codex alimentarais commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

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ALINORM 85/12

JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX ALIMENTARIUS COMMISSION

Sixteenth Session
Geneva, 1-12 July, 1985.

REPORT OF THE SEVENTEENTH SESSION OF THE CODEX COMMITTEE ON FOOD ADDITIVES

The Hague, 10 - 16 April 1984

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REPORT OF THE SEVENTEENTH SESSION OF THE CODEX COMMITTEE ON FOOD ADDITIVES

The Hague, 10 - 16 April 1984.

INTRODUCTION

1. The Codex Committee on Food Additives held its Seventeenth Session in The Hague, The Netherlands, from 10 *to* 16 April 1984, by courtesy of the Government of the Netherlands. Mr. A. Feberwee (The Netherlands) acted as Chairman. The Session was attended by 182 participants. They represented 38 member and observer countries and 26 International Organizations (see Appendix I for the List of Participants, including the Secretariat).

OPENING SPEECH BY THE STATE SECRETARY OF THE MINISTRY OF AGRICULTURE AND FISHERIES OF THE NETHERLANDS

2. The State Secretary welcomed the participants and once again stressed the value the Government of The Netherlands attached to the work of the Codex Alimentarius Commission. He noted that harmonizing food law was even more important at present, when several countries were showing a tendency to protect their producers by specific food regulations, thereby hampering international food trade. He reminded the Committee of the good progress that had been made last year with a "standard" and "code" on irradiation, which had been finalized by the Codex Alimentarius Commission and which formed a good basis for national legislation. The subject raised by the CCFA concerning residues in food of chemotherapeutic agents, anaboles, antibiotics and possible metabolites in animal husbandry and in veterinary medicine had been taken up by the Codex Alimentarius Commission to that extent that it had assigned a joint FAO/WHO consultation group to advise it on how to proceed. The State Secretary stressed the importance of the work on food additive intake, to supply practical instead of theoretical data and reiterated the need for further work on contaminants with the reduction of sources of contamination as a primary goal. He suggested that it was necessary to exchange data on levels of contamination and to try to agree on the level of contamination (for specific contaminants in the various products) on which action is necessary in order to protect the health of the consumer and the quality of the product.

APPOINTMENT OF RAPPORTEURS

3. Mr. T. Avigdor (Switzerland) and Mr. R. Ronk (USA) were appointed as rapporteurs.

ADOPTION OF THE AGENDA

4. The Committee adopted the provisional agenda (CX/FA 84/1) with the following amendments:

- item 4a was extended *to* include a summary of the report of the 28th Session of the Joint FAO/WHO Expert Committee on Food Additives,
- item 6c ("Endorsement of contaminant provisions") was deleted since there were no contaminant provisions to be endorsed,
- item 7c ("Government comments on international numbering system of food additives") was deleted owing to the lack of the relevant document.

5. The delegation of Argentina took the opportunity to repeat its request made at the fifteenth and the sixteenth Sessions that the proceedings and papers of the Codex Committee on Food Additives should be available in Spanish as well as in English and French, including simultaneous interpretation into Spanish during the Session. It also requested that the documents should arrive in due time. The arrival of only four documents at the Argentinian Codex Contact Point resulted in the delegation placing reservations on Agenda items 5, 6c, 7b to f, 8, 9a, b and d and 10 to 14 which might not otherwise have been necessary.

6. The chairman sympathized with the request for simultaneous interpretation at the Session but regretted that financial constraints did not allow the provision of this facility at present. Financial constraints were also responsible for the lack of Spanish documentation prior to and during the Session; the Secretariat pointed out that the final report was produced in Spanish as well as in English and French.

REPORTS OF THE 27TH AND 28TH SESSIONS OF THE JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES (JECFA)

7. The representative of the FAO secretariat of JECFA introduced the report of the 27th Session of JECFA, Geneva, 11-20 April 1983 (WHO Technical Report Series No. 696) and a brief summary report of the 28th Session of JECFA held in Rome, 19-28 March 1984 (Conference Room Document).

8. Attention was drawn to the decisions of the JECFA contained in the 27th report, with regard for the need for specifications. It was considered that specifications for certain processing aids were necessary where such substances came into direct contact with food or with the ingredients of the food since impurities in the substance might be transferred to the final product. The JECFA did not, however, believe that it was necessary to prepare specifications for substances used in the preparation or manufacture of food additives, since the specifications for food additives contained criteria for the limitation of impurities including intermediate or un-reacted chemicals, solvents, etc.

9. It was noted that a revised Guide to Specifications (FAO Food and Nutrition Paper No. 5/Rev.l) had been issued at the initiative of the 27th Session of JECFA. The Committee expressed its appreciation for the timely preparation of this document and noted with satisfaction its presentation in looseleaf format.

10. The Committee also welcomed the publication of the FAO/WHO Food Additives Data System (FAO Food and Nutrition Paper No. 30), which contained a computerized summary of all evaluations of JECFA with regard to food additives (see also Paragraph 106).

11. The Committee noted that a firm line of communication between CCFA and JECFA had been established, according to recommendation 5 of JECFA's 27th report.

12. With reference to the summary report of the 28th Session of JECFA, the Committee noted that there had been a complete review of the specifications for food colours and that those for a number of colours had been withdrawn on the basis of lack of an ADI or information on their use in food. (See Paragraph 126). The Committee expressed its appreciation to FAO and WHO for the preparation of the summary report.

13. In response to a question by the delegation of the Philippines, the Committee was informed that the specification for carrageenan had been revised and now applied specifically to refined, un-degraded carrageenan. It did not apply to other carrageenan

products including semi-refined carrageenan. The revised specification had been designated as tentative pending information on levels and methods of analysis of solvent residues.

14. The Committee noted that JECFA had reevaluated the use of 2-nitropropane as an extraction solvent at the request of CCFA. The Committee recalled the discussions it had on the subject at its last (16th) Session when it had expressed its opinion that it was desirable to have a risk assessment by JECFA of the health significance of a residue level for 2-nitropropane in food.

15. The Committee noted that the previous recommendation of JECFA not to use 2-nitropropane in food processing had been changed to a "temporary acceptance" of its use as a fractionating solvent for edible fats and oils, with the proviso that residue levels would be as low as technically possible. This was understood to be less than the detection limit of the available analytical methods.

16. The representative of WHO, highlighted some aspects related to the 27th Report of the Joint FAO/WHO Expert Committee on Food Additives (WHO Technical Report Series No. 696), as far as the toxicological evaluation of some food additives were concerned. He pointed out some modifications that were necessary to understand the text as presented, in particular the ADI for BHA and BHT which was still on a temporary basis. In addition, the establishment of an ADI for thaumatin required either appropriate long-term studies in animals or adequate studies in man but not both as indicated in the JECFA report. The Committee noted that WHO would shortly be issuing a corrigendum to the 27th Report of JECFA. With regard to the provisional maximum tolerable daily intake for iron, the representative of WHO pointed out that this figure applied to iron from all sources except for iron oxides used as colouring agents, supplemental iron taken during pregnancy or lactation and supplemental iron for specific clinical requirements.

17. Concerning the programme of the 28th report of the Committee, he pointed out that most compounds examined were food additives with temporary ADIs or food additives with deadlines for submission of additional data in 1984. Most of the time of the experts invited by WHO had been spent in assessing the hazards of four substances on the agenda which migrate to food from food contact materials (namely acrylonitrile, diethylmethyl- hexylphthalate, styrene and vinylchloride). Furthermore, the members invited by WHO had also concentrated on matters related to methodology for testing and assessing chemicals in food in response to the recommendation of the JECFA of 1981, 1982 and 1983.

MATTERS OF INTEREST TO THE COMMITTEE

18. The Committee had before it documents CX/FA 84/4 and CX/FA 84/4 Add.l on the above subject, which were presented by the Secretariat.

MATTERS ARISING FROM THE 15TH SESSION OF THE CODEX ALIMENTARIUS COMMISSION (CAC)

Irradiated Foods

19. The Committee was informed that the 15th Session of the Commission had adopted the revised General Standard for Irradiated Foods and the Code of Practice for the Operation of Irradiation Facilities. The Commission had amended the revised general standard by making the application of the General Principles for Food Hygiene advisory. The General Standard and Code would be issued to Governments as Volume XV of the Codex Alimentarius.

20. The delegation of France drew the Committee's attention to the discussion by the 1983 Working Group on Food Irradiation of the possibility of raising the permitted maximum energy level for X-rays from 5 to 10 MeV on the basis of information to be supplied by France. The delegation indicated that information was available indicating that X-rays, like the other types of ionizing radiation, did not induce radioactivity in food at an energy level of lOMeV. It recommended that this information be submitted to the Working Group on Food Irradiation or to the Joint FAO/IAEA/WHO Expert Committee for consideration.

21. The Committee agreed that the data provided by France should be referred to FAO/IAEA/WHO for consideration by an appropriate body. On the basis of this expert advice the Committee could consider taking action concerning the amendment of the Codex Standards.

Microbiological Safety of Irradiated Foods

22. The Committee noted that the International Committee on Food Microbiology and Hygiene of the International Union of Microbiological Societies, at its meeting held in Copenhagen in December 1982 had expressed the opinion that irradiation-induced genetic mutation of pathogens in foods did not create an increased hazard to health and that there was no qualitative difference between the kind of mutation induced by ionizing irradiation and that induced by any other pasteurization/partial preservation methods such as heat treatment or vacuum drying. The report of the meeting was available as Codex document CX/FH 83/9.

Status and Safety aspects of Food Additive Specifications

23. The Commission had agreed with the views of CCFA and JECFA that i) Codex specifications were advisory and not subject to government acceptance and ii) Food Grade Quality in terms of safety was achieved by compliance with the specifications as a whole and not merely with individual criteria. This text would be included in the Procedural Manual of the Commission.

Procedure of Elaboration of Codex Specifications

24. The Commission had adopted a modified procedure (ALINORM 83/12, Appendix X, Annex 1) for the elaboration of Codex Specifications. This modified procedure recognized the principle that CCFA was the final authority to recommend specifications to the Commission. The Procedural Manual would be modified accordingly.

Guidelines for the Establishment of Food Additive Provisions in Commodity Standards

25. It was recalled that the extensive discussions at the 2nd Session of the Codex Coordinating Committee for Asia concerning the possible use of colours and flavours in foods to mask inferior quality and resultant possible consumer deception had led the CCFA to commence work on the elaboration of guidelines for the establishment of food additive provisions in commodity standards. This work had later been suspended by CCFA because it had been decided that guidance already contained in the Fourth Edition of the Procedural Manual of CAC was adequate. The secretariat confirmed that this principle would be included in the 6th Edition of the manual. The Commission had agreed with the action of the CCFA.

26. The Committee noted that the various texts in the Procedural Manual of the Commission related to the above subject had now been collated and sent to Member Countries for information by circular letter CL 1984/12-FA.

Residues in Food of Chemicals used in Animal Husbandry and Veterinary Medicine

27. While recognizing that the terms of reference of the CCFA would include the matter of residues in food of chemicals used in animal husbandry and veterinary medicine, the CAC had been of the opinion "that it would probably overload the programme of work of the CCFA, which was already heavy". The Commission had expressed the opinion that the subject was urgent and timely and had preferred that the subject should first be examined by a Joint FAO/WHO Expert Consultation and that the recommendations of the consultation might then be considered by the Commission and be acted upon by a newly established Codex Committee, if appropriate.

28. The Committee was informed that a Joint FAO/WHO Expert Consultation on Residues of Veterinary Drugs in Foods would be held in Rome from 29 October to 5 November 1984 in response to the request contained in paragraph 158 of the report of the Commission's Fifteenth Session (ALINORM 83/43). Experts in the fields of toxicology, animal husbandry, residue detection and analyses, and regulatory control had been contacted by the Secretariat.

29. The consultation had been requested to examine all aspects relating to the presence and safety of residues of veterinary drugs in foods. For the purpose of the Consultation a broad definition had been prepared which encompassed all substances administered or applied either orally or parentally to food producing animals, including meat or milk producing animals, poultry, eggs, fish and beef, whether for therapeutic purposes or for modifying physiological and general behaviour. The Consultation would report to the Commission at its Sixteenth Session to be held in 1985.

General Principles for the Establishment or Selection of Codex Sampling Procedures

30. The Committee noted that the above General Principles (ALINORM 83/23, Appendix IV), which had been adopted by the Commission, would be followed by the Working Group on Methods of Analysis and Sampling of Salt in elaborating sampling plans for salt.

Packaging Materials for Food

31. The Committee deferred discussion of the subject to Agenda Item 14.

MATTERS ARISING FROM OTHER SESSIONS

Report of the 15th Session of the Codex Committee on Pesticide Residues (ALINORM 85/24)

Consideration of PCB as contaminant

32. The Committee noted that CCPR had agreed to discuss the question of maximum levels for polychlorinated biphenyls in food and general problems of how consumer protection and facilitation of trade with respect to PCB residues would be addressed at its next session to be held in May 1984. The Committee expressed interest in the subject.

Report of the 15th Session of the Codex Committee on Fish and Fishery Products (ALINORM 83/18)

Inclusion of "Water binding agents" in the list of class names

33. The Committee deferred discussion of the subject to agenda item 7(d).

Report of the 17th Session of the Codex Committee on Food Labelling (ALINORM 85/22) Labelling of Irradiated Foods

34. The Committee was informed of developments in the Codex Committee on Food Labelling concerning the labelling of prepackaged, irradiated foods. It was noted that the Codex Committee on Food Labelling had agreed that irradiated foods (first generation) should be labelled using the term "treated with ionizing energy". As regards the labelling of irradiated ingredients in food products or single ingredient processed foods made from irradiated raw materials, the Labelling Committee had deleted such requirements but had noted that such an action did not preclude the discussion of this matter at its next Session.

35. The delegations of Switzerland and Belgium were of the opinion that only "first generation" irradiated foods should be so labelled. The delegation of Thailand and Italy were of the opinion that all irradiated foods whether sold as such, processed further or used as components should be declared on the label. The delegation of France was of the opinion that "first generation" irradiated foods should be labelled as having been irradiated but that the question of irradiated foods used as components or subjected to processing should be further considered in relation to such considerations as the quantity of the irradiated component present in the product. The delegation of the United Kingdom questioned the need for the Committee *to* discuss again the labelling of irradiated foods as this was the responsibility of the Codex Committee on Food Labelling and indicated that it had the same opinion on the subject as before.

Definition of Food Additives

36. The Committee was informed that the Codex Committee on Food Labelling had accepted the definition of food additive as presently contained in the Revised Draft Standard for the Labelling of Prepackaged Foods (App. III, ALINORM 85/22), but that a number of delegations at that session had expressed the opinion that the definition of food additives should be re-considered.

37. The delegation of the Federal Republic of Germany was of the opinion that nutrients, such as vitamins and minerals, should be included in the definition of food additives as they were handled in a similar manner to food additives in that country (i.e. establishment of specifications, safety clearance, etc.). This opinion was supported by the delegations of Denmark and Sweden. The secretariat pointed out that the Codex Committee on Foods for Special Dietary Uses had drawn up a list of mineral salts and vitamin compounds suitable for use in food with reference to appropriate official specifications. If needed that Committee, which considered all matters related to nutrition, could be requested to consider the matter raised by the delegation of the Federal Republic of Germany. The Committee agreed that a paper should be prepared by the secretariat, in cooperation with the Federal Republic of Germany, setting out the issues and indicating work carried out so far in this area within Codex. The delegations of France and Belgium were of the view that the definition of food additives should not be amended for the time being and wished the CCFA to examine the problems which might arise from the fact that vitamins and mineral salts were excluded from the definition of food additive.

38. As regards the revision of the existing Codex definition for food additives, it was noted that the English text referred to a substance which was not normally used as a "typical ingredient of the food" rather than, generally, as a "typical ingredient of food". It was agreed that the word "the" should be deleted so that the English text be in

conformity with the French and Spanish texts. The secretariat was requested to take appropriate action.

