Grimbergen

M. Fondu
Food Law Research Center
Institute of European Studies
Free University of Brussels
39, Avenue Fr. Rooseveld
B-1050 Brussel

Dr. G. Kayaert
Technical adviser
N. V. Jacky
Fabriekstraat 39
9350 Dendermonde

BRAZIL
BRESIL
BRASIL

P. R. Palm
Second Secretary of the Embassy of Brazil
Mauritskade 19
2514 HD Den Haag
The Netherlands

Altanlr J. Gava
Brazilian Food Industries Association
Av. 9 de Julho, 3452
Sao Paulo, SP

M. Killner
Brazilian Food Industries Association
Av. 9 de Julho 3452
Sao Paulo, SP

CANADA

Mrs. D. C. Kirkpatrlck
Director
Bureau of Chemical Safety
Health Protection Branch
Health and Welfare Canada
Tunney s Pasture
Ottawa, K1A OL2

J. A. Drum
Industry Adviser
Coca Cola Limited
42, Overlea Blvd,
Toronto, Ontario M4H 1B8

PEOPLE'S REPUBLIC OF CHINA

You Xin
Chief Engineer
Bureau Food Industry of China
Ministry of Light Industry
no. 22, Fou Wai Street, Beijing

Cao Zhe
Engineer
State Administration of Import and Export
Commodity inspection of the People's Republic
of China Inspection Technical Standards Division
Jianguomenwai No. 12 Beijing

Jin Qi Zhang
Deputy Director
Scientific Research Institute of Fragrance & Flavour
Industry, Ministry of Light Industry
138 Fen Yang Road, Shanghai

Liu Sheng Ming
Deputy Director
China Import & Export Commodity Inspection
Technology Institute
12, Jianguomenwai street,
Beijing

CUBA

A. Castro
Funcionario
Min. Salvo Publica
Calle 23 Y
N. Habana 4

CZECHOSLOVAKIA

Dr. A. Szokolay
Director of Food Research Institute
82509 Bratislava
Trencianska 53

DEM. PEOPLE'S REP. OF KOREA

Pak Du Nam
Vice-head of Food Institute
Pyongyang, P.0-13

Kang Un Sik
Researcher of Food Institute
Pyongyang, P.0-13

DENMARK
DANAMARK
DINAMARCA

Inge Meyland
Scientific Officer
National Food Agency of Denmark
Central Laboratory, Division A
Nutrients and Food Additives
National Food Agency
Morkhoj Bygade 19
DK 2860 Soborg

B. Fabech
Scientific Officer Food Law Department
National Food Agency
Morkhoj Bygade 19
DK 2860 Soborg
Denmark

P. Th. Madsen
Head of Department
Fed. of Danish Industries
Dept. for Food and Consumer Affairs
H. C. Andersens Boulevard 18
DK 1596 Copenhagen V.

EGYPT

Gamal el Dinghali
Chairman Arab Medical Packing
P. O. Box 137
Kubagardens
Cairo

Yousef Houila
Managing Director
Alex. Oil & Soap Co.
76, Canal El Mahmodla Streat Karmous (Alexandria)
Egypt

FINLAND

Dr. A. Hallikainen
Toxicologist
National Board of Trade and Consumer Interests
P. O. Box 5
SF-00531 Helsinki

S. Heiskanen
Research Manager
Finnish Food Industries Federation
Unioninkatu 14
SF-00130 Helsinki

Mrs. L. Rajakangas
Senior Inspector of Food Division
National Board of Trade and Consumer Interests
P. O. Box 5
SF-0053 Helsinki
Finland

Mrs. H. Wallin
Research Scientist
Technical Research Centre of Finland
Food Research Laboratory
Biologinkuja 1
SF-02150 Espoo

FRANCE
FRANCIA

Mme. C. Rioux
Inspecteur
Ministère de l'Economl, des Finances et de la Privatisation
D. G. C. C. R. F.
13 Rue Saint-Georges
75009 Paris

Mme. Duhau
AFNOR
Association Francaise de Normalisation
Tour Europe - Cedex 7
92080 Paris-la-Defense

J. P. Mareschi
Directeur Relations Sci. et Adm.
Groupe BSN
7 Rue de Teheran
75008 Paris

Odiot
Secretaire General
SYNPA
41 bid Bd
Latour Maubourg
75007 Paris

Saint Guilhem
Délégué Scientiflque
Nestlé France
Quai du Pdt. P. Doumer
Courbevoie 92 400

Vacher
Chef de Service
S. F. H.
Cedex 3
92080 Paris La Defense

P. M. Vincent
Food Legislative Manager
Roquette frérea
62136 Lestrem

GERMANY, FEDERAL REPUBLIC OF
ALLEMAGNE, REPUBLIC FEDEREALE D
ALEMANIA, REPUBLICA FEDERAL DE

P. kuhnert
Regierungsdirektor
Bundesministerium für Jugend
Familie, Frauen und Gesundheit
Deutschherrenstrasse 87
D-53 Bonn 2

Dr. H. Hilpert
Adviser
Deutsche Unilever Gab H
Dammtorwall 15
D-2000 Hamburg 36

Dr. R. Langlais
Adviser
Coca-Cola GmbH
Max-Keith-strasse 66
D-43 Essen 1

Dr. W. Lucas
Wiss. Oberrat
Bundesgesundheitsamt
Postfach 33 00 13
D-1000 Beriln 33

H. E. Muermann
Verband der Deutschen Essenzenindustrie e. V.
Meckenheimer Allee 87
D-53 Bonn 1

Dr. G. Müller
Adviser
BASF Aktienges.
ME/Z D 205
Carl-Bosch-Strasse 38
D-6700 Ludwigshafen

Dr. W. Pölert
Wissenschaftl. Leiter des
Bundes für Lebensmittelrecht and Lebensmittelkunde e. V.
Godesberger Allee 157
D-53 Bonn 2

Drs. P. J. Sträter
Adviser
Südzucker
postface 20 66
D-6800 Mannheim

Dr. K. Trenkle
Regierungsdirekcor
Buadesministerium für Ernährung, Landwirtschaft and Forsten
Rochusstrasae 1
D-5300 Botan 1

HUNGARY
HOHGRIE
HUNGRIA

Mrs. Dr. J. Sohàr
Head, Dept. of lexicological Chemistry
National Institute of Food Hygiene and Nutrition
P. O. Box 52
H-1476 Budapest

INDONESIA

Mrs. Sjamsimar Sitaba
Head, Sub Directorate of Food Legislation
Directorate of Food Control
Percetakan Negera 23
Jakarta

Mrs. Indrawati Soegijanto A
Head, Sub Directorate of Food Standardization
Percetakan Negera 23
Jakarta

Mrs. Untari Takain
Head, Sub Directorate of Food Registration
Percetakan Negara 23,
Jakarta

IRAN

Dr. M. Tonkaboni
Co-Director
Food & Drug Laboratory
Ministry of Health
Imam Khomiani Street
Tehran

IRELAND

R. H. Murray
Food Drink & Tobacco Federation
Naomh Phroinnsias
Mornington
Via Drogheda Co. Louth

ITALY
ITALIE
ITALIA

Mrs. A. Bocca
Capo Reparto
Alimenti Lipidici
Instituto Superione della Sanità
Viale Regina Elena 299
00100 Roma

B. Battistotti
Professore
Universita Cattolice
Piacenze It.

E. Dell'Acqua
Chemist
S. P. A., Via Biella 8
Milan

Prof. L. Giannico
General Director of Foods
Hygiene and Nutrition
Ministero Sanita
Roma

L. Ciccardini
C/O Federchimica
Via Accademia 33
20131-Milano

G. Luft
Adviser
Centro, STVDI
Maria Branca
Via Ed. Perro 1
20158 Milano

G. Penna
SPAD
SPA 15063
Casseno Spinola

Mrs. Or. M. A. Perinelli
Monopoli di Stato
Via delle Luce 34a/bis
00100 Roma

Dr. G. Porcelli
Chemiste
Ministero Sanita
Piazza G. Marconi 25
00144 Roma

Dr. F Puddu
Chemiste Industrial
Via Lomelline 37
20133 Milano

Mrs. Prof. E. Quattrucci
Research Scientist
Istituto Nazionale della Nutrizione
Via Ardeatina 546
00179 Roma

JAPAN
JAPONT

T. Ito
Food Chemistry Specialist
Food Chemistry Division
Environmental Health Bureau
Ministry of Health and Welfare
1-2-2 Kasumigaseki, Chiyota-ku,
Tokyo

Takashi Akiyama
Technical Adviser
Japan Flavor & Fragrance Manufacturers Association
C/O T. Hasegawa Co. Ltd.
no. 9, 4-chome
Honcho
Nihonbashi, Chuo-ku
Tokyo

T. Hashimoto
Japan Tobacco Inc.
2-2-1 Toranomon Minatoku
Tokyo 105

T. Inokuchi
Technical Adviser
Japan Food Additives Association
1-2-16 Nihonbashi
Horidome Cho
Chuo-Ku, Tokyo 103

T. Matsunaga
technical Adviser
Japan Food Additives Association
Takita-Build.
1-2-16 Nihombahi-Horidomecho
Chuo-Ku
Tokyo 103

E. Sato
Technical Adviser
Japan Food Additives Association
1-2-16, Nihonbashi, Hodidome-Cho.
Chuo-Ku
Tokyo 103

REPUBLIC OF KOREA

Dr. D. W. Balk
Director of Hygiene Department
National Institute of Health
5 Nockbon-Dong
Seoul

Dr. S. M. Byun
Professor
Dept. of Biological Science and
Engineering
Korea Advanced Institute of Science
and Technology (KAIST)
P. O. Box 150
Chungyang, KAIST
Seoul

Mr. E-Mam Hwang
IGTC Representative
720 Banghak-dong, Dobong-Ko,
Seoul

Dr. I. H. Kim
Advisor, FAO/WHO Food Standard
Programme of Rep. of Korea
Seo-do Chemical Co. Ltd.
Rm. No. 401, Hon-il Bldg.
San 127-1, Seocho-Dong, Kangnam-Ku
Seoul

MEXICO

Mco. J. Gomez-Farías Leal,
Directora de Regulación Sanitaria
de Alimentos, Secretaría de Salud
Hamburgo 213, 10th Floor
Mexico, D. F.

THE NETHARLANDS
PAYS-BAS
PAISES-BAJOS

J. P. Goddijn
Public Health Officer
Ministry of Welfare, Health and Cultural Affairs
P. O. Box 5406
2280 HK Rijswijk

Dr. R. F. van der Heide
Head of the Food and Nutrition Dept.
Ministry of Welfare, Health and Cultural Affairs
P. O. Box 5406
2280 HK Rijswijk

B. Evenhuis
Director
Product Safety Assurance
International Flavours & Fragrances
Liebergerweg 72-92
1221 JT Hilversum

W. J. de Koe
Directorate Food & Quality Affairs
Ministry of Welfare, Health and Cultural Affairs
P. O. Box 5406
2280 HK Rijswijk

G. M. Koornneef
General Commodity Board for Arable Products
P. O. Box 29739
2502 LS The Hague

H. J. Lindenbergh
Van den Bergn en Jurgens
P. O. Box 590
3000 AN Rotterdam

Dr. C. Nieman
Commission of the Dutch Food and Agricultural Industry
Netherlands Federation of Christian Employers
P. O. Box 84100
2508 AC The Hague

R. B. M. Wouters
Nutrition and Quality Affairs Services
Ministry of Agriculture and Fisheries
P. O. Box 20401
2500 EK The Hague

Mrs. C. Zuur
Ministry of Housing, Physical Planning
and Environment
P. O. Box 450
2260 MB Leidschendam

NEW ZEALAND
NOUVELLE-ZELANDE
NUEVA ZELANDIA

J. S. Fraser
Assistent Director (Food Standards)
Public Health Division
Department of Health
P. O. Box 5013
Wellington

NORWAY
NORVEGE
NORUEGA

Ms. R. Kjelkevik
The National Quality Control
Authority for Processed Fruits
and Vegetables
Ministry of Agriculture
P. O. Box 6399-Etterstad
0604 Oslo

Mrs. T. Hellstrom
Executive Officer
The Directorate of Health
P. O. Box 8128 Dep.
N-0032 Oslo 1

POLAND
POLOGNE
POLONIA

Dr. K. Karlowski
Chief of Laboratory
National Institute of Hygiene
Dept. of Food Research
24, Chocimska Street
00-791 Warsaw

A. Pszczolkowski.
Deputy Chief of Section
Ministry of Foreign Trade
Quality Inspection Office
32/34 Zurawia
Warsaw

Mrs. M. Tokarzowa
Chief of Section
Ministry of Agriculture, Forestry
and Food Economy
30 Wspólna St.
Warsaw

Mrs. H. Witecka
Chief of Department
Ministry of Agriculture, Forestry
and Food Economy, 30 Wspólna St.
Warsaw

T. CWIK
Specialist
Central Laboratory for Radiological
Protection, Konwaliowa 7,
03-194 Warszawa

PORTUGAL

M. C. G. Barreto Dias
Head, Food Quality
Control Laboratory
Laboratorio Central de Qualidade
Alimentar
Rua Alexandra Herculano 6, 4 andar
Lisboa

Mrs. M. do Rosário Nogueira
Techn. Superieur de la Santé
I. N. S. A.
Av. Padre Cruz
1699 Lisboa

SPAIN
ESPAGNE
ESPANA

Sra. M. de la Luz Carretero
Jefe Seccion
Productos Alimentarios
Ministerio Sanidad y Consumo
Po. Prado 18-20
28014 Madrid

A. Carbajo
Tecnico
Ministerio de Sanidad y Consumo
Po. del Prado 18-20
Madrid 28014

A. Contijoch
Presidente AFCA
Bruc 72-74
08009-Barcelona

Jesús Campos Amado
Tecnico
Direccion General de Politica Alimentaria
Paseo Infanta/Isabel no. 1
Madrid

Dr. J. M. Rafols
Director de Investigacion
Union Salinera de Espana S. A.
Rambla Estudios, 109-le
08002 Barcelona

SWEDEN
SUEDA
SUECIA

S. A. Slorach
Head of Food Research Department
National Food Administration
Box 622
S-751 26 Uppsala

Mrs. B. Blomberg-Johansson
Head of International Secretariat
National Food Administration
Box 622
S-75126 Uppsala

Dr. A. Edhborg
Manager
Food Law Research,
Quality and Nutrition
AB Findus
Box 500
S-26700 BJUV

A. Grundström
Quality Control Manager
Semper AB
Box 23142
S-104 35 Stockholm

Mrs. A. Janelm
Senior Administrative Officer Food Standards Division
National Food Administration
Box 622
S-751 26 Uppsala

SWITZERLAND
SUISSE
SUIZA

Y. Siegwart
Vice-directeur
Office Fédéral de la Santé Publique
Haslerstrasse 16
CH-3001 Bern

P. Rossier
Office Fédéral de la Santé Publique
Head of Section Codex Alimentarius
Haslerstrasse 16
CH-3008 Berne

F. Baumann
Co. AG
Belleristrasse 5
Zurich

P. A. Cadby
Firmenich S. A.
C. P. 239
1211 Genève 8

Dr. B. A. Gubler
Givaudan
Ueberlandstrasse
CH-8600 Duebendorf

Dr. J. Hofstetter
Chemist
F. Hoffmann-La Roche
Grenzacherstrasse 124
CH-4000 Basel

G. Huschke
Chemist
Mischelistrasse 39
CH-4153-Reinach

T. Kappeler
Microbiologist
NESTEC
1800 VEVEY

Ch. Vodoz
Firmenich S. A.
CP 239
CH-1211 Geneve 8

THAILAND
THAILANDE
TAILANDIA

U. Dechmani
Director of Plant Protection
Service Division
Dept. of Agricultural Extension
Phaholyotln Road, Bangkhen
Bangkok 10900

Ms. R. Kumton
Standards Officer, Office of
Nat. Codex Alimentarius Committee
Thai Industrial Standards Institute
Rama 6 Street
Bangkok 10400

T. Satasuk
Assistant Secretary-General
Food and Drug Administration
Ministry of Public Health
Bangkok

S. Siwawej
Department of Food Science
and Technology
Faculty of Agro-Industry
Kasetsart University
Bangkok 10900

TURKEY

S. Titiz
Ministry of Agriculture, Forestry and Rural Affairs
Turkey Agricultural Counsellor of Turkish Embassy
Utestrasse 47
5300-Bonn
West Germany

UNITED KINGKOM
ROYAUME-UNI
REINO UNIDO

J. Horton
Head of Food Additives Branch
Standards Division
Ministry of Agriculture, Fisheries and Food
Room 554
Great Westminster House
Horseferry Road
London SHIP 2AE

J. F. Howlett
Government Service
Ministry of Agriculture, Fisheries and Food
Great Westminster House
Horseferry Road
London SW1P 2AE

J. N. Counsell
Technical Manager
Vitamin & Chemical Division
P. O. Box 8
Welwyn Garden City
Hertfordshire
London AL7 3AY

J. Hammond
Science Executive
Food and Drink Federation
6 Catherine Street
London WC2B 5JJ
United Kingdom

J. Russell
Information Officer
Kelco International Ltd.,
Westminster Tower
3 Albert Embankment
London SE1 7R2

Mrs. H. Sackville Hamilton
Head of Food Contamination (Radiation Unit)
Standards Division
Ministry of Agriculture, Fisheries and Food
Room 526
Great Westminster Road
Horseferry Road
London SW l P 2 AE

Mr. G. Meekings
Head of Atomic Energy Unit, Food Science Division
Ministry of Agriculture Fisheries and Food
65, Romney Street,
London SW1P 3RD

A. Wyatt
Senior Executive Officer
Chemical Industries Association
Kings Buildings
Smith Square
London SWI

UNITED STATES OF AMERICA
ETATS UNIS D'AMERIQDE
ESTADOS UNIDOS DE AMERICA

R. J. Ronk
Deputy Director
Center for Food Safety and Applied
Nutrition (HFF-2)
U. S. Food and Drug Administration
200 C Street S. W.
Washington DC 20204

Dr. J. P. Modderman
Senior Scientific Advisor
Division of Food Chemistry & Technology
Center for Food Safety and Applied
Nutrition (HFF-458)
200 C Street, SW
Washington DC 20204

Dr. L. J. Czuba
Assistant Director
Central Research, Pfizer, Inc.
Groton, CT 06379

D. F. Dodgen
Staff Scientist
Keller & Heckman
1150 17th Street, N. W.
Washington DC 20036

Dr. G. E. Dunaif
Group Research Toxicologist
Campbell Soup Co.
P. O. Box 57D
Camden N. J. 08103

Dr. O. D. Easterday
Vice President and Chief
Product Safety Assurance Officer
International Flavours & Fragrances,
Inc.
1515 State Highway No. 36
Union Beach, New Jersey 07735-3597

C. Feldberg
Vice President
CPC International Inc.
P. O. Box 8000
Englewood Cliffs, NJ 07632

S. Gardner
Vice President
Grocery Manufacturers of America
Science & Technology
1010 Wisconsin Avenue
Washington, DC 20007

Dr. P. F. Hopper
Corporate Director
Scientific Affairs
General Foods Corporation
250 North Street
White Plains New York 10625

Mrs. J. C Howell
Manager, Regulatory Submissions
The Coca Cola Company
310 North Avenue
Atlanta Georgia 30301

Dr. J. C. Kirschman
Scientific Coordinator
RJR Nabisco
Bowman Gray Technical Center
Reynolds Blvd.
Winstom-Salem, NC 27102

Ms. R. F. Perkowski
Manager, Regulatory Affairs
Nutrasweet Co.
4711 Golf Road
Skokie, It 60076

B. Rosenthal
Director, Office of Management
Center for Food Safety
& Applied Nutrition
U. S. Food & Drug Administration *
200 C Street, S. W.
Washington DC 20205

YUGOSLAVIA
YOUGOSLAVIE

Dr. Ivan Petrovíc
Institute of Public Health of SR Croatia
41000 Zagreb
Rockefeller Street 7

Dr. Z. Zivkovic
Head of Agr. Dept. in Standardisatio
Sl. Penezica 35
Beograd

Dr. V. Zotovíc
Senior Advisor
Federal Committee for Labour, Health
and Social Welfare
Bui. Avnoja 104
11070 Beograd

INTERNATIONAL ORGANIZATIONS
ORGANISATIONS INTERNATIONALES
ORGANIZACIONES INTERNACIONALES

(AMFEP) ASSOCIATION OF MICROBIAL FOOD ENZYME PRODUCERS

D. Praaning
AMFEP
Avenue de Cortembergh AZ
Bruxelles
Belgium

D. A. Toet
President of AMFEP
Gist Brocades
P. O. Box 1
Waterlngseweg 1
NL Delft
The Netherlands

(AOAC) ASSOCIATION OF OFFICIAL ANALYICAL CHEMISTS

Mrs. M. Lauwaars
European Representative
P. O. Box 153
6720 AD Bennekom
The Netherlands

BUREAU DE LIAISON DES SYDICATS EUROPEAN DES PRODUITS AROMATIQUES

J. P. Ostendorf
Flavour Specialist
Naarden International N. V.
P. O. Box 2
1400 CX Bussum
The Netherlands

CONFEDERATION EUROPEENE POUR LE COMMERCE DE DETAIL

A. van Ewijk
Chairman Foodlaw Committee
Avenue de la Loyense Entree 11
Bruxelles
Belgium

(CEES) EUROPEAN COMMITTEE FOR THE STUDY OF SALT

M. J. Enjalbert
Président de la Commission des
Sels Alimentaires
51, Rue d'Anjou
75008 Paris
France

B. Moinier
Secrétaire Général du CEES
11 Bis, Rue Victor Hugo
75116 Paris
France

Rocamora
President Comission Normalisation
Union Salinera
Ramblas 109
08002 Barcelona
Spain

(CEFIC) EUROPEAN COUNCIL OF CHEMICAL MANUFACTURERS' FEDERATION

L. Deurinck
Counsellor, Technical Department
Avenue Louise 250, Bte 71
B - 1050 Brussels
Belgium

(CIAA) CONFEDERATION DES INDUSTRIES AGRO ALIMENTAIRES DE LA CEE

Ph. Mouton
Director
Confederation of the EEC
Food and Drink Industries
Rue Joseph II, 40
B-1040 Brussels
Belgium

R. H. Murray
Chairman of the CIAA Flavours W. G.
"Naomh Phroinnsias"
Mornington, Near Drogheda
Co. Louth
Republic of Ireland

(CIMSCEE) COMITE DES INDUSTRIES DES MAYONNAISES ET SAUCES CONDIMENTAIRES DE LA C. E. E.