39. As regards the question raised in connection with nitrates (see page 150, ALINORM 85/22), which, although technological additives, were included in certain Codex standards for meat products as essential ingredients, it was noted that such a manner of handling by the Codex Commodity Committee did not necessarily cast doubt on the appropriateness of the definition of food additives. Rather it could be argued that nitrates might have been better included in the food additives section as mandatory component of the product.

40. As regards paragraph 151 of ALINORM 85/22 the Committee confirmed that substances which were nutrients per se were not included in the definition of food additives. This did not mean that technological food additives which helped to maintain nutritional quality by stabilizing a nutrient or enhancing digestibility were also excluded from the definition. The delegation of Finland suggested that the best way to separate nutrients and technological food additives was by considering that the former exerted their effects on the consumer, while the latter had an effect in the food.

Other matters

Codex Alimentarius

41. The Committee was informed of the publication of the Codex Alimentarius which is a collection of international food standards adopted by the Codex Alimentarius Commission, together with provisions of an advisory nature in the form of Codes of Practice, guide lines and other recommended measures, intended to assist in achieving the objectives of the Codex Alimentarius. The Codex Alimentarius can be obtained from the Codex contact points in each of the member states. Vol. XIV relating to Food Additives, Vol. XV relating to Food Irradiation and Vol. XVII relating to contaminants would be of special interest to the CCFA.

CONSIDERATION OF FOOD ADDITIVE INTAKE

42. The Committee had before it the report of the Working Group on Food Additive Intake (Room, document CX/FA 84/5-Add.l, see Appendix II). In introducing the report, the Chairman of the Working Group, Mr. M. Fondu (Belgium) informed the Committee that, document CX/FA 84/5 summarizing the government responses to the circular letter CL 1983/21 FA, had also been made available to the Committee because of the considerable number of answers received.

43. As requested by the Committee at its last session (ALINORM 83/12, paras. 54-70) the Working Group had given special consideration to:

- tin in canned foods
- lead levels in refined sugar
- benzoic acid
- colouring matters
- residual levels of sulphur dioxide

Intake of Tin

44. The Working Group had discussed the level of tin in canned foods and had noted that no action had to be taken as regards long-term toxicity and in the light of the very low intake figures received. However, JECFA had indicated that acute manifestations of gastric irritation appeared to occur around 200 mg/kg in food. The Chairman of the

Working Group explained that maximum levels should be established for different types of food based on Good Manufacturing Practice. These maximum levels should be realistic and lower than the 250 mg/kg generally found in Codex standard for canned foods.

45. The delegation of Thailand which took part in the meeting of the Working Group expressed a reservation concerning this proposal of the Working Group. The delegation commented that it was also the opinion of the Coordinating Committee for Asia that a maximum level for tin of 250 mg/kg, should be allowed in all canned foods.

46. The Committee supported the suggestion of the Working Group that, since it wished to lower the level of tin, the general level of 250 mg/kg should be replaced as far as possible with levels that reflect Good Manufacturing Practice. While recognizing the difficulties some countries had at present in meeting a limit of 200 mg/kg, especially in canned acidic foods, the Committee agreed that a target of 200 mg/kg should be aimed at.

47. The Committee noted that more data were needed and that a circular letter should be distributed requesting information.

48. The Committee supported the recommendation of the Working Group that special attention should be given to levels of tin in canned foods for infants and children and to the problem of long storage of foodstuffs packed in non-lacquered cans.

49. The secretariat informed the Committee that FAO would be publishing a manual on the control of contamination of tin and lead in canned foods which would be of special relevance to developing countries.

Lead in Sugars

50. The Working Group had discussed lead levels in refined sugar and had concluded that a legal limit was necessary. It would enable the rejection of highly contaminated food. In the light of the analytical information received, a maximum level of 1 mg/kg appeared too high. The Working Group had recommended that national governments should establish an appropriate value for the calculation of lead intake from sugar.

51. The Committee endorsed the proposal of the Working Group to collect information concerning the levels of lead intake by infants and children and to ask JECFA to examine this special problem of risk due to lead intake by this section of the population. It was noted that the tolerable weekly intake estimated for lead by JECFA only applied to adults.

Intake of Benzoic Acid

52. The Committee supported the recommendation of the Working Group that governments which authorized benzoic acid in soft drinks at a level of 300 mg/1000 ml and higher should examine uses and intakes to ascertain that the ADI was not exceeded.

53. The Committee noted that the Working Group needed more data concerning the intake of food colours with an ADI less than 2 mg/kg body-weight. A circular letter would be prepared requesting information.

54. The Committee endorsed the proposal of the Working Group to ask JECFA to consider the fact that the ADI of sulphur dioxide is commonly exceeded. This is

important in relation to the possible effect of $S0_2$ intake of foods which are important sources of vitamin B_1 .

55. The Committee noted that the Working Group needed more data on the intake of sulphur dioxide especially as regards:

(i) analytical figures for residual SO_2 in beer, wine, soft drinks and dried fruit in those segments of the population which have a high consumption of these commodities;

(ii) epidemiological data on the intake of SO_2 and the possible dietary deficiency of vitamin B due to SO_2.

56. The secretariat was requested to collect the information as required by the Working Group by issuing an appropriate circular letter to member governments and international organizations.

Intake of phosphates

57. While the data collected on phosphorus intake by the Working Group was of value, it was explained by the WHO representative, that the difficulty was primarily with calcium: phosphorus ratio.. The Working Group was, therefore, advised to take no further action in collecting data on phosphorus alone, either organic or inorganic.

Intake of Polyglycerol polyricinoleate (PGPR)

58. Mr. Fondu described the data available to the Working Group and the conclusions as recorded in Appendix II. The Committee agreed to the Working Group's recommendations.

The artificial sweetening agents, saccharin, cyclamate, aspartame and acesulfame

59. Mr. Fondu wished to thank particularly the US delegation for the extensive data provided. The Committee agreed with the Working Group's conclusion that further information was needed.

Guidelines for the study of dietary intakes of chemical contaminants (Ref: WHO-EFP/83-53, FAO ESN-Misc/83/2)

60. The Committee endorsed the value of the FAO/WHO/UNEP Guidelines and agreed with the Working Group that CCFA should recommend them to governments for their use in intake studies.

Classification of foodstuffs

61. The Committee agreed that the classification scheme of the Working Group would help countries to harmonize intake studies and accepted the Belgian delegation's offer to finalize the scheme. The Committee also agreed with the UK delegation that the scheme would be expected to be of value for screening studies. For mere detailed studies a different classification scheme might be more appropriate.

Establishment of an ad hoc Working Group

62. In view of the work agreed to in this area the Committee reinstated the Working Group. Mr. M. Fondu agreed to continue as chairman. Delegations from Austria, The Netherlands, Thailand, CIAA and CEFIC offered to assist the present members who were thanked by the chairman of the Committee. These were Belgium (chairman), Brazil, Canada, Denmark, Finland, France, Federal Republic of Germany, Japan, Spain, Switzerland, Thailand, Egypt, United Kingdom, USA, Australia and EEC.

ENDORSEMENT OF FOOD ADDITIVE PROVISIONS OF CODEX STANDARDS

63. The Chairman pointed out to the Committee that some sections of document CX/FA 84/10 - Part I concerning proposals of the Codex Committee on Fish and Fishery Products were still under discussion in that Committee. This was especially the case for all the waterbinding and thickening agents and for all additives for minced fish flesh (ALINORM 83/18, para. 137). He therefore explained that the CCFA could not take formal decisions and that the endorsement of these provisions should be postponed, pending information on the technological need for those provisions. However, the suggestions made in the document represented useful information for the Codex Committee on Fish and Fishery Products.

64. The Secretariat informed the Committee that it had followed the procedure described in the report of the 13th Session of the Commission in the production of the documents CX/FA 84/10 - Part I and Part I, Add.2.

65. The decisions of the Committee concerning the endorsement, temporary endorsement or postponement of the endorsement of food additive provisions, are indicated in Appendix III(part I) to this report.

I. Coordinating Committee for Europe

Draft Standard for Vinegar (ALINORM 83/19, Appendix II)

Caramel Colour

66. The delegation of Argentina informed the Committee that caramel colour was not permitted in alcohol vinegar (wine vinegar) in its country. The representative of IFVS was of the opinion that this type of caramel is mainly used for flavouring purposes. The food additive provision was endorsed.

Glutamates

67. The Committee postponed the endorsement of this provision for the following reasons. Several delegations questioned the technological need of glutamates in vinegar. Other delegations felt that the Commodity Committee should differentiate between wine (or alcohol) vinegar and other type of vinegars. The delegation of the Netherlands questioned the Secretariat's recommendation that a maximum level should be set. It was of the opinion that this was not needed with products which were not significant in the diet.

II. Codex Committee for Fish and Fishery Products

Draft Standard for Quick Frozen Blocks of Fish Fillet, Minced Fish Flesh and Mixtures of Fillets (ALINORM 83/18, Appendix III)

For Fish Fillets only

Anti-oxidants

68. The Committee postponed the endorsement of the provisions for ascorbic acid and the gallates. It agreed with the delegation of Belgium that information was needed on the need for anti-oxidants in deep frozen fish products, especially since no fat was added. It also noted that the Working Group on Food Additive Intake had based its conclusions concerning the intake of the anti-oxidants on the assumption that anti-oxidants were only used in fats. It agreed with the delegation of France that additional information was needed on the maximum level for ascorbic acid and its Na and K salts. This delegation proposed a maximum level of 0.3 g/kg as ascorbic acid.

Draft Standard for Quick Frozen Fish Sticks (ALINORM 83/18, App.IV)

For Fish Fillet and for Minced Fish Flesh only

69. The Committee postponed the endorsement of the anti-oxidant provisions for the reasons explained in the section on Fish Fillets (see paragraphs 63 and 68).

For Bread and Batter

Phosphates

70. The Committee agreed with the Secretariat's recommendation to postpone the endorsement of the phosphates, requesting that a maximum level should be set, since an ADI exists for phosphates.

Monosodium glutamate (MSG)

71. The Committee postponed the endorsement of the MSG provision, requesting the Commodity Committee to set a maximum level, since MSG had an ADI. The delegation of Switzerland wondered which glutamates were being proposed, since in another standard the Na, K and Ca salts had been provided for. The Committee referred this question to the Codex Committee on Fish and Fishery Products.

Colours

72. The Committee had a detailed discussion on the use of colours in this product.

The Azo-colours

73. The Committee postponed the endorsement of the 5 azo-colours, viz. Red 2G, Tartrazine, Sunset Yellow, Allura Red and Ponceau 4 R since many delegations were opposed to the use of these colours in this product. The delegation of the UK felt that some delegations were disputing the JECFA recommendations by differentiating between the azo and other colours; while JECFA itself had not made this differentiation. The delegation of Sweden explained that since some colours, such as tartrazine, caused allergic reactions in a small portion of the population in some countries, it was opposed to the use of these type of colours in foodstuffs which were close to being staple foods. The representative of WHO was requested to express an opinion on this matter. He pointed to the report of the 27th Session of JECFA. The Committee agreed to consider this matter on the basis of a paper to be prepared by Sweden and the Secretariat.

Annatto, Carotenoids and Caramel

74. The Committee decided to postpone the endorsement of the provisions for annatto, carotenoids and caramel, requesting the Commodity Committee to set a maximum level, since ADIs existed for these colours. The delegation of Switzerland proposed a level of 100 mg/kg for the carotenoids.

75. The Committee requested the Commodity Committee to clarify the need for provisions for the use of colours and other additives in bread and batter.

Emulsifying agents

76. The delegation of Finland was opposed to the use of emulsifying agents, since they are not used in these products in that country.

Glyceryl monolactylate (GML)

77. The Committee postponed the endorsement of GML since this substance had not been evaluated by JECFA.

Sodium steroyl-2-lactylate

78. The delegations of Finland, Federal Republic of Germany, France, Japan and Italy reserved their position on this additive provision.

Lecithin, mono- and diglycerides

79. The Committee agreed with the delegation of the Federal Republic of Germany to ask the Commodity Committee to clarify the meaning of this provision.

III Committee on Milk and Milk Products

Processed Cheese, Standards A8, a, b, c

80. The Secretariat informed the Committee that IDF had, on the request of the 16th Session of the CCFA, suggested maximum levels for a number of colours for certain cheeses and processed cheeses.

Annatto

81. The Committee discussed the proposed level of use of annatto and decided to postpone the endorsement of this provision requesting additional information on the concentration of the colouring principle; it considered that the provision should be expressed in terms of bixin/norbixin. The delegation of the Federal Republic of Germany questioned the setting of a maximum level in cheese, since this had not been done for other items. The Committee also agreed with the delegation of Belgium to request the Commodity Committee to reconsider the use of annatto in all kinds of cheese and not only in processed cheeses.

Chlorophyll including the copper chlorophyll complex

82. The delegations of Japan and Argentina opposed the use of copper chlorophyll complex in food. The delegations of Italy, Poland and Finland opposed the endorsement of chlorophyll in processed cheeses. The food additive provision was endorsed by the Committee.

Other colours

83. The delegations of Italy, Poland and Finland opposed the use of riboflavin, oleoresin of paprika and curcumin in processed cheeses. The delegation of France expressed a reservation for the use of oleoresin of paprika, since it considered this substance as a flavouring agent. The provision for the food additives was endorsed by the Committee.

Extra Hard Grating Cheese (c35) and Blue-veined cheese (c32)

84. The delegations of Finland, Italy, Poland and the Federal Republic of Germany opposed the use of chlorophyll in this product. The delegations of Japan and Argentina opposed the use of the copper-chlorophyll complex. The food additive provision was endorsed by the Committee.

Tilsiter (cll), Limburger (c12) and Butterkäse (c17)

85. The delegations of Finland, Italy and Poland were opposed to the use of riboflavin in these cheeses. The food additive provision was endorsed by the Committee.

Statement by the IDF

86. The Committee noted the remarks of the IDF that it would take several years before the Committee of government experts on the Code of Principles concerning Milk and Milk Products would meet and accepted the offer of the IDF that this body should provide all the requested information on dairy products.

IV Codex Committee on Food for Special Dietary Uses

Standard for Cereal-based foods for Infants and Children

Leavening Agents

87. The delegation of Argentina was opposed to the use of these agents in these products since it felt that the residual ammonia could react with the proteins lowering their nutritive value. The delegation of the Federal Republic of Germany also was opposed to the use of leavening agents. The delegation of France pointed out that the appropriate French name for this category was "poudre à lever" or "agent levant".

Technological justification for endorsement

88. The delegation of Denmark made a general plea that the Commodity Committees should be reminded that in the absence of satisfactory explanation of their recommendations the CCFA would automatically postpone endorsement of the food additive provisions and would refer them back to the Codex Commodity Committees for further clarification.

Provisions for Food Additives and Contaminants not yet fully endorsed in Standards Elaborated by the Committee on the Code of Principles Concerning Milk and Milk Products

89. The Committee had before it a document (CX/FA 84/10, Part I, Add.2) prepared by the Secretariat on the subject. The decisions of the Committee concerning the endorsement or postponement of the endorsement of the relevant food additive provisions are indicated in Appendix III (Part I) to this report.

90. The Secretariat explained that magnesium silicate had now been allocated an ADI (not specified) by the JECFA and therefore proposed a change in the status of this product from "temporary endorsed" to "endorsed" as anticaking agent in milk powder and cream powder, half-cream powder and high-fat milk powder. This use was to be at a maximum level of 10 g/kg singly or in combination with other anticaking agents and with the extra limitation that it is to be used only in powders intended to be used in vending machines. This proposal was accepted by the Committee although with reservations from the delegations of Japan, Italy, Poland and France.

91. The delegation of Italy expressed the opinion that the maximum levels proposed for karaya gum were quite high. At such levels the intake of the additive by a child of 20 kg consuming 100 g of creamed cottage cheese could exceed the ADI. There were also reservations expressed by a number of delegations against the Secretariat's original proposal that karaya gum should be temporarily endorsed. The Committee therefore decided not to endorse the food additive provision.

92. There was a similar discussion in the case of Xanthan gum to that which had taken place concerning karaya gum and the Committee also postponed endorsement of this additive.

Action needed by the CCFA resulting from change in ADI Status of Food Additives

93. The Committee had before it two documents prepared by the Secretariat on this subject, CX/FA 84/10-Part I-Add.I and Add. 3. It was informed that JECFA had allocated a full ADI to sorbitol and annatto extracts in place of the existing temporary ADIs. The two documents explained the action needed to be taken by CCFA resulting from changes in the ADI status of sorbitol and annatto extract, to recommend full endorsement of these additives in the particular products. The decisions of the Committee are tabulated in Appendix III (Part 2) to this report. The first paper also raised the question of the withdrawal by the 26th Session of JECFA of the temporary ADI alloted to Beet Red.

94. The Committee agreed with the Secretariat's proposal concerning the use of sorbitol in raisins to change the status of the existing temporary endorsement to full endorsement, although the delegation of Argentina expressed its reservation.

95. The Secretariat's proposals on some of the applications of annatto extract were not accepted by the Committee for the same reasons as described in para 81 concerning its use in processed cheese, Standards A8, a, b, and c. For this reason all other provisions for this colour in cheeses were kept at the temporary level of endorsement. Procedurally, the Committee felt it better to retain this status for the wide range of applications covered, rather than to revert to an endorsement postponed status.

96. The Committee agreed that requests for the data necessary on the maximum bixin/norbixin level used in these cheese products should be addressed to the International Dairy Federation since the Commodity Committee was not due to meet again until 1986.

97. The Committee noted that the use of annatto extracts in oils was limited to restoration of the colour lost in processing. Accordingly it endorsed the use of annatto extracts as described in Appendix III. Two reservations were however expressed to the action of the Committee. The delegation of France expressed the view, that to be consistent, margarine should be treated in the same way as processed cheese. The delegation of Argentina reserved its position regarding the endorsement on the application of annatto extracts in butter and whey butter, edible fats and oils and pickled cucumbers.

Status of Beet Red

98. The Committee noted that JECFA at its 26th Session, had withdrawn the temporary ADI of beet red due to lack of data.

99. The Secretariat proposed that the Committee should withdraw an endorsement only if the temporary ADI of the food additive had been withdrawn because of new adverse toxicological data. The Committee did not agree with this general approach. However, it agreed to postpone the withdrawal of the endorsement of beet red for one year pending the arrival of data to be provided by the Natural Food Colours Association.

Lead levels in Sugars

100. The Committee had before it a summary of comments received in response to several circulars requesting information on lead in sugars (legal requirements, whether reduction of the Codex maximum levels were feasible and methods of analysis) as contained in CX/FA 84/10 Part II - Add I.

101. The delegation of France expressed the wish that all ambiguity should be removed from the definition of sugars, in plural. There exist in fact several types of sugars including those obtained by hydrolysis of starch and which are dealt with by TC 93 of ISO. As secretariat of the Committee, France has just begun tests on glucose syrups which showed that these products had a lead content below 1 mg/kg.

102. Several delegations expressed concern about the high intake of lead from food, especially by infants and children. This concern was shared by the representative of the IOCU. The representative of WHO indicated that this problem was of considerable interest to his Organization. It was important to know the source of the contaminants so that appropriate measures could be taken to reduce contamination of food by lead. He indicated that WHO would take appropriate action in this respect.

103. The Committee discussed the source of lead contamination of food. During the discussion it was confirmed that lead was both an environmental and a technological contaminant. Generally, refining of sugar resulted in the reduction of lead content. Data currently available indicated that the existing Codex maximum levels might be too high. The delegation of the USA was of the opinion that contamination of laboratories by lead made the interpretation of the levels found difficult. For this reason the current Codex maximum levels for lead should be maintained. The Codex secretariat was of the opinion that the approach to and data base for setting maximum levels for environmental contaminants should be considered and the maximum level for lead in sugar products should be considered in the light of appropriate data.

104. The Committee requested the Working Group on Contaminants to consider the question of maximum levels for lead in the light of all available information (including information available to the Working Group on Food Additives Intake) and information to be obtained through a circular letter. This information should include (a) levels of lead including the distribution of values in various types of sugar products such as those for which Codex standards existed and distinguishing between refined and raw sugars, including the distribution of values (b) analytical methods used in determining the levels, and (c) source of contamination (e.g. environmental vs. technological) specifying information on such sources.

105. The Committee expressed its concern about the levels of lead in food as a contribution to the total lead burden and agreed to reconsider the reduction of the Codex maximum levels for lead in sugars at its next session in the light of information received and the conclusions of the Working Group on Contaminants (see also para 199).

GUIDANCE TO THE SAFE USE OF FOOD ADDITIVES

106. The Committee had before it paper CX/FA 84/2 containing information on the publication of the FAO/WHO Food Additives Data System (FAO Food and Nutrition Paper No. 30), and volume XIV of the Codex Alimentarius. The Committee was informed that the Food Additives Data System contained a number of errors which would be the subject of a corrigendum to be issued in the near future. Foremost among these was the explanation on Page 7 of the paper referring to the meaning of the asterisks in the paper, where the explanations were reversed. Other errors, for example the ADI of xanthan gum which was in fact 0-10 mg/kg body weight would also be corrected.

107. It was noted that the document was a copy of the information stored in the FAO computer facility in Rome, and that direct access to this information was envisaged. Information on how to obtain direct access would be supplied as soon as possible. It was also noted that the Data System was based on the work of JECFA rather than of the

FAO/WHO Food Standards Programme and as such covered a fairly large number of additives not included in Codex Standards.

108. The Committee was informed that Codex Alimentarius Vol. XIV (updated as at October 1983) contained all texts elaborated by the CCFA, definitions and information on food additives permitted for use in Codex Standards. The volume contained all the information available in the Guide to the Safe Use of Food Additives (CAC/FAL 5-1979), which would no longer be published. It did not contain certain advisory texts in the Guide such as: i) Advisory list of Food Additives used in soft drinks; ii) List of plants considered unsuitable as a source of natural flavours for use in food and List C of Food Additives.

109. The Committee recalled that the list of plants considered unsuitable as a source of natural flavours for use in food had been withdrawn, and that the texts on advisory list of food additives used in soft drinks and List C of food additives, which the Committee considered important would be published separately and made available to the member governments for information.

CLASS NAMES AND INTERNATIONAL NUMBERING SYSTEM OF FOOD ADDITIVES

110. The Committee had before it the report of the ad hoc Working Group on Class Names and International Numbering System of Food Additives (Room Document CX/FA 84/9, add.2 See Appendix IV) and a note on International Numbering System of Food Additives prepared by Australia (CX/FA 84/9). The report was presented by the Chairman of the Working Group, Mr. S.W.C. Smith of Australia.

111. The Committee noted that the list of class names for food additives that it has proposed had been adopted in toto by the Codex Committee on Food Labelling for labelling purposes and had been included in the Draft General Standard for the Labelling of Prepackaged Foods which is presently at Step 7 of the Codex Procedure (ALINORM 85/22, Appendix III).

112. The Committee considered the question referred to it by the Codex Committee on Fish and Fishery Products (ALINORM 83/18, para 136) of how the phosphates included in certain standards on fish and fishery products acting as water binding agents, could be accommodated in the class names.

113. The Committee did not agree with the conclusions of the Working Group that "phosphates" intended as a classname applicable only to processed meat, poultry products, fish and fishery products, and which had multiple functions in foods, provided sufficient consumer information. The Committee felt a need for a new class name "water binding agents" and proposed its inclusion in the list of class names, which had already been adopted by the Codex Committee on Food Labelling for food labelling purposes. The Secretariat informed the Committee that such action by the Committee may face procedural problems. The Committee agreed to refer the question referred to it by the Codex Committee on Fish and Fishery Products to the Codex Committee on Food Labelling.

114. The Committee considered *the* question raised by the delegation of the Federal Republic of Germany whether vitamins and minerals fell under the terms of reference of the Codex Committee on Food Additives and whether the Committee should undertake an examination of the use of vitamins and minerals in food. The Committee noted that it had discussed the questions raised by the Federal Republic of Germany earlier under "Matters of Interest", (see para 37) and agreed that a paper should be prepared by the Secretariat in cooperation with the Federal Republic of Germany setting out the issues and indicating work that could be carried out.

INTERNATIONAL NUMBERING SYSTEM OF FOOD ADDITIVES

115. The Chairman of the Working Group informed the Committee about the progress that it had made in developing an international numbering system of food additives, an exercise initiated by the Committee at its 16th Session.

116. The Committee supported the development of the International System which, in its opinion, made identification of food additives easy and facilitated trade. Such a system, the Committee noted, would be based on the existing EEC system.

117. The Committee discussed the recommendation of the Working Group to delete gelatin from the Codex approved list of food additives as given in Codex Alimentarius Vol. XIV. The Secretariat drew the attention of the Committee to its decision taken at earlier sessions that gelatin was a food and should not be considered as a food additive. The delegations of Italy, Canada and Finland informed the Committee that in their countries, gelatin was considered both as food and food additive. The Committee decided to retain gelatin in the list of food additives for inclusion in the international numbering system.

118. The Committee agreed that the problems set out in para 14 of the report of the Working Group (Appendix IV) should be addressed to both EEC and the Codex Committee on Food Additives.

119. The representative of EEC brought to the attention of the Committee that modified starches, sweeteners and flavourings had not been assigned numbers. He drew the attention of the Committee to the fact that modified starches and flavourings included in the Draft General Standard for the Labelling of Prepackaged Foods (ALINORM 85/12, Appendix III) had a status, different from other classes of additives and expressed the opinion that a clarification on the need of such numbers should be sought from the Codex Committee on Food Labelling. The Committee, however, expressed the view that such an exercise, though relevant, should not be undertaken at this stage but should await finalization of the Standard on the Labelling of Prepackaged Foods by the Codex Committee on Food Labelling and its adoption by the Commission. The Working Group should undertake the allotment of numbers for food additives recommended for use by Codex (as listed in Codex Alimentarius Vol. XIV) .

120. The Committee agreed with the suggestion of the ad hoc Working Group to send out a circular letter as underlined in Para 15 of the Working Group report (Appendix IV) and expressed the opinion that it was premature to have the views of the Codex Committee on Food Labelling on any aspect of this exercise at this stage.

Establishment of an ad hoc Working Group

121. The Chairman thanked the members of the Working Group and its Chairman Mr. S.W.C. Smith of Australia for their valuable contribution and Mr. L.J. Erwin (Australia) for the paper that he had prepared on the International Numbering System that has guided the Committee through the discussion. The Committee reinstated the Working Group with Australia as its Chairman. The membership of the Working Group is as follows: Australia, Brazil, Canada, Federal Republic of Germany, Finland, The Netherlands, The Philippines, Spain, Sweden, Switzerland, Thailand, United Kingdom, USA, EEC, AMFEP, CEFIC, CIAA and IOCU.

PHILOSOPHY BEHIND LISTING OF FOOD ADDITIVES IN CODEX LIST B

122. The Committee had before it paper CX/FA 84/2, Add.l. The Committee was informed that this paper had been prepared by the Secretariat at the request of the 16th Session of the Committee and that the Committee wished to be informed on the philosophy behind Codex List B.

123. The Committee noted that Codex List B of Food Additives contained those food additives in which the Member States and national and international Organizations had shown interest from a technological point of view and the evaluation of which by the Joint FAO/WHO Expert Committee on Food Additives was pending. As regards the status of Codex List B, it was purely a working list of substances pending evaluation by JECFA and/or pending consideration by Codex Committees with a view to their inclusion in individual Codex standards.

Revisions to Codex List B

124. The Committee had before it document CX/FA 84/2-Add 2 containing comments from the USA in response to CL 1983/20-FA. The comments contained a list of additives included in Codex List B for which the USA did not have information. However, some delegations informed the Committee that certain of the food additives mentioned by USA were being used in their countries.

125. The delegation of the USA informed the Committee that its comments served the purpose to inform JECFA that the country had adequate information on all the food additives listed in Codex List B, except those listed in the document. It was proposed by the Chairman of the Committee to invite comments from Member Governments regarding the deletion from the Codex List B of the list of additives for which USA did not have information. This proposal was not accepted by the Committee since some countries were finding use for the additives in question.

126. The Committee was informed that JECFA at its 28th Session had withdrawn specifications for 21 food colours which had no ADIs and for which the Committee was not aware of any use (see Para 12).

127. The Chairman informed the Committee that the existing Codex List B (ALINORM 81/12A Appendix VIII) would be amended in the light of decisions taken by JECFA at its 27th and 28th Session and in the light of Committee's decision concerning the inclusion in Codex List B of certain flavours proposed by IOFI (see para 138). The revised Codex List B is included in the report as Appendix V.

128. The revised Codex List B and the list of food colours for which JECFA specifications had been withdrawn will be communicated to member governments and international organizations along with a circular letter asking for:

(i) Information on the food colours for which JECFA withdrew specifications at its 28th Session

(ii) Proposals for inclusion of food additives in the Codex List B in the Codex priority list and

(iii) Inclusion of additives in Codex List B for which information for JECFA evaluation is available.

129. Some delegations were of the opinion that a mechanism should be established by which additives included in Codex List B could be deleted and suggested that failure to submit information on the additives for a continuous period of 5 years could be used

as reasons for deletion. The Secretariat informed the Committee of the difficulties FAO and WHO would face if such a procedure had to be put into practice.

FLAVOURS

130. The Committee had before it the report of the ad hoc Working Group on Flavours (Room document CX/FA 84/6) distributed during the Session. The Chairman of the Working Group, Mr. J.P. Goddijn, introduced the report. The conclusions of the Working Group are summarized in the following paragraphs, together with the decisions of the Committee. The following countries and International Organizations took part in the Working Group: Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Federal Republic of Germany, Italy, The Netherlands, Norway, Switzerland, Thailand, United Kingdom, United States, EEC, Bureau de Liaison des Syndicats Européens des Produits Aromatiques, Council of Europe, CIAA, FIVS, IOFI and FAO.

General Requirements for Natural Flavourings

131. The Committee noted that the Working Group had concluded that the document entitled "General Requirements for Natural Flavourings" (See Appendix VI) should be reconsidered at the next Session and that the following matters should be considered:

(a) the definitions sections should be reconsidered keeping in mind existing definitions and the need to clearly state that 'natural flavourings' exist mainly as complex mixtures containing various components including carriers and other food additives; IOFI would prepare a document in order to assist the Working Group;

(b) reference should be made to the need for using appropriate raw materials which will result in a 'natural flavourings' acceptable for human consumption;

(c) the maximum levels for biologically active principles in food resulting from the use of 'natural flavourings' (i.e. from the aromatic source materials used in the preparation of these flavourings) should be reconsidered in the light of further information; this list of maximum levels should be elaborated as an advisory list rather than a mandatory one for the guidance of those wishing to ensure the safety of foods containing 'natural flavourings';

(d) to reconsider the introduction of a section dealing with labelling of 'natural flavourings' in the light of the Codex Standard for the Labelling of Food Additives when sold as such, which applied to food additives and, therefore, also to 'natural flavourings'; and

(e) to reconsider the question of the declaration of biologically active principles on the label of 'natural flavourings' as a matter of information between supplier of the 'natural flavour' and the industry utilizing it.

132. The Committee agreed with the above conclusions and noted that the Working Group had considered that the 'General Requirements' were not yet ready for submission to the Commission.