V. Staniforth
Chairman, Technical Committee
Av. de Cortenbergh 172
B-1040 Brussels
Belgium

EEC COMMISSION OF THE EUROPEAN COMMUNITIES

R. Haigh
Commission of the European Communities
Hue de la Loi 200
B-1049 Bruxelles
Belgium

(EFEMA) EUROPEAN FOOD EMULSIFIER MANUFACTURERS' ASSOCIATIOH

Mrs. J. Thestrup
Food Legislation Officer
Grindsted Products A/S
8220 Brabrand
Denmark

(EFLA) EUROPEAN FOOD LAW ASSOCIATION

J. H. Byrne
'Mijas' Southside
Steeple Aston
Oxfordshire
OX5-3RU
United Kingdom

Prof. Dr. P. S. Elias
Director International Project
BFE
Postfach 3640
D-7500 Karlsruhe 1
Fed. Rep. of Germany

Prof. A. Gerard
Secretaire General
3, Boulevard de la Cambre (Bolte 34)
1050 Brussels
Belgium

G. O. Kermode
President European Foodlaw Association
Boulevard de la Cambre, 3
Box 34
B-1050 Brussels
Belgium

(FIVS) FEDERATION INTERNATIONALE DES INDUSTRIES ET DU COMMERCE EN GROS DES VINS, SPIRITUEUX, EAUX-DE VIE ET LIQUERS

Dr. S. Valvassori
(FIVS)
Via San Secondo 67
Torino
Italy

(IDF) INTERNATIONAL DAIRY FEDERATION

A. E. Penning
Kon. Ned. Zuivelbond FNZ
Volmerlaan 7
P. O. Box 5831
2280 HV Rijswijk
The Netherlands

J. M. van der Bas
Director Netherlands Controlling
Authority for Milk and Milk Products
P. O. Box 250
3830 AG Leusden
The Netherlands

(IFAC) INTERNATIONAL FOOD ADDITIVES COUNCIL

R. Cristol
Executive Director
International Food Additives Council
5775 Peachtree-Dunwoody Rd.
Suite 500-4D
Atlanta, GA 30342
U. S. A.

(IFAC) INTERNATINAL FEDERATION OF GLUCOSE INDUSTRIES

E. G. Rapp
E. Claeslaan 4
B-1980 Tervuren-Brussel
Belgium

Dr. D. B. Whitehouse
Quality Assurance Officer, CPC Europe
R & D Centre
Havenstraat 84
B1800 Vilvoorde
Belgium

J. Pelgroms
Food Consultant, Amylum N. V.
Burchtstraat 10
9300 Aalst
Belgium

(IFGMA) INTERNATIONAL FEDERATION OF GROCERY MANUFACTURERS ASSOCIATIONS

S. Gardner
Vice President (IFGMA)
1010 Wisconsin Avenue N. W.
Washington DC 20007
U. S. A.

Ch. Feldberg
Vice President
CPC International, Inc.
Box 8000
Englewood Cliffs
New Jersey 07632
U. S. A.

R. W. Harkins
Director R+D
McNeil Specialty Products Co
P. O. Box 3000
Grandview Road
Skillman
New Jersey 08558
U. S. A.

(IFMA) INTERNATIONAL FEDERATION OF MARGARINE ASSOCIATIONS

I. Hodac
Secretary General (IFMA)
74, Rue de la Loi
1040 Brussels
Belgium

A. Leon
Research Manager
Unilever Research Laboratories
0. v. Noortlaan 120
3133 AT Vlaardingen
The Netherlands

(IGTC) INTERNATIONAL GLUTAMATE TECHNICAL COMMITTEE

Dr. A. G. Ebert
Chairman
P. O. Box 76181
Atlanta, Georgia
U. S. A. 30358

Y. Sugita
Chief Executive Officer
IGTC
Kyobasi 1-5-8
Chuo-ku, Tokyo 104
Japan

(ILSI) INTERNATIONAL LIFE SCIENCES INSTITUTE

D. Serruys
21, Toutefais Street
9720 De Pinte
Belgium

INEC) INSTITUI EUROPEEN DES INDUSTRIES DE LA GOMME DE CAROUBE

Dr. E. Nitter
Secretary General (INEC)
Redingstrasse 2
CH 8280 Kreuzlingen
Switzerland

(IOCU) INTERNATIONAL ORGANIZATION OF CONSUMERS UNIONS

D. H. Grose
14 Buckingham Street
London WC2N 6DS
United Kingdom

(IOFI) INTERNATIONAL ORGANIZATION OF THE FLAVOUR INDUSTRY

Dr. F. Grundschober
Scientific Adviser, (IOFI)
8 Rue Charles Humbert
Geneva
Switzerland

Dr. J. Stofberg
Vice President,
PFW Division of Hercules Inc.
33 Sprague Avenue
Middletown N. Y. 10940
U. S. A.

(IPPA) INTERNATIONAL PECTIN PRODUCERS ASSOCIATION

Prof. Dr. W. Pilnik
Agricultural University
Dept. of Food Science
De Dreijen 12
6703 BC Wageningen
The Netherlands

(ISO) INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

H. W. Schipper
Head Dept. Food Agriculture
Nederlands Normalisatie Instituut
Postbus 5059
2600 GB Delft
The Netherlands

(MARINALG INTERNATIONAL) WORLD ASSOCIATION OF SEAWEED PROCESSORS

J. J. Piot
Counseiller/Advisor
(Marinalg International)
85 Blvd. Haussmann
75008 Paris
France

W. J. Sander
Board Member
(Marinalg International)
85 Blvd. Haussmann
75008 Paris
France

(NATCOL) NATURAL FOOD COLOURS ASSOCIATION

J. E. Sorenson
Chr. Hansen's Lab. A/S
Sanki Annae Plads 3
DK-1250 Copenhagen K
Denmark

C. Verniers
President NATCOL
15, Rue du Louvre
15001 Paris
France

(OFCA) ORGANIZATION OF MANUFACTURERS OF CELLULOSE PRODUCTS FOR FOODSTUFFS IN THE EEC

A. Overeem
Secretary General, (OFCA)
P. O. Box 661
2280 AR Rijswijk
The Netherlands

(WHO) WORLD HEALTH ORGANIZATION

Mrs. Dr. H. Galal Gorchev
International Programme on Chemical Safety
World Health Organization
1211 Geneva 27
Switzerland

Dr. J. L. Herman
ICS/EHE
World Health Organization
1211 Geneve 27
Switzerland

Dr. P. J. Waight
Radiation Scientist
World Health Organization
1211 Geneva 27
Switzerland

FAO

Dr. A. W. Randell
Nutrition Officer (Food Science)
FAO
Via delle Terme di Caracalla
00100 Rome
Italy

(IAEA) INTERNATIONAL ATOMIC ENERGY AGENCY

Dr. Mrs. A. Salo
IAEA
P. O. Box 100
A-1400 Vienna
Austria

JOINT FAO/WHO SECRETARIAT

Dr. N. Rao Maturu
Food Standards Officer
Joint FAO/WHO Food Standards Programme
FAO
00100 ROME
Italy

Dr. L. G. Ladomery
Food Standards Officer
Joint FAO/WHO Food Standards Programme
FAO
00100 Rome
Italy

TECHNICAL SECRETARIAT

B. C. Breedveld
Netherlands Education Bureau on Food and Nutrition
P. O. Box 85700
2508 CK The Hague
The Netherlands

E. J. V. J. Christ
Unilever Research Laboratories
0. van Noortlaan 120
3133 AT Vlaardingen
The Netherlands

R. Top
Ministry of Agriculture and Fisheries
P. O. Box 26401
2500 Ek The Hague
The Netherlands

ORGANIZATIONAL SECRETARIAT

J. N. Lemain
Ministry of agriculture and Fisheries
P. O. Box 20401
2500 Ek The Hague
The Netherlands

Mrs. A. B. Van der Veen
Secretary codex Alimentarius
Contact point of the Netherlands
Ministry of agriculture and Fisheries
P. O. Box 20401
2500 Ek The Hague
The Netherlands

* The Heads of Delegations are listed first: Alternates, Advisers and Consultants are listed in alphabetical order.
Les Chefs de délégations figurent en tête et les suppleants, conseillers et consultants sont énumérés par ordre alphabêtique.
Figuran en primer lugar los Jefes de las delegations, los Supletes, Asesores y Consultores aparecen por orden alfabético.

APPENDIX II

REVISED LABELLING SECTION OF THE CODEX STANDARD FOR FOOD GRADE SALT

7. LABELLING

In addition to sections 2, 3, 7 and 8 of the Codex General Standard for Labelling of Prepackaged Foods (Ref. № CODEX STAN 1-1985) [1], the following specific provisions apply:

[1] Hereafter referred to as General Standard.

7.1 The Name of the Food

7.1.1 The name of the food to be declared on the label shall be "Salt".

7.1.2 The name "salt" shall have in its close proximity a declaration of either "Food Grade Salt" or "Cooking Salt" or "Table Salt".

7.1.3 Only when salt contains one or more ferrocyanide salts, added to the brine during the crystallization step, the term "dendritic" could be included accompanying the name.

7.1.4 Where salt is used as a carrier for one or more nutrients, and sold as such for public health reasons, the name of the product shall be declared properly on the label, for example "salt fluoridated", "salt iodated", "salt iodized", "salt fortified with iron", "salt fortified with vitamins" and so on, as appropriate.

7.1.5 An indication of either the origin, according to the description in Section 2, or the method of production may be declared on the label, provided such indication does not mislead or deceive the consumer.

7.2 List of Ingredients

A complete list of ingredients shall be declared in accordance with Section 4.2 of the General Standard.