133. The document entitled "General Requirements for Natural Flavourings" is attached to the Report as Appendix VI.

Priority Setting

134. The Committee noted that the Working Group had considered a report by Dr. J. Stofberg (IOFI) on some 350 nature identical substances regarding their consumption as food additives when compared to amounts of the same substance naturally present in

foods. The Working Group had endorsed the approach involving the determination of the consumption ratio (CR)[1] and the consideration of molecular structure and human exposure, as useful in setting priorities for and screening of synthetic artificial and nature identical flavouring substances by a group of experts. This exercise was considered to be necessary and should be initiated as soon as possible as a preliminary to certain flavouring substances being submitted to JECFA for evaluation.

[1] "Consumption ratio" (CR) is defined as the ratio between the quantity consumed as an ingredient of traditional foods and the quantity consumed as a food additive.

135. The delegation of the Federal Republic of Germany stressed that the data generated in the CR study should be considered only as one of several parameters needed for the evaluation of flavouring substances. The Committee noted that the CR study also yielded information on the identity of nature identical flavouring substances which were used in the preparation of food. In the opinion of some delegations and the representative of IOFI a lot of time would be needed to generate sufficient information necessary for an expert group to consider the question. For this reason it would be premature to consider convening such a group.

136. It was pointed out that further information on most of the 350 substances included in the CR study would only tend to increase the numerical value of the consumption ratio, since more foods containing the flavour component would be identified. Furthermore, a sufficiently long list of known 'artificial flavouring substances" already existed (see Codex List B) which could be examined in the light of their molecular structure (i.e. the decision tree approach) and of other available information. In the opinion of some delegations and the representative of IOFI, more time would be needed to improve the data and to deal with additional substances in order to enable an expert group to consider the question. For this reason it would be premature to convene such a group now.

137. The Committee agreed that the above screening of flavouring substances should be proceeded with and accepted the offer of the Secretariat to look into the possible convening of an appropriate group of experts. In this respect it was agreed that the question should be brought to the attention of the Executive Committee at its 1984 Session. The Committee noted that the 1976 JECFA meeting had also recommended the convening of such a meeting of experts.

Up-dating of Codex List B on Flavours

138. The Working Group had considered a submission by IOFI for the amendment of Codex List B as regards flavouring substances (additions, deletions and editorial amendments). IOFI had offered to present available safety data. The. Working Group had accepted the amendments proposed by IOFI except for the changes from 'artificial' to 'nature- identical' flavouring substances based on unpublished information (i.e. private communication). The Group had also considered deletions proposed by the US, but had agreed that information on use should be requested before deletion (see also para 124).

139. As regards the deletions proposed by the Working Group the Committee agreed to them, except those deletions which had been proposed by the USA (CX/FA 84/2 - Add.2) (see para. 138) and by IOFI on the basis of a redefinition of certain 'artificial' flavouring substances as 'nature-identical'. The Committee agreed that the nature identical flavouring substances should not be deleted. As regards flavouring substances evaluated by JiiCFA and found to be unacceptable for use as food additives, the Secretariat was requested to include them in List C, as appropriate.

140. The delegations of the UK and Denmark were of the opinion that the Codex List of synthetic flavouring substances (in List *&)* should also include nature-identical flavouring substances and that substances which were recommended not to be used in food should be listed elsewhere (e.g. in Codex List C). It was pointed out that all synthetic flavouring substances would eventually find their way into the Codex system through the CR-apprcach. The delegation of the USA also favoured the nature-identical flavouring substances being included on Codex List B.

141. The Committee also considered additions to List B proposed by the Working Group. The delegation of the Federal Republic of Germany was of the opinion that it was important to know if data were available for the flavouring substances to be included in Codex List B. It was pointed out that most of the flavouring substances included in Codex List B had been evaluated by FEMA., the Council of Europe or The Netherlands and that, therefore, data should be available. The Committee agreed to add the flavouring substances suggested by the Working Group to List B.

Inventory of aromatic source materials

142. The Committee noted that the Working Group had considered a paper by Dr. S. Valvassori (FIVS) and a brief inventory of references to official lists of aromatic source materials (i.e. aromatic plants) suitable for use in food. The Working Group had agreed that the establishment of such a list of references would be useful in selecting appropriate source materials in the preparation of 'natural flavourings'. However, the Working Group had considered it necessary that the inventory of references be completed and had suggested that Governments be requested to provide information to the Working Group.

143. The Committee agreed with the conclusions of the Working Group and noted that this work would continue with the assistance of FIVS.

Establishment of an ad hoc Working Group on Flavours

144. The Committee expressed its appreciation to the Working Group and to its Chairman Mr. J.P. Goddijn (Netherlands) and agreed that the Working Group should be re-established. Mr. Goddijn was reappointed Chairman of the Working Group with the same membership as before. The full membership of the Working Group comprises of all the countries and international organizations that attended the Working Group meeting (see para 130) and Australia.

CONSIDERATION OF PROCESSING AIDS

145. The Committee had before it the report of the Working Group on Processing Aids (Room document CX/FA 84/12 - Add 3, part I), which is reproduced in Appendix VII of the present report. In introducing the report, the Chairman of the Working Group, Mr, R. Ronk (USA), explained the procedure followed in the preparation of the inventory. At the request of the 16th Session of the Committee the USA delegation had redrafted the inventory and had sent it to members of the Working Group for comment. Each processing aid had been included in one of four categories indicating whether it also had some use as a food additive, or some combination of these. These categories are described in detail in the introduction to the Working Group's report. The comments received by the Chairman of the Working Group are reproduced in document CX/FA 84/12 Add.I. Amendments suggested by the members of the Working Group had been included in the revised draft Inventory.

146. The Chairman of the Working Group noted that a preamble to the inventory had been proposed which would explain the purposes of the inventory and the nature of the categorization. The Working Group had agreed that the object of the inventory was to serve as a basis for future consideration as to whether these substances needed evaluation by JECFA. For those substances in Category I, information would be requested on levels of residues found in foods treated with the processing aid, as well as on possible interactions with food components, or concentration of the impurities of the processing aid in the food itself. On the basis of this information priorities for submission of substances to JECFA would be considered.

147. The Working Group had proposed that the inventory should be divided into two parts, viz., one list containing only those substances in Category I, and also a complete listing of all substances in the Inventory. The first would be sent to Governments, Codex Contact Points and interested International Organizations for comments, on the presence of residues and for related information; and the second would be available for information only. Some substances in the other Inventory might require additional evaluation along the lines of Category I substances. It was recognized that some of the information requested might be of a confidential nature. The Chairman of the Working Group stated that the questionnaire requesting such information should be framed so that the confidentiality of the information would not be compromised.

148. In commenting on the draft Inventory the representative on AMFEP requested that enzymes should be listed on the basis of the source material rather than on the basis of function. The Chairman of the Working Group pointed out that both methods of listing had been used. At the request of the delegation of the United Kingdom references to its "E" classification of enzymes were deleted so as to avoid confusion with the "E" numbering of food additives of the EEC. The Committee decided that processing aids used for preparation of food additives need not be a part of the inventory since they would be dealt with when the specifications of the particular food additive were considered.

149. The delegation of the Federal Republic of Germany requested that substances should be included only once in the Inventory, under their main functional class. The Chairman of the Working Group agreed to revise the Inventory listing of substances under their main functional class as far as this was practical.

150. On the basis of the information supplied on the outcome of the 28th Session of JECFA, the Committee agreed that the extraction solvent 2-nitropropane should be once again included in the Inventory. The delegation from Belgium was however of the view that 2-nitropropane should not be included in the Inventory until such time that requirements outlined in the JECFA evaluation were met. It was also agreed to include asbestos, as this substance was known to be used in the processing of food, and there was general agreement that inclusion of a substance in the Inventory was not a statement of its toxicological acceptance or otherwise. The Committee recalled a decision taken at its last session to gather information on asbestos as a processing aid in food. It was agreed that the Chairman of the Working Group on processing aids would send out a circular letter to gather the information.

151. The Committee accepted the offer of the US delegation to revise the Inventory in accordance with the present discussion, and to have it circulated to members of the Working Group, Governments and Organizations for comment together with a questionnaire on levels of residues, presence of impurities which may be concentrated in

the food, and possible interactions with foods for those substances listed in Category 1 of the Inventory.

152. At a later stage the information would be collated and sent to Governments and International Organizations for comment under a Codex circular letter and these comments would be reviewed by the next Session of the Committee.

Re-draft of the Carry-Over Principle

153. The Committee had before it document CX/FA 84/12-Add 2 containing a proposed re drafting of the Carry-over Principle prepared by the Secretariat. The object of the re-draft was to combine the various texts adopted by the Commission into a single, consolidated statement. Comments of governments had been collated by the Chairman of the Working Group on Processing Aids in document CX/FA 84/12-Add.2A and these had been considered by the Working Group. The Working Group had prepared a re-drafted version for the Committee's consideration (CX/FA 84/12, Add.3, Part II - Conference Room Document).

154. The Committee agreed to delete from the Scope the statement that the Principle did not apply to labelling or to the carry-over of contaminants. A footnote referring to the previously expressed opinion of the Commission with regard to labelling (ALINORM 79/38, para 156) was inserted.

155. In regard to the carry-over of additives in quantities or amounts sufficient to perform a technological function in the final product (section 4) it was agreed that these should, in all cases, be treated as normal food additives. The words "where applicable" were therefore deleted.

156. The Committee agreed to delete paragraph 4.3 which repeated the general statement of application of the principle.

157. The Committee, in adopting the re-drafting of the carry-over principle noted that no substantive change had been made, but was of the opinion that it should be sent to governments for comments at Step 3. The consolidated re-draft of the Carry-over Principle is given in Appendix VII to the present report.

Appointment of an ad hoc Working Group on Processing Aids

158. The Committee thanked the Chairman and decided to reinstate the Working Group under the Chairmanship of Mr. R.J. Ronk (USA). The membership of the Working Group is as follows: Australia, Austria, Belgium, Brazil, Denmark, France, Federal Republic of Germany, Italy, The Netherlands, Norway, Spain, Switzerland, Thailand, United Kingdom, USA, AMFEP, CEFIC, CIAA, EEC, IFGMA, ILSI.

Government Comments on Food Grade Salt and Consideration of the Draft Codex Standard for Food Grade Salt

159. The Committee had before it Conference Room Document CX/FA 84/4 - Add.l, the opinion of the CAC reached at its 15th Session on the Draft Standard for Food Grade Salt currently at Step 8.

160. The Commission had expressed its opinion that the levels of contaminants should be established only on the basis of supporting data and had asked the Codex Committee on Food Additives to re-examine the sections especially on contaminants (ALINORM 83/43, para 130-131).

161. For this purpose Governments had been asked for further data on contaminant, levels in food grade salt (circular letters CL 1983/20-FA and CL 1983/27-FA).

162. The Government comments in reply to the above-mentioned circular letters had been prepared for the Committee by Dr. (Mrs.) M.A. Perinelli (Italy), the chairman of the Working Group on Food Grade Salt. Documents CX/FA 84/13, 84/13A and 84/13A-Add.l were available to the Committee.

163. The Committee also had before it Room Document CX/FA 84/13 Add.l ("Consideration of the Draft Standard for Food Grade Salt") prepared by the Working Group and attached as Appendix VIII to the Report.

164. In introducing the Working Group's report Dr. Perinelli explained that the available data pointed to a normal distribution of arsenic, cadmium and mercury in salt, but were insufficient to allow any conclusion to be drawn about the contamination of salt by copper; they revealed a possible contamination by lead from other sources.

165. Dr. Perinelli further explained that the Working Group had been unable to come to a consensus in making recommendations for maximum contaminant levels of these elements. Her opinion and recommendation and those of the rest of the Working Group are summarized in paragraphs 8 and 9 (Appendix VIII) respectively.

166. Dr. Perinelli estimated that on the basis of her recommendations and assuming a salt intake of 12g/person/day, the maximum intake of arsenic, cadmium and mercury would be 5% of the potential tolerable daily intake (PTDI) and 7.5% and 1.7% of the potential tolerable weekly intake.(PTWI) respectively.

167. The Committee concluded that it lacked sufficient data to decide between the two points of view but agreed that the question of intake was a vital one in arriving at a proper decision.

168. The Committee therefore decided to ask for more data on intake to reach a conclusion. Dr. Perinelli agreed to formulate the appropriate circular letter with the assistance of the Codex Secretariat and the Chairman of the Working Group on Food Additive Intake (Mr, Fondu, Belgium), who agreed to assist and would help analyze the data received.

169. The delegation of the UK reflected the view of several other delegations that there was in fact not a great difference between the two proposed recommendations. It added, the suggestion that the request for data should ask respondents to identify the type of salt on which data were being submitted so that it could be seen whether the problems lay with particular types of salt only or whether the problem was more general.

170. The Committee also agreed with the suggestion of the delegation of Canada that the questionnaire to be sent to governments should include a request for information on their approaches to establishing maximum levels for contaminants in foods which are minor components of the diet.

171. The Chairman thanked Dr. Perinelli and members of the Working Group on behalf of the Committee for the work they had done.

Establishment of an ad hoc Working Group on Salt

172. The Committee agreed to establish an ad hoc Working Group and Dr. Perinelli agreed to chair it again. Cuba wished to be added to the membership of the Working Group. The members are: Italy (Chairman), Austria, Brazil, Cuba, Greece, Japan, Switzerland, Thailand, The Netherlands, USA and the European Committee for the Study of Salt (GEES).

Methods of Analysis and Sampling for Salt

173. The Committee noted that it had no document for consideration of this agenda item since the Working Group on Methods of Analysis and Sampling for Salt had not met during the Session. Elaboration of sampling plans for the analysis of salt was the only outstanding item left for action by the Working Group. The Working Group, having studied the general principles for sampling adopted by the Codex Alimentarius Commission at its 15th Session, had initiated action to elaborate sampling plans for analysis of salt and hoped to report its findings to the 18th Session of the Committee.

174. The delegation of Japan, at the 16th Session of the Committee expressed its opinion, that the determination of halogens according to the ISO 2481-1973, mercury-metric method would result in increased contamination of the environment by mercury and that the silver nitrate method could be developed as an alternate method for the determination of the chloride content.

175. The Committee was informed that the Secretariat had contacted ISO in this regard and action was being taken by ISO to find an acceptable solution to the problem raised by the delegation of Japan. The subject would be discussed by the ISO Technical Committee during May/June 1984. A draft method of analysis for the determination of chloride using silver nitrate, suggested by the Japan Tobacco and Salt Public Corporation had been made available to ISO/TC 47/SC5 for its consideration.

176. The Committee, expressed the opinion that in case it was not possible for ISO to develop the needed methodology, the Committee should develop it through the assistance of the Working Group on Methods of Analysis and Sampling of Salt.

Establishment of an ad hoc Working Group on Analysis for Salt

177. The Committee agreed to establish an ad hoc Working Group under the Chairmanship of Dr. Rocamora (Spain) with the participation of Austria, Brazil, Cuba, Egypt, France, Greece, Italy, Japan, The Netherlands, Spain, Switzerland, Thailand, USA and the European Committee for the Study of Salt (CEES).

CONSIDERATION OF SPECIFICATIONS FOR FOOD ADDITIVES

178. The Committee had before it the report of the Working Group on Specifications (CX/FA 84/7) which was presented by the Chairman of the Working Group, Dr. J.P. Modderman (USA). The report is reproduced as Appendix IX to this report.

179. Dr. Modderman indicated that the Working Group had considered the specifications prepared by the Joint FAO/WHO Expert Committee on Food Additives at its 26th Meeting, 1982, as contained in FAO Food and Nutrition Paper No. 25. The Working Group had also considered comments received in reply to Codex Circular Letters CL 1982/33-FA, CL 1983/ 26-FA and CL 1983/32-FA.

180. The Chairman of the Working Group noted with satisfaction the decision of the Commission concerning the status of Codex Advisory Specifications. However, it was noted that some specifications had been adopted by the Committee and by the Commission only after editorial corrections had been made to the original JECFA text but that no reprinting of the corrected specifications had been made available. The Committee was informed that the Secretariat was aware of this problem and that procedures by which it might be resolved were under consideration.

181. In considering the report of the Working Group the Committee endorsed the view that it would be appropriate to continue to review specifications prepared by JECFA in advance of its toxicological evaluation as these would be of value to some countries.

The delegation of France expressed its reservation against this procedure. The representative of WHO explained that it was entirely appropriate for JECFA to establish specifications for substances which were proposed for later toxicological testing and evaluation. The Committee also endorsed the recommendations of the Working Group that the substances listed in Categories I and II were suitable for adoption as Codex Advisory Specifications and that substances listed in Categories III, IV and V of the Working Group report should be referred to JECFA.

182. The delegation of the Philippines raised a question with regard to the existing JECFA specification for carrageenan (FAO Food and Nutrition Paper No. 4, 1978), which, in the opinion of the delegation, was unnecessarily restrictive in applying a maximum level of 2 percent acid-insoluble matter. This specification could not be met by the semi-refined carrageenan produced and marketed by the Philippines and which was of considerable economic importance to that country. It was noted that the specification for carrageenan had not been adopted as a Codex Advisory Specification.

183. The Committee was informed that the 28th JECFA had considered and revised the specification for carrageenan, but had maintained the criterion for acid-insoluble matter in order to distinguish between the product that had been evaluated and other products. JECFA had been informed that semi-refined carrageenan was considered to be a food in some countries. The delegation of the Philippines firmly stated its opinion that the product described as semi-refined carrageenan fell within the traditional description of carrageenan.

184. The Committee noted that carrageenan would be the subject of a Codex Circular Letter once the specifications arising from the 28th JECFA were published and invited all producing countries to provide comments for the consideration of the Committee's next session. The Committee also agreed to include carrageenan on the priority list of substances for evaluation by JECFA and noted that the timing of sessions in 1985 would enable the Committee's views to be forwarded to JECFA for its consideration.

185. The observer from the European Economic Community, referring especially to the JECFA specifications for sorbitol, drew the attention of the Committee to the fact that the reports of JECFA did not contain information on why the recommendations of the Committee were not accepted when specifications had been returned after consideration. The Joint Secretariat of JECFA stated that it should be possible to do this in the reports of future meetings of JECFA.

186. The representative of WHO reminded the Committee that it was important for the JECFA specifications to correspond to the material actually subjected to toxicological evaluation. For this reason future editions of the toxicological monographs prepared by JECFA would refer directly to the specifications of the material tested. Any substantial differences introduced in the Codex Advisory Specifications for economic reasons, could require a toxicological re-evaluation of the substance.

187. The Committee thanked the Working Group and its Chairman for its report, and noted that at its next session it would be necessary to review the specifications arising from two sessions of JECFA.

Establishment of an ad hoc Working Group on Specifications

188. The Committee thanked the Chairman and decided to establish an ad hoc Working Group under the chairmanship of Mr. J.P. Modderman (USA). The membership of the Working Group is as follows: Austria, Brazil, Denmark, Finland, France, Japan, Federal Republic of Germany, Switzerland, Thailand, UK, USA, EEC and Marinalg.

CONSIDERATION OF SAMPLING PLANS

189. The Committee had before it replies received from governments to circular letter CL 1983/38-FA on enforcement policy for contaminants in Codex Standards.

190. Dr. J.P. Modderman, in introducing the papers prepared by the USA, reminded the Committee of the procedure it had followed in handling the subject. The Committee noted that the maximum levels of contaminants in commodities could be given a different meaning, depending on the method of sampling followed. The CCFA had tried to develop a general approach to sampling, but had concluded at its last Session that governments could not agree on such an approach. A questionnaire had, therefore, been developed to collect information on enforcement procedures in different countries. The comments received are contained in CX/FA 84/8 Add.l and 2.

191. The comments received did not show a consensus among governments on how maximum levels are or should be enforced. Several countries clearly stated that they had national regulations which required enforcement plans for use by an enforcement authority. Other governments had stated that they had recommended sampling plans, but had not stated whether they were mandatory or advisory. Since it appeared that no consensus could be reached about sampling plans, Dr. Modderman recommended that the Committee should not continue to work on this subject and should refer the subject to Codex Commodity Committees.

192. Many delegations stressed the point that it would not be possible to propose a general sampling approach since this depended on the type of contaminant and the type of food. The Committee agreed with the delegations of Sweden and Canada that different approaches were required when contaminants with acute toxic effects were involved or where contaminants showed chronic toxicity.

193. Many delegations were also of the opinion that the Commodity Committees had the expertise on this matter and that they should be asked to consider the subject and to indicate what they meant when suggesting a certain level of a contaminant in a food.

194. The delegation of Switzerland informed the Committee that in its country a plan involving the analysis of multiple composites was used when a consignment was found not to be in compliance with the maximum level for a contaminant. The observer of the People's Republic of China emphasized the importance of sampling plans and informed the Committee that in its country a plan was used which involved the analysis of a single composite. This was done because of the large volume of export/import trade involved. The delegation of Brazil informed the Committee that in its country, a plan involving the analysis of a single composite was used, but that it was not legally formalized.

195. The Secretariat emphasized the importance for Codex to discuss the basis for acceptance or rejection of a shipment when moving in international trade. It felt that Codex should therefore develop a set of guidelines for this purpose and that this could be an activity for either CCFA or CCMAS.

196. The Secretariat also suggested that a distinction should be made between the level of confidence needed for checking a food on a routine basis and the level of confidence needed to confirm non-compliance for the purpose of taking action against the food. It was in this area where Codex could make useful contributions to facilitate international trade while protecting the health of the consumer by making recommendations concerning the criteria from which conclusions could be reached about the status of a shipment. These criteria would not prejudice any action a particular country would take against the food.

197. The delegation of Switzerland supported the view that a sampling plan should be agreed upon for use in international trade.

198. The Committee recognized that sampling for contaminants depended on various parameters and it was for Codex Commodity Committees to indicate the basis on which maximum levels for contaminants should be sampled to check compliance with the maximum levels. On the other hand, it was also important to consider the basis for the estab lishment of maximum levels for environmental contaminants, their nature (e.g. advisory or mandatory) and criteria for their enforcement in relation to sampling plans by the Working Group on Contaminants. The Working Group was requested to look into the matter at its next Session in the light of any information received from Codex Committees and to consider the suggestion of the Secretariat to develop guidelines on how Codex maximum levels should be enforced in international trade.

REGULATION OF INDUSTRIAL AND ENVIRONMENTAL CONTAMINANTS IN FOOD

199. The Committee had before it conference room document "Report of the Working Group on Contaminants", which is attached to this report as Appendix X.

200. Dr. S.A. Slorach, Chairman of the Working Group, introduced the report by reviewing the developments that had led to the first meeting of this newly established Working Group. After the brief overview he summarized the conclusions and requests as laid out in para 25 of the Working Group report (Appendix X). The Committee made the following conclusions:

Mandate

201. The Committee approved the proposal that pesticide residues and related compounds, as well as residues of veterinary drugs should be excluded from the mandate of the Working Group. It decided, however, that contaminants originating from packaging material other than metal cans would fall within the mandate.

Terms concerning limits for contaminants

202. The Committee accepted the proposal from the Working Group that two terms should be adopted, namely "maximum permitted level" and "guideline level" to describe contaminant levels. The latter term was to be used in a similar sense to the "WHO guideline levels for drinking water quality".

203. The Committee requested the Chairman of the Working Groups and the Secretariat to expand and clarify the definitions given in para 6 of the report of the Working Group and make certain that the two could be distinguished one from the other. The philosophy behind these two types of limits would then be understood. It was discussed whether both terms were to be used in Codex Standards. It was explained that these terms resulted from a recommendation (ALINORM 83/12A, App. XV), which had been submitted to governments for guidance when setting contaminant limits in national legislation. Some delegations expressed the opinion that, at a later stage, the question of whether the limit for a certain contaminant in a certain food should be expressed as a "maximum permitted level" or a "guideline level", should be reviewed.

204. The Secretariat, pointed out that, according to Codex Procedure, maximum permitted levels would be sent to governments for acceptance as part of a Codex Standard, whereas guideline levels could be adopted under less formal Conditions. As stated in the report of the Working Group the decision as to which of the two types of levels should be applied would depend on the characteristics of individual contaminants.

Joint FAO/WHO Food Contaminant Monitoring Programme (JFCMP)

205. The Committee took note of the report by the representative of the JFCMP to the Working Group. The recommendation by the Working Group, that JFCMP should be approached to monitor mercury in fish was discussed and finally adopted. It was pointed out that mercury in fish created problems in international trade and might also create a health problem. According to the procedures of the JFCMP, the Secretariat would collect standardized data on JFCMP forms from governments which would be processed and evaluated by JFCMP. These results would be reported to CCFA. It was also considered appropriate that the JFCMP should report regularly to the Committee at its (annual) meetings.

International Register of Potentially Toxic Chemicals (IRPTC of UNEP)

206. A report was presented by the representative of IRPTC which is included in the Working Group report (Appendix X). In the discussion it was explained that, although the name of this institution referred to "potentially toxic chemicals" this would in no way prejudice the legal information received on contaminants.

Collecting of legal information

207. The Working Group had emphasized the urgent need for information on national and international legislation on contaminants in food because of their impact on international trade. The IRPTC should, therefore, be invited to provide such information, possibly also using its network of IRPTC-National Focal Points, since the Committee would be interested in receiving such information. The Secretariat was requested to approach governments again in order to collect more legal information, or to contact other sources of information directly.

Contaminants in Compound Foods

208. At its previous session, the Committee had decided that the Carry-over Principle did not apply to contaminants. Para 21 of the Working Group report was corrected accordingly. The Committee was generally of the opinion that while the "principle" should not be applied to contaminants the health implications arising from the presence of contaminants from raw materials in finished products should be given consideration.

Extremely low limits for contaminants

209. The Working Group had recommended that no limit should be set below the level of detection of current analytical methodology since this might create difficulties in international trade and for the food control authorities. The delegation of the USA offered to determine whether existing low contaminant limits in national legislations were a problem in international trade and to identify the scope of the problem of foods contaminated with mercury, lead, cadmium and aflatoxin. This offer was welcomed by the Committee.

Identification of critical contaminants

210. The Working Group recommended that at this stage this would be more of a national problem, than a Codex problem. However, such information would be useful to guide governments on appropriate actions to be taken.

Establishment of an ad hoc Working Group on Contaminants

211. The Committee thanked the Chairman and decided to establish the Working Group under the Chairmanship of Dr. S.A. Slorach (Sweden). The membership of the

Working Group is as follows: Australia, Austria, Belgium, Brazil, Canada, Cuba, Denmark, Finland, Federal Republic of Germany, France, Italy, The Netherlands, Switzerland, Thailand, UK, USA, UNEP-IRPTC, IOCU, FAO, WHO and CIAA.

PRIORITIES FOR FOOD ADDITIVES

Migration from packaging materials

212. The Committee had before it two documents for consideration: CX/FA 84/11, a report on packaging materials prepared by the delegation of Canada on the basis of replies to CL 1983/20-FA; and the report of the ad hoc Working Group on Priorities for Food Additives, CX/FA 84/11 Add.l, included in the report as Appendix XI and which contained in part the response of the Working Group to the first document.

213. The report on packaging materials was introduced by the delegation of Canada which noted that replies had been received from 7 countries and from the Commission of the European Community, The information had been collated by the Canadian delegation to show the extent of the use of food contact materials which may contain vinyl chloride, acrylonitrile, styrene, or di-(2-ethylhexyl) phthalate. The report showed the nature and use of the materials currently used in the food industry, whether as packaging materials or as food-contact materials used during processing (e.g. as tubing or conveyor belts). The report also showed the types of food commonly packaged or coming into contact with the materials mentioned and levels of migrants found in such foods. The delegations noted that it had been possible in some cases to show, where surveys had been carried out at two different times, that there had been a reduction in the amount of migrants found in food.

214. The Committee expressed its appreciation to the delegation of Canada for the excellent presentation of the material collected. The Committee noted that JECFA, at its 28th Session, had evaluated the four migrating substances mentioned above, and had considered that the most appropriate action for the Committee to take would be to request governments to provide estimates of intake based on the levels found in food. It was agreed that the Chairman of the Working Group on Food Additive Intake, together with the delegation of Canada, should prepare a suitable Circular Letter inviting governments to comment. The delegation of Canada would collect this information and report to the next Session of the Committee.

Report of Working Group on Priorities

215. The report of the ad hoc Working Group on Priorities, as amended by the Committee, is attached as Appendix XIto this report. At the request of the Committee, the Chairman of the Working Group, Mr. S.W.C. Smith (Australia) first dealt with the section of the report dealing with migration of substances from packaging materials into foods (paras. 13-20).

216. Mr. Smith pointed out that paras. 13 and 14 reflected the current situation following JECFA's evaluation of vinyl chloride, acrylonitrile, styrene and di-(2-ethyl-hexyl) phthalate. The delegation of Sweden requested clarification regarding submission of further information to JECFA, particularly in regard to condition (IV) reported in para. 14. The Committee was informed that such data would indicate whether progress in reduction of migration levels was being achieved and that this would assist JECFA in its future consideration of these substances.

217. The Committee accepted the recommendation of the Working Group (para. 16) that information would be useful, and, as noted above, requested the Chairman of the

Working Group on Food Additive Intake and the delegation of Canada to circulate a questionnaire. Canada would collate and report the results.

Terms of Reference of a consultant on Packaging Materials

218. The Committee noted that the Working Group had considered proposed Terms of Reference for the consultant as requested by the Commission. This consultant would consider possible approaches to the questions raised when various types of packaging materials are needed by the food industry (see paras. 534-539 of the report of the 15th Session of the Commission, ALINORM 83/43). The Committee agreed that it would not be appropriate for the consultant to consider food packaged in tinned cans since adequate information on the control of levels of tin and lead in canned foods was available or was in preparation. The Committee approved the Terms of Reference of the Consultant as outlined in para 20 of the Working Group's report.

219. It was agreed to refer the proposed Terms of Reference to the Executive Committee for its action.

Codex Priority List of Food Additives and Contaminants

220. The Chairman of the Working Group informed the Committee that the Working Group had reviewed the priority list prepared at the previous session (ALINORM 83/12A, Appendix XIV, Annex 1). It had been noted that some of the salts and potassium saccharin had already been considered by JECFA and had been therefore deleted from the Priority List. The Committee agreed to include two food colours, Crocin and Carthamus yellow, to the list as these had been included by the Codex Committee on Processed Fruits and Vegetables in the Draft Standard for Canned Chestnut Puree.

221. Several delegations were of the opinion that the status of carbon dioxide and nitrous oxide was not clear, and that there appeared to be conflicting or confusing statements in both the Codex and JECFA reports. It was therefore decided to retain these substances on the priority list for clarification of their toxicological status by JECFA.

222. The Committee discussed the inclusion of vegetable gums in the Priority List. The delegation of the. United Kingdom pointed out that the type of gums to be considered should be specified and that the request should be accompanied by a commitment from a government to provide data. The FAO Joint Secretariat of JECFA stated that it would be possible to prepare a list of gums which would indicate which ones had recently been evaluated by JECFA. The delegation of the USA stated that it would be able to provide information on certain gums which had not been evaluated. The Committee noted the concern expressed by the representative of CIAA that the absence of complete technological data should not unduly delay the evaluation of the substance involved. The Codex priority list as approved by the Committee is given as Annex I to Appendix XI.

223. The Committee also supported the suggestion that the Provisional Agenda of JECFA should be circulated to governments through Codex contact points, as was the procedure in the consideration of pesticides by JMPR, and which had proved to be successful.