7.3 Net Contents

The net contents shall be declared by weight in metric ("Système International") units in accordance with Section 4.3 of the General Standard.

7.4 Name and Address

The name and address shall be declared in accordance with Section 4.4 of the General Standard.

7.5 Country of Origin

The Country of Origin shall be declared in accordance with Section 4.5 of the General Standard.

7.6 Lot Identification

The lot identification shall be declared in accordance with Section 4.6 of the General Standard.

7.7 Date Marking and Storage Instructions

7.7.1 Date Marking is needed only in case of Food Grade Salt, used as a carrier for nutrients and sold as such for public health reasons. The date of minimum durability and Storage Instructions shall be declared in accordance with Sections 4.7.1, 4.7.2 and 4.8 of the General Standard.

7.8 Quantitative declaration of Ingredients

A quantitative declaration of ingredients shall be made in accordance with Section 5.1 of the General Standard.

7.9 Exemptions from Mandatory Labelling Requirements

Exemptions from Mandatory labelling Requirements shall be made in accordance with Section 5.1 of the General Standard.

7.10 Labelling of Non-Retail Containers (outer containers for a number of prepackaged foods only) [1]

[1] See Paras 42-45 (ALINORM 87/12A).

In addition to Sections 2 and 3 of the General Standard the following specific provisions apply to outer containers of a number of prepackaged containers of Food Grade Salt.

Information required in Sections 7.1 to 7.7 shall either be given on the container or in accompanying documents, except that the name of the food, lot identification and name and address of the manufacturer or packer shall appear on the container. However, lot identification, and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such mark is clearly identifiable with the acommpanying documents.

APPENDIX III

DERIVED INTERVENTION LEVELS WHO PLANNED ACTIVITIES

Radiation protection assumes an international importance for health when the transboundary release of radionuclides results from a nuclear accident. In such an emergency, the crucial decisions facing governments are what levels of radioactive contamination in air, water and food can be tolerated in the short- and long-term, and at what levels should control measures be introduced to minimise the potential deleterious health effects. The Chernobyl accident clearly demonstrated that different national authorities had differing approaches which resulted in widely disparate levels. This variation in levels led to increased public concern, reduced public confidence and disrupted trade.

In Nuclear Power: Accidental Releases - Practical Guidance for Public Health Action (WHO, in Press), guidance is provided to Public Health authorities on the levels of dose at which intervention in the form of the introduction of control measures to avoid exposure, should be considered. This advice was given in the form of a dose range (5 to 50 mSv), below the lower level of which there was no justification on public health grounds to intervene. Above the upper level, control measures would almost certainly have been introduced.

Those countries with established nuclear power programmes have developed emergency plans which include actions to be taken when environmental contamination exceeds a set level (Derived Intervention Levels). However, many countries without a nuclear power programme have no emergency plans and seek guidance on how to deal with the problems caused by accidental environmental contamination.

Since the levels of environmental contamination at which specific control measures such as evacuation should be introduced are dependent on local circumstances, it is not feasible to develop guideline values which would be universally applicable for all intervention actions. However, following many requests for guidance from Member States and as a logical extension of its previous advice, WHO intends to develop guideline values for Derived Intervention Levels (DILs) below which it is not warranted to intervene on the grounds of preventing potential adverse health effects. These values may be adopted directly or used as a guide by Member States when developing their own. It is felt that these values may promote the harmonisation of Derived Intervention Levels between countries.

The radionuclides considered would be limited to those that are likely to be emitted in significant quantities in an accident at a nuclear facility, whether it is a nuclear power station, a reprocessing facility or a fuel fabrication plant. The following radionuclides would be included: ^{90}Sr, ^{106}Ru, ^{131}I, ^{134}Cs, ^{137}Cs, ^{239}Pu and ^{241}Am.

The dose per unit intake for the selected radionuclides will reflect the most sensitive group, usually infants, and will be based on internationally accepted data. In this way, a large measure of consensus will be achieved.

While the assessment of the dose to an individual from external irradiation from radionuclides deposited on the ground is relatively straightforward, the individual dose accrued from radionuclides ingested in food and water is dependent on complex variables, not least among which is the quantity of food consumed. In developing WHO guideline values the intention is to translate the acceptable lower level of dose (e.g. 5 mSv) into realistic contamination levels from the various exposure routes. Thus the amount of intake from differing foods, water and air should reflect the dose distribution

as accurately as possible and provide a practical health baseline. Since water and food intake varies from area to area, it is intended to develop regional food consumption patterns. Sufficient global data on food consumption are available to determine consumption of generic groups of food, which will ensure that the reduced consumption of a specific food item in a group will be compensated by the increased consumption of similar food in that group. Having one level for cereals ensures that protection is afforded no matter whether rice or wheat is the main cereal consumed, and that this is applicable generically over a wide range of cereal consumption.

The food groups would include cereals, roots and tubers, nuts and pulses, vegetables, fruit, meat, fish as well as milk and milk products. With the assistance of FAO, WHO has begun a survey of the available national food consumption data for groups of foods.

The basic outline and approach was reviewed at an interagency meeting with the participation of representatives of IAEA, FAO, OECD's Nuclear Energy Agency and the Commission of the European Communities in November 1986. It was also discussed at WHO's Executive Board meeting in January 1987.

A small expert group will be convened in April 1987 to prepare an initial draft which will be circulated to WHO focal points and other agencies for comment. The comments will then be collated and presented to a larger expert group in late September 1987 for finalisation before the end of the year.

It is felt that such a document would provide the health basis for consistent advice internationally and provide a firm basis to protect health, and the environment with minimal economic and social cost.

APPENDIX IV
Part I

ENDORSEMENT OF MAXIMUM LEVELS FOR FOOD ADDITIVES IN CODEX COMMODITY STANDARDS

This Appendix summarizes all provisions which were considered by the Codex Committee on Food Additives at its 19th Session.

Abbreviations used

E = Endorsed

TE = Temporarily Endorsed

EP = Endorsement Postponed for reasons given in the footnotes

Limited by GMP = Limited by Good Manufacturing Practice

NE = Not Endorsed

Contents

ENDORSEMENT OF MAXIMUM LEVELS FOR FOOD ADDITIVES IN CODEX COMMODITY STANDARDS

Codex Committee on Processed Fruits and Vegetables

DRAFT STANDARD FOR CANNED MANGOES (ALINORM 87/20, Appendix V, Step 8)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Pectins	Limited by GMP		E
Ascorbic Acid	200 mg Ag		E

DRAFT STANDARD FOR MANGO CHUTNEY (ALINORM 87/20, Appendix VI, Step 8)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Citric Acid	To maintain the p H at a level not above 4.6 if the product is heat pasteurized or limited by GMP if the product is heat sterilized		E
Acetic Acid			E
Na metabisulphite	100 mg/kg singly or in any combination expressed as SO_2	102	E
K metabisulphite		102	E
Na Benzoate	250 mg/kg singly or in combination expressed as Benzoic Acid	102	E
K Benzoate		102	E
Methyl, ethyl and propyl parahydoxybenzoates	250 mg/kg singly or in combination expressed as Benzoic Acid	102	E
Sorbic Acid	100 mg/kg		E

ECE/ Codex Group of Experts on Fruit Juices

DRAFT GENERAL STANDARD FDR FRUIT JUICES PRESERVED EXCLUSIVELY BY PHYSICAL MEANS (Step 5) (ALINORM 87/14, App. III)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Citric Acid Malic Acid	Limited by GMP		E
L-Ascorbic Acid	400 mg/kg		E
Carbon Dioxide	Limited by GMP	103	E

CODEX COORDINATING COMMITTEE FOR EUROPE

DRAFT EUROPEAN REGIONAL STANDARD FOR MAYONNAISE (STEP 5) (ALINORM 87/19, APP. III)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Acetic Acid Citric Acid Lactic Acid Malic Acid	Limited by GMP		E
Tartaric Acid	5 g/kg		E
Alpha Tocopherol	Limited by GMP	104	EP[1]
Mixed Tocopherol Concentrates	Limited by GMP	104	EP[1]
Butylated Hydroxy Anisole	160 mg/kg	105	TE
Butylated Hydroxy Toluene	160 mg/kg	105	TE
Calcium disodium EDIA	75 mg/kg	106	E
Curcumin	100 mg/kg singly or in combination in all types of Mayonnaise	108, 109, 110, 112	TE
Tartrazine		109, 110, 111, 112	TE
Sunset Yellow F. C. F.		109, 110, 111. 112	
Beta-Carotene		109, 110, 112	E
Beta-Apo-Carotenal		109, 110, 112	E
Beta-Apo-8' -Carotenoic		109, 110, 112	E

Acid Ethyl Ester			109 110, 112	E
Annatto extracts			107, 109, 110, 112	EP[2]
Chlorophyll	500 mg/kg, only in mayonnaise with herbs		109, 110, 112	E
Caramel III (ammonia)	500 mg/kg only in mayonnaise with mustard		109, 110, 112	E
Beet Red	500 mg/kg in mayonnaise with tomato		109, 110, 112	E
Natural or Nature identical flavouring substances as defined for the purpose of the Codex Alimentarius Commission	Limited by GMP		115, 116	TE
Artificial Flavouring substances as defined for the purpose of the Codex Alimentarius Commission	Limited by GMP	113, 114, 115, 116, 117		EP[1]
Benzoic Acid and Na and K salts of Benzoic Acid Sorbic Acid and Na Sorbate [4]	1 g/kg singly or in combination			E E
Carrageenan Sodium Alginate Potassium Alginate Propylene glycol Alginate Locust Bean Gum (Carob Gum) Sodium Carboxymethylcellulose Xanthan gum Tragacanth Gum Microcrystalline Cellulose	1 g/kg [1]			E
Chemically Modified Starches [2]	5 g/kg	118		EP[1]

Glucose Oxidase (Aspergillus niger var)	Limited by GMP		E

DRAFT STANDARD FOR VINEGAR (STEP 8) ALINORM 87/19, APPENDIX II)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Monosodium Glutamate Monopotassium Glutamate Calcium Glutamate	5 g/kg		E

[1] EP requiring the setting of a maximum level

[2] EP requiring the setting of a maximum levels in terms of bixin

[1] EP requiring specification of the individual substances

INTERNATIONAL OLIVE OIL COUNCIL

REVISED STANDARD FOR TABLE OLIVES (STEP 8)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Sodium Alginate	5 g/kg	119	E
Xanthan Gum	3 g/kg		E

Joint FAO/WHO Committee of Government Experts on the Code of Principles concerning Milk and Milk Products

DRAFT STANDARDS FOR ANHYDROUS BUTTER OIL, BUTTEROIL AND GHEE (CX 5/70 - 21ST SESSION, APPENDIX XV, STEP 7)