FUTURE WORK

Consideration of Vitamins and Minerals

224. The Committee expressed the opinion that exclusion of vitamins and minerals from the definition of the term "Food Additives" should not preclude it from undertaking

work on vitamins and minerals. It recalled the earlier decision that it had taken during the meeting that the Secretariat with the assistance of the delegation of the Federal Republic of Germany should prepare a paper for discussion at its next Session on how the Committee should deal with vitamins and minerals, since they were used mainly for nutritional purposes. It supported the suggestion of the Working Group that the subject be referred also to the Codex Committee on Foods for Special Dietary Uses for its consideration.

Analysis of Food Additives in Food

225. A number of delegations expressed the opinion that if the Committee undertook the above work, it would be embarking on a big programme for Which it presently lacked the required capability and suggested that the analysis of food additives in food could be well undertaken by the Codex Committee on Methods of Analysis and Sampling.

226. The Committee recalled its discussion at its 16th Session when, because of its workload, it had decided not to become involved in the analysis of food additives in food. Although the area was still considered to be an important area for possible future work, the Committee confirmed its previous opinion (ALINORM 83/12A, para. 239).

227. The Committee was informed that FAO was compiling a manual on food analysis which would include methods of analysis for food additives and that an AOAC publication on "Analysis of Food Additives" was available. Since analysis of food additives represented a very broad field the Committee requested that Canada set up certain priorities for future work in this field, and prepare a position paper on the subject for discussion at the 18th Session of the Committee. The delegation of France brought the attention of the Committee to work being carried out in its country on analysis of food additives in food and suggested that the Committee should take this into consideration.

Water treatment agents

228. The Committee considered the work proposed on the above subject as outlined in para 23 of the report of the Working Group, but considered that it should not embark on this new programme of work.

229. The Committee noted that related activities were in progress in the World Health Organization and asked the Secretariat to approach the pertinent department in WHO for any relevant information it could provide on problem areas identified by the Working Group. This information should be available to the Committee for discussion at its 18th Session.

Existence of additives and contaminants in various chemical forms

230. The delegation of Belgium raised the question of the existence of additives and contaminants in various chemical forms, which might have different toxicological significance. The delegation cited as examples sulphur dioxide which existed as free sulphur dioxide and as sulphites, and mercury which existed as inorganic mercury and organic methyl mercury. The Committee agreed that this was a problem to consider and asked the Secretariat to collect information from governments and international organizations on the subject.

Intolerance to Food Additives

231. The delegation of Australia brought the attention of the Committee to the problem of intolerance to food additives discussed by the 27th Session of JECFA (WHO Technical Report Series 696, p.10). It expressed the view that the problem was quite

extensive and proposed that an International Data Bank on Food Additives and Natural Components that caused such food intolerance be established.

232. The Committee noted that the 27th Session of JECFA had expressed the opinion that appropriate labelling was the only feasible means of offering protection to susceptible individuals and that this matter should be discussed again at a future meeting. The JECFA Secretariat confirmed that the subject would be included as an agenda item for a future meeting, depending on the work load.

Establishment of an ad hoc Working Group on Priorities

233. The Committee thanked the Chairman and reinstated the Working Group under the chairmanship of Mr. S.W.C. Smith (Australia), The membership of the Working Group is as follows: Brazil, Canada, Sweden, Federal Republic of Germany, The Philippines, Thailand, UK, USA, FAO and WHO.

OTHER BUSINESS

234. The delegations of Argentina, Brazil, Cuba, Portugal and Spain made a statement that the Secretariat of the Codex Committee on Food Additives of the Joint FAO/WHO Food Standards Programme, FAO, Rome as well as the host government should strive to make the documents for the session available in Spanish and to provide facilities for simultaneous interpretation into Spanish. Their statement in full is reproduced in Appendix XII.

Date and Place of Next Session

235. The Committee noted that its next Session would be held in The Hague from 26 March to 1 April 1985. The Committee was informed that the dates were provisional *.

* Note from Secretariat: It has now been decided by the Chairman of the Committee in consultation with the secretariat to hold the next (18th) Session, of the Committee in the Hague from Tuesday 5 November to Monday 11 November 1985.

236. A number of delegations expressed the opinion that an interval of one year between two sessions was too short a period for the governments to carry out effective consultations and also for the Secretariat to issue documentation on time and preferred that sessions of CCFA be held every 18 months. The UK delegation made a plea for Working Group meetings to take place in the same week as the plenary session. The Chairman agreed to give consideration to the views expressed by the delegations, and to inform in due course the member governments about the finalized dates for holding the 18th Session of CCFA.

Valediction

237. Before closing the session, Mr. A. Feberwee, Chairman of the Committee, expressed on behalf of the Committee, appreciation of the services of Dr. R.W, Stephens, who assisted the technical secretariat and Mr. T. Avigdor (Switzerland) who acted as rapporteur for a number of sessions. He also expressed appreciation of the contributions of Prof. Dr. E. Matthey (Switzerland), an outstanding member of the Codex Alimentarius Commission including its chairmanship. For Dr. R.W. Stephens, Mr. T. Avigdor and Prof. Dr. E. Matthey, this had been the last session of the Committee that they would participate at.

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APPENDIX II

REPORT OF THE AD HOC; WORKING GROUP ON FOOD ADDITIVE INTAKE

1. The following persons took part in the discussions of the ad hoc Working Group on Food Additive Intake (see Appendix I for addresses):

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2. The Working Group had before it a report prepared by the Belgium delegation giving the summary of the governmental responses to the circular letter CL 1983/21/FA. This summary was also made available to the members of CCFA as CX/FA 84/5. The following problems were discussed:

3.1 Tin in canned food

In its 26th report, JECFA gave a temporary admissable intake for tin of 2 mg/kg body weight/day which means 120 mg/day for an adult of 60 kg body weight. According to the data available to the Working Group on the subject, the intake level of tin is in the range of 0.5 to 15 mg/adult/day. At those low levels, which are far below the admissable intake for tin, there is no risk of long term toxicity. However JECFA indicated that, as regards acute toxicity, the acceptable level of tin should be around 200 mg/kg food. Taking these elements into consideration, the WG proposed to CCFA the following:

(a) As regards long term toxicity, no action need be taken. However, due to the fact that the level of contamination has to be maintained as low as possible, the Working Group suggested that as regards tin, levels which reflect GMP should replace the 250 mg/kg food generally permissible by Codex standards for canned foods. According to the information available to the Group, this proposal would result, in most cases, in lower maximum levels of tin in the standards. The Codex Commodity Committees would have to be informed of this proposal. Figures presented by Italy and Canada during the meeting confirmed this proposal.

(b) As regards a number of canned acidic foods, like tomatoes, certain kinds of fruits, fruit juices, a level of 250 p.p.m. seems to be justified.

(c) For canned foods meant for babies and infants, low levels should have to be foreseen.

(d) In a few cases, levels of tin in canned food rose to values of 600 and 770 p.p.m. The Working Group drew the attention of the Committee to the fact that those very high figures are unacceptable. More attention has, therefore, to be given to the problem of a too long storage of foodstuffs packed in unlacquered cans.

3.2 Lead level in refined sugar

Level of lead in the human body is the consequence of a number of factors like air pollution, pollution of foodstuffs, canned foods, equipment used for processing food, soil pollution etc. The problem of the level of lead in refined sugar has, therefore, to be considered in this complex situation.

Although a legal limit is needed to assure that foodstuffs containing high levels should not be offered for sale, the Working Group believes that the setting of a mean value for lead content in foods should remain a problem of national decision. Each country has to decide taking into account the level of contamination on its own territory. However according to information available to the Working Group on legal limits, 1ppm of lead for refined sugar is too high a level and a lower figure should be proposed.

Concern was expressed by a number of delegations regarding the lead intake by infants and babies. The Working Group proposed that JECFA should examine this special problem of risk of lead intake by this group of the population and would be interested in receiving actual figures of intake, as well as an indication of a tolerable intake.

3.3 Benzoic acid

The intake values available from USA where benzoic acid and its Na salt are G.R.A.S. indicate that, even in a country where this additive is theoretically largely used and taking into account a level of use of 0.1 percent there is no risk to exceed the A.D.I. However, where benzoic acid and salts are authorized in soft drinks at a level higher than 300 mg/1, national authorities would have to examine actual uses and intakes to ascertain that the A.D.I, is not exceeded.

3.4 Colouring matters

The Working Group had before it the results of the intake studies carried out in the UK. For the five colours having an ADI lower than 2 mg/kg body weight/day (Amaranth, Quinoline Yellow, Brown HT, Annatto, Red 2 G) the intake values in the UK are much lower than the ADI. However, the Working Group believes that it has received too little information on this topic and that, due to the fact that intensity of food coloration can widely vary from country to country, information coming from other countries is needed.

3.5 Residual levels of Sulfur dioxide

The very interesting study carried out in the UK on this problem was taken as a basis for discussions.

In the UK four types of food contribute 60 percent of the intake level: beer, wine, fruit juice and dried fruit. The Working Group considers therefore, that priority has to be given to those four groups of food.

(a) For those foods which are not heated, or those which like dried fruit are eaten as such, actual figures for SO_2 are needed, since the difference between these and the authorized levels can be significant.

(b) As regards the ADI, the Working Group would be interested in having a re-evaluation done by JECFA (the last one was done during the 17th meeting).

(c) The problem of groups of populations consuming large quantities of some of these foods (dried fruit by children) would have to be examined with special attention,

3.6 Intake of phosphates

Taking into account the 26th report of JECFA indicating that "At present there is insufficient evidence for resolutions of the question of the optimum ratio Ca: P" the Working Group suggested to wait until JECFA had reviewed the problem.

According to certain calculations carried out in Finland, Italy and Belgium, the Phosphorus intake from additives accounts for 5 to 15 percent of the total phosphorus intake. Those figures would have to be confirmed by other countries. JECFA should be informed of these values and of the fact that this phosphorus arising from additives is almost exclusively inorganic in nature.

3.7 Polyglycerol pblyricinoleate

In the UK, a maximum of 0.3 percent of PGPR is used (instead of 0.5 percent in the standard for chocolate) for cocoa, chocolate and related confectionary. The Working Group would therefore wish to be informed if any country interest in using 0.5 percent PGPR. As regards margarine, low fat spreads and shortenings, this additive was not authorized for use in USA, UK, Belgium, France, Denmark, Hungary, the Netherlands, Sweden, Italy, Federal Republic of Germany and Finland. The question is therefore to know if there is a need for this additive in these products and if it is authorized in a country and at what level.

3.8 Artificial sweetening agents

Taking into account the experience of USA with saccharin, one can say that the risk of exceeding the ADI of saccharin is low. However, the Working Group believes that, due to the recent modifications in the authorization of use of artificial sweetners in a number of countries, the intake of sweetners should be followed during the next years. Information regarding the levels of authorization should be gathered.

3.9 Guidelines for the study of dietary intakes of chemical contaminants

Dr. Gorchev (WHO) gave an account of the guidelines published by FAO/WHO/UNEP. During the discussion it was indicated that each country should be asked to use it for its intake studies taking into account the local availability in manpower and financial resources. Taking into account the fact that intake studies on food additives, pesticide residues and contaminants have to be undertaken by as many countries as possible and according to the same schemes, the Working Group strongly recommended governments to use these guidelines in their intake studies.

3.10 Classification of foodstuffs

This classification is intended to help countries in intake studies to classify the same foodstuffs in the same categories. It would greatly help comparisons of intake figures. Based on the US classification, this proposal should be completed. If CCFA feels that this is a useful exercise, the Belgium delegation is prepared to finalize the classification. National classifications are needed so that they can be introduced in the international classification of foodstuffs. These should be sent to Mr. M. Fondu. A more complete document could then be prepared before the next meeting of CCFA. It would be first checked by the Codex Secretariat.

Part 1

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 17th 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

I Coordinating Comittee for Europe

Draft Standard for Vinegar

ALINORM 83/19, Appendix II)

Food Additive	Maximum level in the final product	Paragraph	status of endorsment
Caramel Colour (Plain)	GMP	66	E
Monosodium glutamate	GMP	67	EP[1.)]
Monopotassium glutamate	GMP		
Calcium glutainate	GMP		

II

Codex Committee for Fish and Fishery Products

Draft Standard for Quick Frozen Blocks of Fish Fillet, Minced Fish Flesh and Mixtures of Fillets and Minced Fish Flesh (ALINORM 83/18, Appendix III).

For Fish Fillets Only

Monophosphate, mono-sodium or monopotassium (Na or k or theprosphate)	5 g/kg expressed as $P2^05'$ singly or in combination	63	2) 3) 4)
Diphosphace, tecra sodium or tetra potassium) (Na or k pyrophisphate)		63	2) 3) 4)
Triphosphate, penta sodium-or penta potassium) or calcium (Na, k or Ca) tripolyphosphate))		63	2) 4)
Polyphosphate, sodium) (Na hexametsphesphate	5 g/kg	63	2)
Sodium alginate	5 g/kg	68	EP [5)]
Ascorbic acid or its Na or k salts	1 g/KG expressed as ascorbic acid		
Propyl gal late) Octyl gallate) Dodgecyl pall late	100 mg/kg singly or in combination	68	Ep[5)]

[1)] EP requiring more information on the technological justification

[2)] No formal decision taken, since this provision is still in discussion by the Commodity Committee

3) The synonyms for the additive given in the brackets are not correct
4) Useful information if the chemical formula is given
5) EP, requiring information on the technological justification

For Minced Fish Flesh Only

Food Additive	Maximum level in the final product	Paragraph	Status of endorsement
Sodium alginate .	5 g/kg		
Ascorbic acid or its Ha or k salts	1 g/kg expressed as ascorbic acid		
Propyl gallate Octyl gallate Dodecyl gallate	100 mg/kg singly or in combination	63	1)
Citric acid Na citrate k citrate	I g/kg singly or in combination		
Guar gum Carob bean (locust bean) gum Pectin Carboxy methyl cellulose, sodium salt Xanthan gum Carrageenan Methyl cellulose	5 K/kg, singly or in combination		

1) No formal decision taken, since the provisions are still under discussion by the Commodity Committee

Draft Standard for Quick Frozen Fish Sticks

(ALINORM 83/18, Appendix IV)

Food Additive	Maximum level in the final product	Paragraph	Status of endorsement
For Fish Fillet Only			
Monophosphate, mono sodium or mono potassium (Na or k orthophosphate)	5 g/kg expressed as P_2O_5' singly or in combination	63	[1]
Diphosphate, tetra sodium or tetra potassium (Na or k pyrophosphate)	"	63	[1]
Triphosphate, penta sodium or peuta potassium or calcium (Na, k or Ca tripolyphosphate)	"	63	[1]
Polyphosphate sodium (Na hexametaphosphate)	"	63	[1]
Sodium alginate	5 g/kg	63	[1]
Ascorbic acid or its Na or k salts	1 g/kg expressed as ascorbic acid	69	EP[2]
Propyl gallate Octyl gallate Dodecyl gallate	100 mg/kg singly or in combination	69	EP[2]

[1] No formal decision taken, since the provision is still under discussion by the Commodity Committee

[2] EP, requiring more information on the technological justification

Food Additive	Maximam level in the final produet	Paragraph	status of endorseme
For Minced Fish Flesh Only			
Sodium alginate	5 g/kg	63	[1]
Ascorbic acid or its Na or k salt	1 g/kg expressed as ascorbic acid	69	EP[2]
Propyl gallate Octyl gallate Dodecyl gallate	100 mg/kg singly or in combination	69	EP[2]
Citric acid Na citrate k citrate	1 g/kg singly or in combination		E
Guar gum Carob bean (locust) bean) gum Pectin Carboxy methyl cellulose sodium, salt Xanthan gum Carrageenan Methyl cellulose	5 g/kg singly or in combination	63	[1]

[1] No formal decision taken, since the provision is still under discussion by the Commodity Committee
[2] EP, requiring-more information on the technological justification