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Propyl Gallate			E
Octyl Gallate		121	NE
Dodecyl Gallate		121	NE
Ascorbyl Palmitate		120	E
Butylated Hydroxy Anisole	200 mg/kg but gallates not to	121	EP[1]
Butylated Hydroxy Toluene	exceed 100 mg/kg	121	EP[1]

[1] EP requiring the setting of a maximum level

CODEX COMMITTEE ON CEREALS, PULSES AND LEGUMES

CODEX STANDARD FOR WHEAT FLOUR

ALINORM 87/29 Appendix IX and Annex I, II and III of Appendix IX

Food Additive	Maximum Level in the finished product	Paragraph	Status of Endorsement
Mono-Calcium phosphate	2 500 mg/kg	122, 123, 124	EP[1]
Azodicarbonamide	45 mg/Kg		
Potassium bromate	50 mg/Kg		
Benzoyl peroxide	60 mg/Kg		
Chlorine dioxide	30 mg/kg		
Chlorine	2 500 mg/kg		
Fungal Amylase from Aspergillus Oryzae	GMP		
Proteolytic enzyme from Aspergillus Oryzae	GMP		

[1] EP requiring the commodity committee to reconsider the standards

CODEX COMMITTEE ON FOODS FOR SPECIAL DIETARY USE

DRAFT STANDARD FOR FOLLOW UP FORMULA (at Step 8) ALINORM 87/26, Appendix XIII)

Food Additive	Maximum Level in 100ml of Product Ready-for-Consumption	Paragraph	Status of Endorsement
Guar Gum Locust Bean Gum	0.1 g singly or in combination	125 - 130	E
Distarch Phosphate Acetylate distarch phosphate Phosphated distarch phosphate	0.5 g singly or in combination in soy-based products only		

Acetylated distarch adipate	2.5 singly or in combination in hydrolyzed protein and/or amino acid based products only		
Carrageenan	0.3 g singly or in combination in milk and soy-based products only 0.1 g singly or in combination in hydrolyzed protein and/or amino acid based liquid products only		E
Pectins	1 g		E
Lecithin	0.5 g		E
Mono- and Diglycerides	0.4 g		E
Sodium hydrogen carbonate Sodium carbonate Sodium citrate Potassium hydrogen carbonate Potassium carbonate Potassium citrate Sodium hydroxide Potassium hydroxide Calcium hydroxide	Limited by G. M. P. within the limits for Na in Section 3.2.6	125 - 130	E
L (+) Lactic acid		125, 130	NE[I]
L (+) Lactic acid producing cultures		125, 130	NE[I]
Citric Acid			
Mixed Tocopherol concentrate L-Tocopherol	3 mg singly or in combination		E
L-Ascorbyl palmitate	5 mg singly or in combination expressed as ascorbic acid		E

L-Ascorbic acid and its Na, Ca salts	5 mg singly or in combination expressed as ascorbic acid	E
Natural Fruit Extracts-	G. M. P.	E
Vanilla Extract	G. M. P.	E
Ethyl Vanillin	5 mg	E
Vanillin	5 mg	E

[1] Not cleared toxicological by JECFA

CODEX COMMITTEE ON FATS AND OILS

i) CODEX DRAFT STANDARD FOR SPECIFIED VEGETABLE FAT PRODUCT

ii) CODEX DRAFT STANDARD FOR SPECIFIED ANIMAL OR MIXED ANIMAL AND VEGETABLE FAT PRODUCT ALINORM 87/17)

Food Additive	Maximum Level in the Final Product	Paragraph	Status of Endorsement
Beta-Carotene	25 mg/kg	131 - 134	E
Annatto extracts	20 mg/kg (calculated as bixin or norbixin)		E
Curcumin or Turmeric	5 mg/kg (calculated as total curcumin)		TE[1]
Canthaxanthine	25 mg/kg		TE[1]
Beta-apo-8'-Carotenal	25 mg/kg		E
Methyl and ethyl esters of beta-apo-8-carotenoic acid	25 mg/kg		E
Propyl gallate	100 mg/kg		E
Butylated Hydroxy Toluene (BHT)	75 mg/kg		TE[1]
Butylated Hydroxy Anisole (BHA)	175 mg/kg		TE[1]
Tertiary butyl hydroquinone (TBHQ)	120 mg/kg		TE[1]
Any Combination of propyl gallates, BHA, BHT and/or	200 mg/kg (with individual limits not to be exceeded)		TE[1]

TBHQ		
Natural and synthetic	500 mg/kg [1]	E
Tocopherols		
Monoglyceridecitrate	100 mg/kg	E

[1] ADI temporary

APPENDIX IV-PART II

Change in Status of Endorsement of Food Addiitves resulting from changes in ADI status

CARAMEL COLOUR (AMMONIA-SULPHITE PROCESS):

	Commodity	Maximum level of use	Earlier Status	Present Status of Endorsement
1.	Canned Mushrooms	Limited by GMP, for use in the sauces	TE	E
2.	Jams (fruit preserves) and Jellies	200 mg/kg, singly or in combination with other colours	TE	E
3.	Citrus Marmalade	1.5 g/kg	TE	E
4.	Pickled Cucumbers	300 mg/kg, singly or in combination with other colours	TE	E
5.	Bouillons and Consommes	3 000 mg/kg on a ready-to-eat basis	TE	E
6.	Flavoured Yoghurt and Products Heat-Treated after Fermentation	150 mg/kg, from flavouring substances as a result of carry-over	TE	E

CARAMEL COLOUR (AMMONIA PROCESS):

Commodity	Maximum level of use	Earlier Status	Present Status of Endorsement
1. Flavoured Yoghurt and Products Heat-Treated after Fermentation	150 mg/kg (from flavouring substances as a result of carry-over)	TE	E

CALCIUM HYDROGEN CARBONATE:

	Commodity	Maximum level of use	Earlier Status	Present Status of Endorsement
1.	Evaporated Milks	2 g/kg singly; 3 g/kg in combination with other stabilisers, expressed as anhydrous substances	E	
2.	Sweetened Condensed Milk	1 g/kg singly; 3 g/kg in combination with other stabilisers	E	
3.	Milk Powders	5 g/kg singly or in combination with other stabilisers, expressed as anhydrous substances	E	TE [1]
4.	Cream	2 g/kg singly; 3 g/kg in combination with other stabilisers, expressed as anhydrous substances	E	

[1] paragraph 140

CALCIUM HYDROGEN CARBONATE

Commodity	Maximum level of use	Earlier Status	Present Status of Endorsement
Cream Powders	5 g/kg singly or in combination with other stabiolisers, expressed as anhydrous substances	E	TE[1]

POTASSIUM FUMARATE:

Commodity	Maximum level of use		
Jams (fruit preserves) and Jellies	3 g/kg singly or in combination with the Acid, Tartaric Acid and their salts, expressed as Acid, to maintain the p H between 2.8 and 3.5.	E	TE[1]
Citrus Marmalade	3 g/kg singly or in combination with the Acid, Tartaric Acid and their salts, expressed as Acid, to maintain the p H between 2.8 and 3.5.	E	

CALICUM FUMARATE:

Commodity	Maximum level of use		TE[1]
Jams (fruit preserves) and Jellies	3 g/kg singly or in combination with the Acid, Tartaric Acid and their salts, expressed as Acid, to maintain the p H between 2.8 and 3.5.	E	

Citrus Marmalade	3 g/kg singly or in combination with the Acid, Tartaric Acid and their salts, expressed as Acid, to maintain the p H between 2.8 and 3.5.	E	

[1] Paragraph 140

SODIUM SORBATE:

	Commodity	Maximum level of use	Earlier Status	Present Status of Endorsement
1.	Minarine	2 000 mg/kg singly or in combination with the Acid, Benzoic Acid and their salts, but Benzoic Acid not to exceed 1 000 mg/kg	E	TE[1]
2.	Dried Apricots	500 mg/kg singly or in combination with the Sorbic Acid, and Potassium Sorbate, expressed as Sorbic Acid	E	
3.	Margarine	1 000 mg/kg singly or in combination with the acid, Benzoic Acid and their salts, expressed as acid	E	
4.	Table Olives	500 mg/kg singly or in combination with the acid, expressed as Sorbic Acid	E	
5.	Whey Cheese	1 000 mg/kg singly or in combination with the acid, expressed as Sorbic acid	E	

6.	Processed Cheeses	3 000 mg/kg singly or in combination with the acid, Propionic Acid and their salts	E
7.	Gulbrandsalsost Cheese (Whey Cheese)	1 000 mg/kg singly or in combination with the acid, expressed as Sorbic Acid	E
8.	Extra Hard Grating Cheese	1 000 mg/kg singly or in combination with the acid, expressed as Sorbic Acid	E
9.	Processed Cheeses Preparations	3 000 mg/kg singly or in combination with the acid, Propionic Acid and their salts	E
10.	Cheddar Cheese	1 000 mg/kg singly or in combination with the acid	E
11.	Cheshire Cheese	1 000 mg/kg singly or in combination with the acid	E
12.	Concentrated Pineapple Juice with Preservatives	1 000 mg/kg singly or in combination with the acid, Benzoic Acid, their salts and sulphites, but sulphites not to exceed 500 mg/kg (for manufacturing only)	E

[1] paragraph 140

APPENDIX IV-PART III

Endorsement of maximum levels of Contaminants in Codex Commodity Standards

I. CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES (18TH SESSION)

Draft Standard for Canned Mangoes (At Step 8) (ALINORM 87/20, Appendix V)

Contaminant	Maximum Level	Paragraph	Status of Endorsement
Lead	1 mg/kg		TE
Tin	250 mg/kg	144, 151	TE

Draft Standard for Mango Chutney (At Step 8) (ALINORM 87/20, Appendix VI)

Contaminant	Maximum Level	Paragraph	Status of Endorsement
Lead	1 mg/kg		TE
Tin	250 mg/kg	144, 151	TE

II. JOINT ECE/CODEX ALIMENTARIUS GROUP OF EXPERTS ON STANDARDIZATION OF FRUIT JÜICES (17TH SESSION)

Draft General Standard for Fruit Nectars Preserved Exclusively by Physical Means (At Step 8) (ALINORM 87/14, Appendix II)

Contaminant	Maximum Level	Paragraph	Status of Endorsement
Arsenic	0.2 mg/kg		E
Lead	0.3 mg/kg		E

Draft General Standard for Fruit Juices Preserved Exclusively by Physical Means (At Step 5) (ALINORM 87/14; Appendix III)

Contaminant	Maximum Level	Paragraph	Status of Endorsement
Arsenic	0.2 mg/kg		E
Lead	0.3 mg/kg	145, 146	TE
Copper	5.0 mg/kg		E
Zinc	5.0 mg/kg		E
Iron	15.0 mg/kg		E
Tin	200.0 mg/kg		TE
Sum of Copper, Zinc and Iron	20.0 mg/kg		E
Sulphur Dioxide	10.0 mg/kg		E