Food Additive	Maximum level in the final product	Paragraph	Status of endorsement
Annatto	Limited by CMP	74	EP[1)]
Beta carotenes	"	74	EP[1)]
Other carotenes	"	74	EP[1)]
Red 2G		73	NE[2)]
Caramel	"	74	EP[1)]
Tartrazine 19140	"	73	NE[2)]
Sunset yellow	"	73	NE[2)]
Allura Red		73	NE[2)]
Ponceau 4R	"	73	NE[2)]
Guar gum	5 g/kg singly or in combination		
Carob bean (locust bean) gun	"	63	3)
Carrageenan	"	63	3)
Xanthan gum	"	63	3)
Pectins	2.5 g/kg	63	3)
Sodium alginate	"	63	3)
Hydroxypropyl cellulose	5 g/kg singly or in combination"	63	3)
Hydroxypropyl methyl cellulose	"	63	3)
Methyl. Ehtyl celluilose		63	3)
Sodium carboxy methyl cellulose	"	63	3)

1) EP, requiring the setting of a maximum level
2) NE, since the Committee opposes the use of their colour in bread
3) No formal decision taken, since the provision is still under discussion fay the Commodity Committee

Food Additive For Bread or Batter	Maximum level inthe final produce	Paragraph M	Status of endorsement
Mono calcium phosphate	Limited by CMP	70	EP[1)]
Dicalcium phosphate	Limited by GMP	70	EP[1)]
Sodium aluminium phosphate	"	70	EP[1)]
Sodium acid pyrophosphate		70	EP[1)]
Sodium carbonate	"		E
Potassium carbonate	“		E
Ammonium carbonate	“		E
Sodium bicarbonate	"		E
Potassium bicarbonate			E
Ammonium bicarbonate	“	71	E
Mono sodium glutamate	“		EP[1)]
Lactic acid	1 g/kg		E
Citric acid	1 g/kg as citric acid		E
Na citrate	“		E
K citrate	“		E

[1)] EP, requesting the setting of a maximum level

Food Additive	Maximum level in the final product	Paragraph	Statuts of endorsement
Glyceryl monostearate	5 g/kg of the final product singly or in combination	76	E
Glyceryl monolactylate	"	77	EP[1)]
Sodium steroyl 2 -lactylate	"	78	E
Lecithin, mono and di-glycerides	"	79	EP[2)]
Acid treated starches (including white &yellow dextrins) "	Limited by GMP	63	[3)]
Alkali treated starches	"		
Bleached starches . "	"		
Distarch adipate, acetylated	Limited by CMP		
Distarch glycerol	"		
Distarch glycerol, acetylated "	"		
Distarch glycerol, hydroxy-propyl	"		
Distarch phosphate	"	63	[3)]
Distarch phosphate, acetylated	"		
Distarch phosjihate-, hydroxy-propyl	"		
Distarch phosphate, phosphated	"		
Monostarch phosphate	"		
Oxidized starch	"		
Starch acetate	"		
Starch, hydroxypropyl	"		

[1)] EP, since here is no JECFA evaluation available .
[2)] EP, requiring information on the type of substance involved
[3.] No formal decision taken, since the provicion is still under consideration by the Commodity Committee

III Codex Committee on Milk and Milkprdducts

Food Additive	Maximum level in the final product	Paragraph	Status of endorsement
Processed Cheese, Standards A8, a, b, c			
(i) Beta Carotene[1]	600 mg/kg	80	E
(ii) Annattoi[1]	600 mg/kg	81	EP[1)]
(iii) Chlorophyll including copper chlorophyll complex	300 mg/kg	82	E
(iv) Riboflavin	100 mg/kg	83	E
(v) Oleoresin of Paprika	450 mg/kg	83	E
(vi) Cur cumin	300 mg/kg	83	E
Extra hard grating cheese (c35) and blue-veined cheese (c32)			
Chlorophyll including copper chlorophyll complex	15 mg/kg	84	E
Tilsiter (cll), Limburger (cl2) and Butterkäse (cl7)			
Riboflavin	100 mg/kg	85	E
Milk Powder, Standard A5 (for vending marchines only)			
Magnesium silicate	10g/kg singly or in combination	90	E
Cream Powder, half creampowder and high fat milk powder, Standard A-10 (for vending machines only)			
Magnesium silicate	10g/kg singly or in combination	90	E
Creamed cottaqe cheese, Standard C-16			
Karaya gum	5g /kg singly or in combination	91	NE
Processed Cheese preparations, cheese foods cheese spreads standard A-8			
Xanthan gum	8g/kg singly or in combination	92	EP[1)]

[1)] EP, requesting the Commodity Committee tc

IV Codex Committee on Foods for special Dietary Uses

Draft Standard for Processed Cereal-Based foods for Infants and Children
(CODEX STAN 74-1981)

Leavening Agents		Paragraph	Status of endorsement
Ammonium carbonate Ammonium hydrogen carbonate	Limited by CMP	87,	E

Change in status of endorsement of food additives resulting from JECFA evalttion..

		Earlier Status	Present status of endorsement
	SORBITOL		
Commodity	Maximum Level of Use		
Raisins	5 g/kg	TE	E
	ANNATTO EXTRACT		
Commodity	Maximum Level of Use		
Edible Fats & Oils	Limited by GMP, to restore colour lost in processing	TE	E
Butter & Whey Butter	Limited by GMP	TE	E
Processed Cheeses	Limited by GMP	TE	TE
Margarine	Limited by GMP	TE	E
Leidse Cheese	300 mg/kg singly or in combination with Beta-Carotene	TE	TE
Friese Cheese	300 mg/kg singly or in combination with Beta-Carotene	TE	TE
Minarine	20 mg/kg calculated as total Bixin or Norbixin		E
Bouillons and Consommés	150 mg/kg' on a ready-to-eat basis	TE	E
Edible low Erucic Acid Rapeseed Oil	Limited by GMP, to restore the colour lost in processing	TE	E
Edible Coconut Oil	Limited by GMP, to restore the colour lost in processing	TE	E
Edible Palm Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Grapeseed Oil	Limited by GMP, to restore dolour lost in processing	TE	E
Edible Babassu Oil	Limited by CMP, to restore colour lost in processing	TE	
Pickled Cucumbers	300 mg/kg singly or in combination with other colours		

Processed Cheese Preparations	Limited by GMP		
Cheddar Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Danbo Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Gouda Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Harvarti Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Samsoe Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Cheshire Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Tilsiter Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Saint-Paulin Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Svecia Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Butterkase Cheese	600 rag/kg singly or in combination with Beta-Carotene		
Coulotnmiers Cheese	600 mg/kg singly or in combination with Beta-Carotene		
Herrgardsost Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Hushallsost Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Norvegia Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Maribo Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Fynbo Cheese	600 mg/kg singly or in sembisation with Beta-Carotene	TE	TE

Esram Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Amsterdam Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Camembert Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Brie Cheese	600 mg/kg singly or in combination with Beta-Carotene	TE	TE
Edam Cheese	600 rag/kg singly or in combination with Beta-Carotene	TE	IE
Edible Soybean Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Arachis Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Cotton seed Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Sunflower-seed Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Rapese--Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Maize Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Sesame-seed Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Safflower-seed Oil	Limited by GMP, to restore colour lost in processing	TE	E
Edible Mustard-seed Oil	Limited by GMP, to restore colour lost in processing	TE	E

CCFA requests the commodity committee concerned to reconsider the use of annatto in all kinds of cheese and not only in processed cheese

CONSIDERATION OF CLASS NAMES FOR FOOD ADDITIVES AND INTERNATIONAL NUMBERING

SYSTEM OF FOOD ADDITIVES - REPORT OF THE WORKING GROUP

The following participated in the meeting (see Appendix I for addresses):

S.W.C. Smith (Chairman)	Australia
N. Rao Maturu (Rapporteur)	FAO
D.C. Kirkpatrick	Canada
A. Feberwee - Chairman CCFA	
C. Nieman	The Netherlands
Allan Edhborg	Sweden
T. Kappeler	Switzerland
P. Rossier	Switzerland
T. Satasuk	Thailand
M.J. Griffiths	United Kingdom
J.C. Hammond	United Kingdom
E. Lueck	CEFIC
P. Kuhnert	Federal Republic of Germany
D.K. Grose	IOCU
Richard Cristal	USA
T. Endo	Philippines
P.H. Mouton	CIAA
J.L. Mahler	AMFEP
R. Haigh	EEC
P. Sträter	Federal Republic of Germany
A. Contijoch	Spain
R. Kumton	Thailand
P.S.J. Padin Fernandez	Brazil
Iram Rud de Thoraes	Brazil
R.J. Ronk	USA
S. Gardner	IFGMA

1. The Working Group chaired by Mr. S.W.C. Smith (Australia) had the following documentation available to it, for its discussion.

(i) Report of the 15th Session of the Codex Committee on Fish and Fishery Products (ALINORM 83/18)

(ii) Report of the 17th Session of the Codex Committee on Food Labelling (ALINORM 85/22)

(iii) A note on International Numbering System of Food Additives (CX/FA 84/9)

(iv) (iv) Information Paper on EEC numbering system, and (v) Codex Alimentarius Vol. XIV. Food Additives,

Consideration of Class names of Food Additives

2. The Working Group noted that the list of class names for food additives proposed by the Codex Committee on Food Additives was accepted in toto by the Codex Committee

on Food Labelling for labelling purposes and included in the Revised Draft-General Standard for the Labelling of Prepacked Foods which is presently at Step 7 of the procedure (ALINORM 85/22, Appendix III).

3. The Working Group considered the question referred to CCFA by the Codex Committee on Fish and Fishery Products (ALINORM 83/18, Para 136) of how the phosphates included

in certain standards on Fish and Fishery products and act as a water binding agent, could be accommodated in the class names.

4. The Working Group noted that the list of Class names includes "Phosphates" applicable only for processed meat and poultry products and fish and fishery products.

(Phosphates exert multiple functional properties and act as stabilizers, water binding agents and chelating agents etc. The Working Group expressed the opinion that there was no need for a new class name of "water binding agents" and that use of the term "phosphates" which have multiple functions to perform provides sufficient consumer information.

5. The observer from the Association of Microbial Food Enzyme Products (AMFEP) questioned the justification of the Committee for inclusion of "Enzymes" in the list

of class names, which according to him are mainly processing aids and agreed to prepare a paper on the subject for discussion at the next (18th) Session of CCFA.

6. The Working Group considered the question raised by the delegation from the Federal Republic of Germany whether or not CCFA should undertake for consideration the use of vitamins and minerals which are chemicals, governed by specifications and which are used for fortification.

7. The Codex Secretariat informed the Working Group of the relevant discussions on the subject by the Working Group on priorities which expressed the opinion that vitamins and minerals did not fall in the terms of reference of CCFA, since the definition of the term "Food Additive" excludes vitamins and minerals. Also direct food additives and vitamins and minerals are regulated in different manners.

International Numbering System of Food Additives

8. The Working Group was reminded of the decision taken by CCFA at its last (16th) Session to develop an International Numbering System of Food Additives based on the EEC system. The International Numbering System makes identification of food additives easy and facilitates trade. The use of the system would avoid the use of lengthy chemical names on the label and would provide easy reference for the consumer who needs to remember only a few numbers of the food additives that he has to avoid. There was a consumer reaction in favour of the system and the Working Group considered that development of such a system was a step forward in providing consumer information.

9. The participating countries in principle supported development of such a system as it could provide useful information for consumers.

10. The Working Group agreed that the use of the prefix "E" would create difficulties in adapting the EEC system for international use and enquired from the representative of the EEC whether deletion of "E" would be possible if a positive decision was taken to develop an international numbering system based on the existing EEC system.

11. The Working Group was informed that if a Codex international system was developed, the EEC would consider sympathetically the suggestion for deletion of "E". Prefix "E", however, had a special meaning for consumers in the EEC.

12. A comparison of the list of food additives approved for use by Codex as given

in Codex Alimentarius vol. XIV, and the list of food additives for which EEC numbers had already been allotted, reveal that there are only about 20 additives in the Codex approved list for which EEC numbers had not been allotted. Within the EEC, numbers have been allotted only to additives belonging to classes for which there are permitted category names for labelling purposes (comparable to provisions in draft Codex Standard for labelling of pre-packaged foods).

However, the EEC had not allocated numbers to flavours, modified starches and artificial sweetners.

13. The Working Group was reminded of the views expressed by CCFA at its earlier session that gelatine is a food and should not be considered as a food additive. The Working Group recommended deletion of gelatine from the Codex approved list of food additives as given in Codex Alimentarius Vol. XIV. The delegation of Canada informed the Working Group that in its country, gelatine was considered both as a food and food additive.

14. The Working Group identified some problems which need to be addressed in developing the proposed international numbering system based on the present EEC system:

(i) It will be necessary to decide which additional additives should be included in a Codex numbering system (e.g. whether only those listed in Vol. XIV of the Codex Alimentarius should be considered).

(ii) Suitable arrangements will have to be agreed with the EEC Commission for the allocation of additional numbers.

(iii) In a number of cases, different names have been used by the EEC and Codex to refer to the same food additive (see Appendices 2 and 3 of CX/FA 84/9).

(iv) The EEC list sometimes attributes the same number to a range of related chemicals. For example, under ammonium carbonates, both ammonium carbonate and ammonium hydrogen carbonate have the same numbers namely 503. Codex, however, considers them as separate additives.

(v) The EEC presently uses alphabetical suffixes for related additives. For example E 160 (a) to (f) identifies various carotenes (Appendix III, CX/FA 84/9).

15. The Working Group agreed to recommend to CCFA that the Codex Secretariat with the assistance of the Commission of the European Communities and Australia should prepare a paper which would consider the questions raised above and compare

the present EEC list of food additive numbers with the list of additives in Vol XIV of the Codex Alimentarius. This paper should be circulated to member states for comment, who may also propose additional additives which may be considered for inclusion in the numbering scheme.

ALINORM 85/12
APPENDIX V

UP-DATED CODEX LIST B OF FOOD ADDITIVES

Codex List B of Food Additives contains those substances in which the member states and/or industry has shown interest, and evaluation of which by the Joint FAO/ WHO Expert Committee on Food Additives (JECFA), is pending.

Some of the food additives in the list B had been evaluated by JECFA at some of its sessions but no ADI could be allocated mainly because of a lack of adequate data. Such of the food additives which fall in the above Category are given a Status of B1. The rest of the food additives which had never been considered by JECFA are given a Status of B2.