III. CODEX COORDINATING COMMITTEE FOR EUROPE (ALINORM 87/19) Draft European Regional Standard for Mayonnaise (Step 5) (ALINORM 87/19, Appendix III [1])

Contaminant	Maximum Level	Paragraph	Status of Endorsement
Arsenic	0.3 mg/kg		E
Lead	0.3 mg/kg		E
Copper	2.0 mg/kg		E
Iron	5.0 mg/kg		E

IV. CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES (ALINORM 85/20) Provision for Lead and Tin in Codex Standards for Canned Fruits and Vegetables

Contaminant	Maximum Level	Paragraph	Status of Endorsement
Lead	1 mg/kg in all canned fruits and vegetables, except tomato concentrate	149	TE
Lead	1.5 mg/kg in tomato paste concentrate	149	TE
Tin	250 mg/kg in all canned fruits and vegetables.	149	TE

STATUS OF CCFA ENDORSEMENTS ON THE MAXIMUM LEVELS OF TIN AND LEAD IN DIFFERENT COMMODITIES

Tin:

Food	Present Status	Max. Level in Food (mg/kg) Paragraph	Levels (mg/kg) Endorsed	Status of Endorsement
- Canned Pineapple	250.0 (temporarily endorsed)	150	200.0	TE
- Canned Asparagus	250.0 (Provisional)		200.0	
- Processed Tomato Concentrates	250.0 (provisional)		200.0	
- Canned Green Peas	250.0 (Provisional)		200.0	
- Canned Pears	250.0 (provisional)		200.0	
- Canned Strawberries	250.0 (provisional)		200.0	
- Canned Mandarin Oranges	250.0 (provisional)		200.0	
- Canned Fruit Cocktail	250.0 (temporarily endorsed)		200.0	
- Canned Mature Processed Peas	250.0 (temporarily endorsed)		200.0	
- Tropical Fruit Salad	250.0 (temporarily endorsed)		200.0	
- Pickled Cucumbers	250.0 (temporarily endorsed)		200.0	
- Canned Carrots	250.0 (temporarily endorsed)		200.0	
- Canned apricots	250.0 (temporarily endorsed)		200.0	
- Orange Juice Preserved Exclusively by Physical means	250.0 (under review)		200.0	
- Grapefruit Juice Preserved Exclusively by Physical Means	250.0 (under review)		200.0	
- Lemon Juice Preserved Exclusively by Physical Means	250.0 (under review)		200.0	
- Apple Juice Preserved Exclusively by Physical Means	150.0 (under review)		150.0	
- Tomato Juice Preserved Exclusively by Physical Means	150.0 (under review)		150.0	
- Grape Juice Preserved Exclusively by Physical Means	150.0 (under review)		150.0	
-Pineapple Juice Preserved Exclusively by Physical Means	250.0 (under review)		200.0	

- Concentrated Pineapple Juice Preserved Exclusively by Physical Means	250.0 in the reconstituted product (under review)	200.0
- Blackcurrant Juice Preserved Exclusively by Physical Means	150.0 (under review)	150.0
- Concentrated Pineapple Juice with Preservatives	250.0 (under review)	200.0
- Concentrated Apple Juice Preserved Exclusively by Physical Means	150.0 in the reconstituted product (under review)	150.0
- Concentrated Orange Juice Preserved Exclusively by Physical Means	250.0 in the reconstituted product (under review)	200.0
- Concentrated Grape Juice Preserved Exclusively by Physical means	150.0 in the reconstituted product (under review)	150.0
- Sweetened Concentrated Labrusca Type Grape Juice Preserved Exclusively by Physical Means	150.0 in the reconstituted product (under review)	150.0
- Concentrated Blackcurrant Juice Preserved Exclusively by Physical Means	150.0 in the reconstituted product (under review)	150.0
- Apricot, Peach and Pear Nectars Preserved Exclusively by Physical Means	250.0 (under review)	200.0
- Non-Pulpy Blackcurrant Nectar Preserved Exclusively by Physical Means	150.0 (under review)	150.0
- Pulpy Nectars of Certain Small Fruits Preserved Exclusively by Physical Means	150.0 (under review)	150.0
- Nectars of Certain Citrus Fruits Preserved Exclusively by Physical Means	250.0 (under review)	200.0

- Guava Nectar preserved Exclusively by Physical Means	250.0 (temporarily endorsed)	200.0
- Liquid Pulpy Mango Products Preserved Exclusively by Physical Means	250.0 (under review)	200.0

LEAD

Food	Max. Level of Lead in Food (mg/kg) Present Status	Paragraph	Status of Endorsement
- White Sugar	1.0	151	TE
- Powdered Sugar (Icing Sugar)	1.0		
- Soft Sugar	1.0		
- Dextrose Anhydrous	1.0		
- Dextrose Monohydrate	1.0		
- Glucose Syrup	1.0		
- Dried Glucose Syrup	1.0		
- Lactose	1.0 (temporarily endorsed		
- Powdered Dextrose (Icing Dextrose)	1.0		
- Fructose	0.5		
- Cocoa Butters	0.5		
- Chocolate	1.0		
- Unsweetened Chocolate	2.0		
- Cocoa Powders and Dry Cocoa-Sugar Mixtures	2.0		
- Cocoa Press cake	2.0 (temporarily endorsed)		
- Cocoa Dust	2.0		
- Composite and Filled Chocolate	1.0 (endorsed)		
- Edible Acid Casein	2.0 (endorsed)		
- Edible Caseinates	2.0 (endorsed)		
- Guava Nectar Preserved Exclusively by Physical Means	0.3 (endorsement postponed)		
- Liquid Pulpy Mango products Preserved Exclusively by Physical Means	0.3 (under review)		
- General Standard for Fruit Nectars Preserved Exclusively by Physical Means not covered by Individual Standards	0.3 (under review)		
- Concentrated Blackcurrant Juice Preserved Exclusively by Physical Means	0.3 in the reconstituted product (under review)		

- Apricot, Peach and Pear Nectars Preserved Exclusively by Physical Means	0.3 (under review)
- Non-Pulpy Blackcurrant Nectar Preserved Exclusively by Physical Means	0.2 (under review)
- Pulpy Nectars of Certain Small Fruits Preserved Exclusively by Physical Means	0.2 (under review)
- Nectars of Certain Citrus Fruits Preserved Exclusively by Physical Means	0.2 (under review)
- Edible soya Bean Oil	0.1 (endorsed)
- Edible Arachis Oil	0.1 (endorsed)
- Edible Cottonseed Oil	0.1 (endorsed)
- Edible Sunflowerseed Oil	0.1 (endorsed)
- Edible Rapeseed Oil	0.1 (endorsed)
- Edible Maize Oil	0.1 (endorsed)
- Edible Sesameseed Oil	0.1 (endorsed)
- Edible Safflowerseed Oil	0.1 (endorsed)
- Edible Mustardseed Oil	0.1 (endorsed)
- Edible Low Erucic Acid Rapeseed Oil	0.1 (temporarily endorsed)
- Edible Coconut Oil	0.1 (temporarily endorsed)
- Edible Palm Oils	0.1 (temporarily endorsed)
- Edible Palm Kernel Oil	0.1 (temporarily endorsed)
- Edible Grapeseed Oil	0.1 (endorsed)
- Edible Babassu Oil	0.1 (temporarily endorsed)
- Lard	0.1 (endorsed)
- Rendered Pork Fat	0.1 (endorsed)
- Premier Jus	0.1 (endorsed)
- Edible Tallow	0.1 (endorsed)
- Margarine	0.1 (endorsed)
- Minarine	0.1 (temporarily endorsed)
- Edible Fats and Oils	0.1 (temporarily endorsed)
- Bouillons and Consommẽs	1.0 in dry product as sold (temporarily endorsed); 0.5 in canned product (temporarily endorsed
- Cocoa Nib	2.0 (temporarily endorsed)
- Cocoa Mass	2.0 (temporarily endorsed)
- Orange Juice Preserved Exclusively by Physical Means	0.3 (under review)

- Grapefruit Juice Preserved Exclusively by Physical Means	0.3 (under review)
- Lemon Juice Preserved Exclusively by Physical Means	1.0 (under review)
- Apple Juice Preserved Exclusively by Physical Means	0.3 (under review)
- Tomato Juice Preserved Exclusively by Physical Means	0.3 (under review)
- Grape Juice Preserved Exclusively by Physical Means	0.3 (under review)
- Pineapple Juice Preserved Exclusively by Physical Means	0.3 (under review)
- Concentrated Pineapple Juice Preserved Exclusively by Physical Means	0.3 in the reconstituted product (under review)
- Blackcurrant Juice Preserved Exclusively by Physical Means	0.3 (under review)
- Concentrated Pineapple Juice with Preservatives	0.3 (endorsement postponed)
- Concentrated Apple Juice Preserved Exclusively by Physical Means	0.3 in the reconstituted product (under review)
- Concentrated Orange Juice Preserved Exclusively by Physical Means	0.3 in the reconstituted product (under review)
- Concentrated Grape Juice Preserved Exclusively by Physical Means	0.3 in the reconstituted product (under review)
- Sweetened Concentrated Labrusca Type Grape Juice Preserved Exclusively by Physical Means	0.3 in the reconstituted product (under review)

APPENDIX V

REPORT OF THE WORKING GROUP ON CLASS NAMES AND THE INTERNATIONAL NUMBERING SYSTEM

The meeting of the Working Group was attended by delegates of Australia, Belgium, Canada, Denmark, France, Federal Republic of Germany, Finland, the Netherlands, New Zealand, Sweden, Switzerland, Thailand, United Kingdom and USA and observers from EEC, European Starch Ass., CIAA, FAO, IFAC, IFG, IFGMA and IOCU. Mr. Laurie Erwin (Australia) acted as Chairman and Dr. Rao Maturu (FAO Secretariat) was rapporteur.

The Working Group had before it document CX/FA 87/9 which contained the responses to CL/1986/39-FA and late comments from Finland and USA. The observer from the CIAA advised that his organization had prepared a paper which included proposals for new definitions for a number of terms including "food additive" and that it could have relevance to the discussions. The Chairman agreed that the document should be distributed for information but that it was not appropriate to discuss it since the matter was outside the terms of reference of the Working Group.

a) The Proposed International Numbering System (INS)

The Chairman advised that the corrections proposed by the Netherlands (CX/FA 87/9, para 2) had already been made to the draft INS (CX/FA 87/9, Annex 2).

The Working Group agreed with the proposal of the delegate of New Zealand that the draft INS should include all the additives allocated numbers by the EEC. It was noted that this would involve the inclusion of the 59 food additives listed on pages 14-15 of CX/FA 87/9.

It was agreed that the draft INS should not include any reference to flavours and flavourings since they did not require specific identification in labelling. The delegation of the USA questioned the inclusion of maltol in the list (№ 633) as a flavour. It was decided that maltol could also be used as a flavour enhancer and amended the list accordingly.

b) The Suitability of the Class Name "Artificial Sweetener" for Labelling Purposes

The delegation of Switzerland pointed out that in his country there were three types of sweeteners, namely sugar, sugar replacers and sweeteners (which included aspartame). The delegation of Thailand noted that in its country the term "non-sugar sweetener" was used to declare food additives which functioned as sweeteners.

The delegation of the USA expressed the view that the term "sweetener" was the functional description and that the term "artificial" was not meaningful in this context. Further, there would be technological difficulties in defining "artificial" as applied to sweeteners. As many more sweeteners could be expected to enter the market in future years, the retention of "artificial" could cause further complications. A number of delegations and observers expressed similar views.

The delegation of the Netherlands noted that the translation of the term "sweetener" into Dutch did denote sweeteners other than sugars. It was also noted that a similar situation existed with some other languages, for example German.

The delegation of Australia supported the retention of the term "artificial sweetener" since it was well established and clearly understood by consumers. The issue had been recently considered at length by the food regulatory authorities in

Australia, which had decided to retain the descriptive term "artificial". The vast majority of the products involved were correctly described as artificial. No alternative term such as "intense" or "non-nutritive" covered all the products and the term "sweetener" alone was inadequate information for the consumer.

The delegation of the Netherlands pointed out that the description "artificial" could not apply to intense sweeteners of natural origin such as thaumatin and glycyrrizen and that perhaps there was a need for both terms, namely "sweeteners" and "artificial sweeteners" as class names.

The observer from the EEC reminded the Working Group that both the Codex General Standard for the Labelling of Prepackaged Foods and the EEC Trailing Directive required the use of the class title "artificial sweetener".

While consideration was being given to the matter, no decision had yet been taken and any decision within Codex was awaited with interest.

The observer from the IOCU indicated that the term "sweetener" correctly and adequately defined the function for the consumer.

It was proposed that if it was decided that the word "artificial" should continue to be used as part of the description of "sweeteners" then for consistency the term should be required in relation to flavours and other food additives, as appropriate.

On the basis of the above discussion, the Working Group agreed that the appropriate class title should be "sweetener". The delegation of Australia reserved its position on this decision.

c) The Need for Additional Class Names for Labelling Purposes

The Chairman indicated that the recent meeting of the Codex Committee on Food Labelling had given further consideration to the class name "water-binding agent" to cover phosphates and alginates. That Committee had eventually decided to recommend the term "water retention agent" for consideration by the relevant Commodity Committees (CCFFP and CCPMPP) and also CCFA (Draft Alinorm 87/22, paras 35-40).

The observer from the IOCU advised that any class name used for labelling purposes should be easily understood by the consumer and also informative regarding the technological function of the additive.

The Working Group reiterated that there were other functional uses of food additives in addition to those presently listed in the General Standard for the Labelling of Prepackaged Foods. However, for labelling purposes the class names should not only be descriptive of the function but also meaningful to the consumer and that too many class names would be confusing.

The delegation of the Netherlands proposed the adoption of "bulking agent", "colour retention agent", "firming agent" and "humectant" as additional class names. The Chairman noted that a number of countries had proposed additional class names as listed in Annex 4 of CX/FA 87/9.

The delegation of the USA referred to Appendix 11 of its comments (Conference Room Document 12) wherein the Codex class names had been given a range of technological functions as sub-classes. There was general agreement that this approach was a very appropriate one and formed the basis of a realistic and functional classification. It had the advantage of restricting the number of class names for labelling

purposes to a small number of terms which were easily understood by consumers. It also provided for extensive listings of precise technogical functions as sub-classes within these main classes. The observer from the EEC advised that a similar approach was under consideration within the Community.

There was an extended discussion on how bulking agents should be covered. The question was raised of whether polyols (sorbitol, xylitol, mannitol, isomalt, maltitol, lactitol and hydrogenated glucose syrup) which could be the major component of foods (mints, candies, chewing gum etc.) should be considered as additives, . Some members, of the Working Group considered that when bulking agents comprised the major component of a product then they should be treated as inqredients rather than food additives. There was a consensus, however, that the labelling should be in accordance with the General Standard whereby the declaration of the relevant functional class was followed by the specific name or relevant international number of the additive.

Consideration was given to retaining bulking agents as a sub-class under thickeners as proposed in the US paper. However, it was decided that bulking agents warranted inclusion as a separate class function.

It was agreed that the term "humectan" should be included as a class name and that this would accommodate the sub-class of "moisture retaining agent" as given in the US paper. The observer from the IOCU aknowledged this approach but requested that consideration be given to selecting a more descriptive term than "humectant" as it was not easily understood by consumers. Other members of the Working Group proposed "moisturizer" or "moisture regulator" as possible options.

The delegation of the Netherlands proposed the inclusion of "colour retention agent" as a full class name. It was noted that this term along with "colour stabilizer" and "colour fixative" had been included as stabilizers in the US list.

It was noted that "stabilizers" are often associated with the stabilization of emulsions and viscous products and that many consumers would not interpret colour stabilization as part of this function. Mo easy solution was identified and it was agreed to asterisk these technological functions and include a footnote requesting further consideration of this matter.

The Working Group noted that the term "firming agent" was already included as a stabilizer in the US list and agreed to leave it there pending further consideration of the list of classes and sub-classes as a whole.

Consideration was given to how packaging gases should be declared. The observer from the EEC noted that the term "gas" was under consideration in the EEC. It would include "propellants"

It was agreed that "packing gas" was the more appropriate description term. However, the view was expressed that this did not advise the consumer of the function and that packing gases should be listed under other functional classes, as appropriate, such as preservative, anti-oxidant and propellant.

The delegation of Sweden expressed the view that a packing gas introduced in the head space of a food package to exclude the influence of oxygen and which as such has no technological function in the final product should not be considered as a food additive within the meaning of Codex. It was not normally the packing gas as such that affects the characteristics of the food nor does it become a component of the food. An

unavoidable residue of the packing gas in the food as consumed may, however, be considered a contaminant,

A number of members of the Working Group supported the view that packing gases should be considered as processing aids rather than food additives. However, the delegation of Denmark and other members of the Working Group were of the opinion that packing gases were food additives and that the true function should be declared.

The Working Group was unable to resolve this issue and decided that it would need further consideration.

The Working Group agreed that freezants functioned only as processing aids and therefore should not be included in the list.

It was noted that the US list included the term "Sequestrant" as a class function for labelling purposes. It was agreed that "sequestrant" was a chemical rather than a functional description. In any event, it may not be readily understood by consumers. Accordingly, it could be used to describe a technological function alongside a functional class such as antioxidant or stabilizer.

A revised list was prepared and it was agreed that it should be distributed for comments which could be considered at the next session.

Except for five class names proposed by Canada (Carriers and solvents, functional property aids, product characterization agents, starch modifying agents and yeast foods) the Working Group was able to allocate the proposed class names into the US list as sub-classes. It was agreed that the sub-classes should be headed as technological function to distinguish them from the class function for labelling purposes.

d) The Method of Declaring Chemically Modified Starches

The delegation of the USA advised that the most recent JECFA publication (FNP 30/Rev.1) and also the Codex General Standard for the Labelling of Prepackaged Foods uses the designation "modified starches" rather than "chemically modified starches". The latter terms should be considered obsolete because it was not sufficiently descriptive of all the substances involved. It was agreed that future reference should be to "modified starches".

The Working Group noted that neither the Codex General Labelling Standard nor the EEC Labelling Directive required the identification of the specific modified starches in labelling. It was only necessary to declare their presence under the general declaration of "modified starches".

The observer from the European Starch Association reiterated the view have expressed in CX/FA 87/9 (Para 32) including the preference that modified starches should be considered as ingredients rather than food additives.

The observer from the EEC informed the Working Group that the comments in para 32 relating to the proposed EEC Directive no longer reflected the latest situation.

The delegation of Thailand indicated that in her country modified starches were classified as food additives.

A number of delegations and observers opposed the allocation of numbers for the modified starches on the. basis that it was inconsistent with the philosophy of the Codex General Labelling Standard which do not require their specific identification.

The delegation of Sweden proposed that modified starches should be specifically identified in labelling. However, this should be done by reference to the actual function such as "thickener" rather than as "modified starches" because the latter did not describe the function for the consumer.

After further discussion the consensus view was that these substances need be declared only under the general class name of "modified starches". However, the specific numbers should be retained in the draft INS since many countries required the specific identification of these substances and the numbers would facilitate this.

e) The Adequacy of the Range of Technological Functions for Each of the Additives in the Draft INS

It was agreed that in future the functions in the INS list should be headed as Technological Functions to distinguish them from the functional classes used for labelling. On this basis, the technological functions listed would equate with the sub-classes in the list at Annex 1.

The question was raised as to why the technological functions should be included in the INS. It was agreed that it was worthwhile since technological justification was necessary for the use of any food additive.

It was agreed that the technological functions proposed in CX/FA 87/9 (paras 32 and 35) be included in the INS. The US proposal to include "flavour enhancer" as another technological function of aspartame was adopted.

f) General Considerations

The Working Group tentatively accepted the numbers allocated to most of the food additives included An Annex 3 of CX/FA 87/9. These numbers had been allocated on the basis of the principles used within the EEC lists and were compatible with them.

The question was raised as to whether substances such as gelatine ml), amylose and amylopectin (418), sodium caseinate (469) and enzyme treated Starch (1405) should be included in the INS and allocated numbers. It was noted that some or all of these substances were not treated as food additives in a number of countries. It was decided to retain them in the list pending further comments.

It was decided to retain the choline salts (1001 - 1006) in the INS since there was technological justification for their use in salt substitutes

The extraction solvents (acetone, heptane, light petroleum, methanol, propane and toluene) were deleted on the basis that they were all processing aids.

There was some support for the deletion of all enzymes on the basis that they were all processing aids. However, others held the view that at least some enzymes were functional in the final product and had to be classified as food additives.

There was general agreement that all immobilized enzymes functioned solely as processing aids and accordingly were deleted from the list.

It was not possible to reach a decision on which of the remaining enzymes should be included as food additives. It was agreed that the list should be distributed for further comments and reviewed at the next meeting.

The Working Group did not have time to review all the additives proposed for inclusion in the INS (CX/FA 87/9, Annex 4). It was noted that those proposed by the

Netherlands and Spain would now be included because of the earlier decision to include all food additives which had already been allocated a number.

The Chairman undertook to prepare a single and comprehensive list of the additives proposed for inclusion in the INS by Australia, Canada, France, New Zealand, Switzerland, Thailand and USA. Such a list could include any additional information available such as technological functions, extent of use, etc. The list would then be considered in detail at the next meeting of the Committee. The Working Group accepted this proposal.

APPENDIX VI

GENERAL REQUIREMENTS FOR NATURAL FLAVOURINGS

1. DEFINITIONS

1.1. Natural Flavourings

Natural flavourings are products used to impart flavour to a food or beverage - with the exception of only salty, sweet or acid tastes. Their aromatic part consists exclusively of "natural flavours" and/or "natural flavouring substances" and they may or may not contain adjuncts. They are not intended to be consumed as such.

1.2 Natural Flavours

Natural Flavours and Natural Flavouring Substances are preparations and single substances respectively, acceptable for human consumption, obtained exclusively by physical, microbiological or enzymatic processes from material of vegetable or animal origin either in the raw state or after processing for human consumption by traditional food-preparation processes (including drying, roasting and fermentation).

1.3 Adjunct

Adjuncts are foodstuffs and food additives which are essential in the manufacture and use of "natural flavourings".

1 4 Natural aromatic raw materials

Natural aromatic raw materials are vegetable or animal raw materials suitable for use in the preparation of "natural flavours". These raw materials include foods, spices and herbs and other vegetable sources [1] which are appropriate for use in the intended application.

[1] For information concerning appropriate aromatic raw materials for use in foods and beverages, see list of references in Appendix A

2. FOOD ADDITIVES

Natural flavourings may contain food additives (including carriers) as far as these necessary for the production, storage and application of the flavourings and as far as these are present in amounts which would not perform a technological function in the finished food.

3. BIOLOGICALLY ACTIVE SUBSTANCES

With the exception of quinine and quassine, the following biologically active substances should not be added as such to food and beverages. They may only be contributed through the use of natural flavourings to foods and beverages, provided that the maximum levels specified below in mg/kg of the final product ready for consumption are not exceeded.

	Biologically active substance	Food Commodity	Beverage	Exceptions
3.1.	Agaric acid	20	20	100 mg/kg in alcoholic beverages and in food containing mushrooms
3.2.	Aloin	0.1	0.1	50 mg/kg in alcoholic beverages

3.3.	beta-Azarone	0.1	0.1	1 mg/kg in alcoholic beverages 1 mg/kg when seasoning used at low levels in food
3.4.	Berberine	0.1	0.1	10 mg/kg in alcoholic beverages only
3.5.	Cocaine	cocaine-free by agreed test		
3.6.	Coumarin	2	2	10 mg/kg in special caramels and in alcoholic beverages
3.7.	Total hydrocyanic acid (free and combined)	1	1	25 mg/kg in confectionery 50 mg/kg in marzipan 5 mg/kg in stone fruit juices 1 mg/kg per % volume in alcoholic beverages
3.8.	Hypericine	0.1	0.1	1 mg/kg in pastilles (lozenges) 2 mg/kg in alcoholic beverages
3.9.	Pulegone	25	100	250 mg/kg in peppermint or mint flavoured beverages 350 mg/kg in mint confectionery (higher levels are to be found in special strong mint)
3.10.	Quassine	5	5	10 mg/kg in pastilles (lozenges) 50 mg/kg in alcoholic beverages
3.11.	Quinine	0.1	85	300 mg/kg in alcoholic beverages 40 mg/kg in fruit curds
3.12.	Safrole	1	1	2 mg/kg in alcoholic beverages containing less than 25% vol. 5 mg/kg in alcoholic beverages above 25% vol. 15 mg/kg in food containing mace and nutmeg
3.13.	Santonin	0.1	0.1	1 mg/kg in alcoholic beverages above 25% vol.
3.14.	Thujones (alpha and beta)	0.5	0.5	10 mg/kg in alcoholic beverages above 25% vol.

	5 mg/kg in alcoholic beverages containing less than 25% vol.
	35 mg/kg in bitters
	25 mg/kg in food containing sage
	250 mg/kg in sage stuffings

4. HYGIENE (subject to endorsement by the CCFH)

4.1 It is recommended that "natural flavourings" be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the Codex Alimentarius Commission (CAC/RCP 1-1969, Tev. 1).

4.2 When tested by appropriate methods of sampling and examination, the natural flavourings:

(a) should be free from micro-organisms of public health significance capable of development under normal conditions of storage of the natural flavourings, of the food commodity and of the beverage; and
(b) should not contain any substances originating from micro-organisms in amounts which may represent a hazard to health.

5. METHODS OF ANALYSIS

References to methods of analysis:

5.1. General Methods, recommended by IOFI.

Analytical Procedure for a General Headspace Method. Recommended Method 1 (1973). Int. Flav. Food Add., 6 (2), 128 (1975)

Analytical Procedure for a General Method for Gas Chromatography. Recommended Method 4 (1974). Int. Flav. Add., 7(2), 55-56 (1976)

Analytical Procedure for a General Method for High Pressure- (high-performance) Liquid Chromatography. Recommended Method 17 (1990) Z. Lebensm.-Unters. Forsch.174, 396-398 (1982)

Analytical Procedure for a General Methods for Gas Chromatography on Capillary Columns. Recommended Method 18 (1980)

Z. Lebensm.-Unters. Forsch. 174, 399-400 (1982)

5.2 Specific Methods, recommended by IOFI.

Quinine-Spectrophotometric Determination. Recommended Method 2 (1973). Int. Flav. Food Add., 6 (3), 184 (1975)

Safrole and Isosafrole - Gas Chromatographic Determination. Recommended Method 5 (1976). Int. Flav. Food Add., 8 (1), 27 (1977)

Thujone - Gas Chromatographic Determination. Recommended Method 6 (1976). Int. Flav. Food Add., 8 (1), 28 (1977)

Pulegone - Gas Chromatographic Determination. Recommended Method 7 (1976). Int. Flav. Food Add., 8 (4), 161 (1977)

Coumarin in Certain Foods - Isolation by Extraction. Recommended Method 8 (1978). Int. Flav. Food Add., 9 (5), 223 (1978)

Coumarin - Gas Chromatographic Determination. Recommended Method 9 (1978). Int. Flav. Food Add., 9 (5), 223, 228 (1978)

Beta-Asarone - Gas Chromatographic Determination. Recommended Method 10 (1978). Int. Flav. Food Add., 9 (5), 228 (1978)

Quassin - Gas Chromatographic Determination. Recommended Method 11 (1978). FFIP, 1 (1), 24 (1979)

Coumarin in Certain Foods - Isolation by Steam Distillation. Recommended Method 12 (1979) Revised version. FFIP, 1 (2), 93 (1979)

Hydrocyanic Acid - Photometric Determination. Recommended Method 13 (1979). FFIP, 1 (3), 140 (1979)

Agaric Acid - Gas Chromatographic Determination. Recommended Method 14 (1979). FFIP, 1 (4), 193 (1979)

5.3 Specific Methods, recommended by FIVS

Détection et dosage de quatre composés (thvyone, safrole, ß- asarone et coumarine) dans les boissons alcooliques. P. A. P. Liddle c. s., Ann. Fals. Exp. Chim. 69, 857-864(1976)

Dosage de l'acide agarique dans les boissons alcooliques. P. A. P. Liddle c. s., Ann. Fals. Exp. Chim. 72, 125-132 (1979)

La determinazione del safrolo nelle bevande alcoliche aromatizzate, L. Usseglio-Tomasset & G. Mazza, Riv. Viticolt. e Enol. Conegl. 33, 435-452 (1980)

La determinazione della cumarine nelle bevande alcoliche aromatizzate, ibid. ibid. 33, 247 - 256 (1980)

La determinazione della cumarine mediante HPLC. G. Mazza, ibid. 37, 316 - 323 (1984)

La determinazione de safrolo mediante HPLC. G. Mazza, Riv. Soc. Ital. Sc. Aliment. 12, 159 - 166 (1983)

Dosage de la ß- asarone par HPLC. G. Mazza, Sciences des Aliments 4, 233 - 245 (1984)

5.4. Specific Method recommended by ISO

ISO 7355-1985 Determination of safrole and cis-and trans-isosafrole in oils of sassafras and nutmeg by CLC

ISO 7356-1986 Determination of α - and ß -thujone in oils of artemisia and sage by GLC

ISO 7357-1985 Determination of cis -ß - asarone in oil of calamus by GLC.

REFERENCES TO LISTS OF AROMATIC RAW MATERIALS SUITABLE FOR THE PREPARATION OF NATURAL FLAVOURS [1], [2]

[1] It should be understood that the references contain potential sources for natural flavours without reference to the safety or acceptability for human consumption of any specific source.

[2] This list is not exhaustive and will be up-dated from time to time.

1. Flavouring Substances and Natural Sources of Flavourings, Council of Europe, 3rd. Ed. 1981.
2. International Standard IS0676 Spices and Condiments. First List.
3. United States of America Code of Federal Regulations (Revised as of April 1, 1986), Title 21, Parts 172.510, 182 and 184.
4. Canada, Food and Drugs Regulations Part B, Division 10.
5. AFNOR Norme Française NF V00-001.
6. Payom Tuntiwat, 1984, Creungthate, Mahidol University, Bangkok, Thailand.
7. Fenaroli's Handbook of Flavour Ingredients (Volume I) by CRC Press Inc., Cleveland, Ohio
8. Tanaka's Cyclopedia of Edible Plants of the World by Tyôzaburô, Tanaka Keigaku Publishing Co., Tokyo, 1976.
9. Reports of the Flavor and Extract Manufacturers' Association of the United States (FEMA) Expert Panel's publications on generally recognized as safe (GRAS) status:

Food	Technology	19(2): 151-197, 1965
"	"	24(5): 25-28, 30-32 & 34, 1970
"	"	26(5): 35-42, 1972
"	=	27(1): 64-67, 1973
"	"	27(11): 56-57, 1973
"	"	28(9): 76-80, 1974
"	"	29(_): 70-72, 1975
"	"	31(T): 65-67, 70, 72 & 74, 1977
"	"	32(2): 60-62, 64-66, 68-70, 1978
"	"	33(7): 65-73, 1979
"	"	38(10): 70-72, 74, 76-78, 80-85 and 88-89, 1984
"	"	39(11): 108, 110, 112, 114, & 116-117, 1985

APPENDIX VII

CODEX PRIORITY LIST ESTABLISHED BY THE 19th SESSION OF CCFA

Tin (proposed by Thailand and Australia)

Cadmium (proposed by Cuba)

Mercury (see para of the Report)

Sucralose (proposed by UK, Ireland and CIAA)

Lipase from Mucor Miehei
Glucose Isomerase from Streptomyces Murinus — proposed by Denmark
Protease from Bacillus licheniformis

Glucerol esters of wood resin (proposed by USA) (for specification only)

Iodine (toxicologically acceptable under limits of intake (proposed by Canada)

Sodium Potassium and Calcium Salts of Oleic Acid (for specifications only) (Proposed by Denmark and Fed. Rep. of Germany)

Diethylhexylphtalate (DEHP) (see para. 249 of the Report)

Codex Flavour Priority Ranking System (see para. 203 of the Report)