1. ACIDS, BASES, SALTS	Status	JECFA Ref.
Benzoate, calcium	B2	
dihydrogen orthophosphate, ammonium (ammonium phosphate, monobasic)	B2	
diphosphate, dicalcium (calcium pyrophosphate)	B1	8
diphosphate, tetrapotassium (potassium pyrophosphate)	B1	8
Fumarate, calcium	B2	
Fumarate, potassium	B2	
1,4-Heptanolactone, calcium and sodium salts	B2	
hydrogen orthophosphate, diammonium (ammonium phosphate, dibasic)	B1	8
hydrogen orthophosphate, magnesium (magnesium phosphate, dibasic)	B2	
dl-malate, sodium hydrogen	B2	
Metabisulphate, calcium	B2	
Phosphate, bone	B1	8
Phytate, calcium	B2	
Polyphosphate, ammonium	B1	8
Polyphosphate, calcium	B1	8
Polyphosphate, potassium	B1	8
Succinate, ammonium	B2	
Succinate, calcium	B2	
Succinate, magnesium	B2	
Succinate, potassium	B2	
Succinic acid	B2	
Sulphate, aluminium-ammonium	B2	
Sulphate, aluminium-potassium	B1	1, 2
Sulphate, aluminium-sodium	B1	2
Sulphate, aluminium	B1	1, 2
Sulphate, ammonium, potassium and sodium	B2	
Sulphate, hydrogen, potassium and sodium	B2	
Suphuric acid	B2	
dl-Tartaric acid and its salts	B1	3,9

L(+)Tartaric acid	B1	9
L(+)Tartrate, ammonium	B1	3,9
L(+)Tartrate, calcium	B1	3,9
L(+)Tartrate, magnesium	B1	3,9
Triphosphate, pentapotassium	B2	

2. ANTIOXIDANTS

4-Hydroxymethyl-2,6-di-tert-butylphenol	B2	

3. CARRIER SOLVENTS

Diethylene glysol monoethyl ether	B1	4, 5, 6
Diethylene glysol monopropyl ehter	B1	5
Diethyl tartrate	B1	5, 7
Dipropylene glycol	B1	5
Hexylene glycol	B2	
Isopropyl myristate	B1	5
Paraffins (not defined)	B2	
Synthetic triglycerides	B1	5, 7

4. COLOURS

Beet Red	B1	8, 9
Alkanet	B1	3
Alkanin	B1	3
Anthocyanins (incl. anthocyanine)	B1	3, 8
Black 7984	B1	3
Brown FK	B1	3
Capsanthine	B1	3
Capsorubine	B1	3
Caramel colour (ammonia process)	B1	3, 9
Caramel colour (caustic sulphite)	B2	
Carothene (natural)	B1	3, 9
Carthamus (yellow and red)	B1	3, 9
Chrysoine	B1	3
Fast Red E	B1	3, 9
Fast Yellow AB	B1	3
Green S	B2	
Indanthrene Blue	B2	
Lithol Rubine BK	B1	3, 8, 9
Lycopene	B1	1, 3
Orange GGN	B1	1, 3
Orange G	B2	
Orange RN	B1	1, 3, 4
Patent Blue V	B1	1, 8, 9
Ponceau SX	B1	1, 6
Ponceau 6R	B1	1, 3
Quercetin and quercitron	B1	3
Saffron	B1	3, 9
Scarlet GN	B1	3
Silver	B1	3, 9

Ultramarines	B1	3
Xanthophylls	B1	1
Yellow 2G	B1	1, 3, 5

5. EMULSIFIERS AND STABILIZERS

Benzoin gum	B1	3
Bleached lecithins	B2	
Dioctyl sodium sulphosuccinate	B2	
Esters of glycerol and thermally oxidized soybean fatty acids	B1	4, 6
Gum ghatti	B1	8
Hydroxylated lecithin	B1	3, 6
Oat gum	B1	3
Oxidized hydroxypropyl distarch glycerol	B1	4
Polyglycerolesters of fatty acids	B2	
Quillaia extract	B1	8
Sodium carboxymethyl distarch glycerol	B2	
Starch aluminium octenyl succinate	B2	
Starch sodium succinate	B1	8
Stearoyl monoglyceridyl citrate	B1	8
Stearoyl propylene glycol hydrogen succinate	B2	
Succinylated monoglycerides	B1	8
Tragacanth gum	B1	3, 6, 9

6. ENZYMES

Carbohydrase (Aspergillus oryzae varieties)	B2	
Catalase (Aspergillus niger varieties)	B2	
Catalase (Micrococcus lysodeikticus)	B2	
Ficin	B2	
Micorbial carbohydrase (Aspergillus awamori)	B2	
Microbial carbohydrase (Arthrobacter)	B2	
Microbial glucose oxidase (Penicillium amagasakiense)	B2	
Microbial rennet (Bacillus cereus)	B2	
Microbial rennet (Irpex lacteus)	B2	
Protease (Aspergillus oryzae varieties)	B2	
Streptomyces fradial-protease	B1	9

7. EXTRACTION SOLVENTS

Butan-1-ol	B1	5, 9
Butan-2-ol	B1	5
Butane	B1	5
Cyclohexane	B1	5
Di-isopropyl ether	B1	5
1,1-Dichloroethane	B1	5
Dichlorofluoromethane	B2	
1,2-dichlorotetrafluoroethane	B1	5
Diethyl ether	B1	5
Furfural	B1	5
Iso-butanol	B1	5

Isopropanol		B1	6, 7
Isopropyl acetate		B1	5
Methyl ethyl ketone		B1	5
Methylated spirit (industrial)		B2	
Naphta (Medium petroleum fraction)		B2	
n-Propanol		B1	5, 7
Tetrachloroethylene		B1	5
1,1,1-Trichloroethane		B1	5, 7
1,1,2-trichloro-trifluoroethane		B1	5

8. FLAVOURS

	Status	Council of Europe No.	FEM No.	JECFA Reference
Acetaldehyde benzyl methoxyethyl acatal		523	2148	
Acetaldehyde phenethyl propyl acetal		511	2004	
Acetaldehyde diisopropyl acetal		-		
3-Acetyl-2,5-dimethylfuran		-	3391	
3-Acetyl-2,5-dimethylthiophene		11603	3527	
Acetyl isovaleryl		-	3190	
Acetyl nonanoyl		155	3090	
Allyl acetic acid		2004	2843	
Allyl anthranilate	B2	254	2020	
Allyl Butyrate		280	2021	
Allyl cinnamate		344	2022	
Allyl crotonate		2222	-	
Allyl cyclohexylacetate		2070	2023	
Allyl cyclohexylbutyrate		283	2024	
Allyl cyclohexylhexanoate		2180	2025	
Allyl cyclohexylpropionate		2223	2026	
Allyl cyclohexylvalerate		474	2027	
Allyl 2-ethylbutyrate		281	2029	
Allyl furoate		360	2030	
Allyl heptanoate	B2	369	2031	
Allyl hexanoate		2181	2032	
Allyl hexenoate		610	-	
Allyl-a-ionone		2040	2033	
Allyl isovalerate	B2	2098	2045	
Allyl nonanoate		390	2036	
Allyl octanoate		400	2037	
Allyl phenoxyacetate		228	2038	
Allyl phenylacetate		2162	2039	
Allyl propionate		2094	2040	
Allyl sorbate		2182	2041	
Allyl thiopriopionate		-	3329	
Allyl tiglate		2183	2043	
Allyl undecen-10-oate	B2	441	2044	
Amylheptin carbonate	B2	2172		
a-Amylcinnamaldehyde dimethyl acetal	B2	47	2062	
a-Amylcinnamaldehyde	B2	128	2061	
a-Amylcinnamal acetate	B2	216	2064	
a-Amylcinnamal alcohol	B2	79	2065	

a-Amylcinnamal formate	B2	357	2066
a-Amylcinnamal isovalerate	B2	463	2067
2-Amyl-5 or 6-keto-l,4-dioxane	B2	2205	2076
Anisylacetone	B2	163	2672
Anisyl phenylacetate		233	Fed.Reg.
Anisyl propionate		426	2102
Benzaldehyde glyceryl acetal		36	2129
Benzaldehyde propylene glycol acetal	B2	2226	2130
Benzilidene methyl acetone	B2	161	2734
2-Benzofurnacarboxaldehyde	B2	2247	3128
Benzoin	B2	162	2132
Benzyl butyl ether	B2	520	2139
Benzyl-2,3-dimethyl crotonate	B2	2187	2143
Benzyl-4-heptanone	B2	2140	2146
Benzyl isobutyl carbinol	B2	2031	2208
Benzyl isobutyl ketone	B2	159	2740
Benzyl isoeugenol	B2	522	-
Benzyl phenylacetate		232	2149
Benzyl propyl carbinol	B2	83	2953
Benzyl ethyl carbinol	B2	2137	-
Benzylidenmethional		-	-
Butatt-2-one-2-yl butanoate	B2	-	3332
Butyl acetoacetate		241	2176
2-Butyl-2-butenal	B2	-	3392
1,2-Butanedithiol		11909	3528
1,3-Butanedithiol		11910	3529
2,3-Butanedithiol	B2	-	3477
Butyl anthranilate		252	2181
Butyl butytylglycollate	B2	2188	-
Butyl butyryllactate	B2	2107	2190
Butyl ethyl malonate		384	2195
Butyl levulinate		374	2207
Butyl phenylacetate		2159	2209
Butyl salicylate		614	3650
Butyl 10-undecenoate		2103	2216
2-sec-Butylcyclohexanone	B2	-	3261
2-Butyl-5 or 6-keto-l,4-dioxane	B2	2206	2204
a-Butylcinnamaldehyde	B2	127	2191
2-(2-Butyl)-4,5-dimethyl-3-thiazoline			3619
Carvacryl ethylether	B2	2057	2246
Carvyl propionate		424	2251
Caryophyllene alcohol acetate		-	Fed. Reg.
Cedryl acetate		527	-
Cinnamaldehyde ethyleneglycol	B2	48	2287
Cinnamyl anthranilate	B2	255	2295
Cinnamyl phenylacetate	B2	235	2300
Cinnamyl isobutyrate		496	2297
Citral diethyl acetal		38	2304
Citral dimethyl acetal		39	2305
Citral propylene glycol acetal	B2	4064	-

Citronellyl oxyacetaldehyde	B2	2012	2310
Citronellyl phenylacetate		2157	2315
Cinnamyl formate	B2	352	2299
Cinnamyl propionate	B2	414	2301
Cyclocitral		10326 11849	3639
Cyclohexanecarboxylic acid		11911	3531
Cyclohexyl acetate		217	2349
Cyclohexyl butyrate	B2	2082	2351
Cyclohexyl formate	B2	498	2353
Cyclohexyl hexanoate	B2	528	-
Cyclohexyl isovalerate	B2	459	2355
Cyclohexylmethyl pyrazine		-	3631
Cyclohexyl propionate	B2	421	2354
Cyclohexylacetic acid	B2	34	2347
Cyclohexyl anthranilate	B2	257	2350
Cyclohexyl cinnamate	B2	337	2352
Cyclohexylethyl acetate	B2	218	2348
Cyclohexyl mercaptan	B2	529	-
Cyclopentanethiol	B2	-	3262
-Damascone		-	3622
-Decalactone		-	3613
Decanal dimethyl acetal		43	2363
Dehydrodihydroionone	B2	-	3447
Diallyl polysulfides		11912	3533
1,2-Di[(l'-ethoxy)-ethoxy]propane		-	3534
Diethyl sebacate	B2	623	2376
Dimethylbenzylcarbinyl acetate	B2	2077	2392
Dimethylbenzylcarbinyl isobutyrate	B2	2084	2394
4,5-Dimethyl-2-ethyl-3-thiazoline		-	3620
4,5-Dimethyl-2-isobutyl-3-thiazoline		-	3621
2,6-Dimethyl-3-[(2-methyl-3-furyl) thio] -4-heptanone		11915	3538
a, a-Dimethylphenethyl formate		353	2395
3,7-Dimethyl-2,6-octadienyl 2- ethylbutyrate	B2	-	3339
Dehydrodihydroionol	B2	-	3446
Dibenzyl disulfide	B2	4077	-
Dibenzyl ketone	B2	2054	2397
Dibenzyl ether	B2	2150	2371
Di-(butan-3-one-l-yl) sulfide	B2	-	3335
4,4-Dibutyl-y-butyrolactone	B2	2231	2372
Dibutyl sebacate	B2	622	2373
Dicyclohexyl disulfide	B2	-	3448
5,7-Dihydro-2-methylthiano (3,4-D) pyrimidine	B2	-	3338
2,4-Dimethyl-5-acetylthiazole	B2	-	3267
2,4-Dimethylbenzaldehyde	B2	-	3427
2,5-Dimethyl-2,5-dihydroxy-l,4-dithiane	B2	-	3450
2,5-Dimethyl-3-furanthiol	B2	-	3451
bis-(2,5-Dimethyl-3-furyl) disulfide	B2	-	3476

2,5-Dimethyl-3-thiofuroylfuran	B2	-	3481	
2,5-Dimethyl-3-thioisovalerylfuran	B2	-	3482	
2,6-Dimethyl-4-heptanol	B2	4030	3140	
2,6-Dimethyl-5-heptenal	B2	2006	2389	
2,6-Dimethyloctanal	B2	112	2390	
2,4-Dimethyl-2-pentenoic acid	B2	4081	3143	
Dimethyl phenyl carbinyl isobutyrate	B2	4240	2388	
Dimethyl phenylethyl carbinyl acetate	B2	219	2735	
Dimethyl phenylethyl carbinyl isobutyrate		2086	2736	
Diphenyl disulfide	B2	4085	3225	
spiro-(2,4-Dithia-l-methyl-8-oxablcyclo (3.3 .0) octane-3,3-(l'-oxa-2'-methyl) cyclopentane) and spiro (2,4-dithia-6-methyl-7-oxabicyclo (3.3.0) octane-3,3'-(1'-oxa-2'-methyl) cyclopentane)	B2	-	3270	
2,2-Dithiodithiophene	B2	-	3323	
Dodeca-3,6-dional	B2	2121	-	
-Dodecalactone		-	3610	
Dodecyl isobutyrate		-	3452	
Estragole	B1			5
p-Ethoxybenzaldehyde	B2	626	2413	
7-Ethoxy-4-methyl-coumarine	B2	2193	-	
o-(Ethoxymethyl) phenol	B2	-	3485	
2-Ethoxythiazole	B2	-	3340	
Ethyl aconitate		2108	2417	
Ethyl 2-acetyl-3-phenylpropionate	B2	2241	2416	
Ethyl benzoylacetate	B2	627	2423	
a-Ethylbenzyl butyrate		628	2424	
2-Ethylbutyl acetate		215	2425	
Ethyl butyryllactate	B2	2242	-	
Ethyl cresoxyacetate	B2	2243	3157	
Ethyl cyclohexanecarboxylate		11916	3544	
Ethyl cyclohexylpropionate	B2	2095	2431	
Ethyl 2,4-dioxohexanoate	B2	-	3278	
Ethyl N-ethylanthranilate	B2	629	-	
Ethyl 2-ethyl-3-phenylpropanoate	B2	-	3341	
Ethyl 8-furfuryl-8-thiopropionate				
Ethyl furfuracrylate	B2	545	-	
Ethyl furylpropionate	B2	2091	2435	
2-Ethyl-2-heptenal	B2	120	2438	
Ethyl-iso-eugenol	B2	190	2472	
Ethyl 2-mercaptopropionate	B2	-	3279	
Ethyl 2-methylpentanoate		-	3488	
Ethyl 2-methyl-4-pentenoate		10613	3489	
Ethyl (4-emthylthio)-butyrate				
Ethyl nitrite	B2	2190	2446	
Ethyl octine carbonate	B2	480	2448	
Ethyl 4-phenylbutyrate	B2	307	2453	

Ethyl phenyl carbinyl butyrate	B2	628	2424	
Ethyl 3-phenyl glycidate	B1	2097	2454	3
Ethyl thioacetate	B2	-	3282	
2-Ethylthiophenol	B2	-	3345	
Ethyl 10-undecenoate	B2	2102	2461	
Ethylene tridecanedioate	B2	4094	-	
3-Ethyl-2-hydroxy-4-methyl-cyclopent-2-en-l-one	B2	-	3453	
5-Ethyl-2-hydroxy-3-methyl-cyclopent-2-en-l-one	B2	-	3454	
N-Ethyl-2-isopropyl-5-methyl-cyclohexanecarboxamlde B2	-	3455		
Ethyl-2-methyl-3-pentenoate	B2	-	3456	
2-Ethyl-l,3,3-trimethyl-2-norbornanol	B2	-	3491	
Ethyl methyl phenylglycidate	B1	-		5
Eugenyl formate		355	2473	
Eugenyl methylether	B1			5, 7
2-Furanmethanethiol formate	B2	4112	3158	
2-Furfurylidene butanal	B2	2251	2492	
Furfuryl isopropyl sulphide	B2	2248	3161	
Furfuryo thiopropionate	B2	-	3347	
Geranyl acetoacetate	B2	243	2510	
Geranyl phenylacetate		231	2516	
Glucose pentaacetate		-	2524	
Guaiyl acetate	B2	552	-	
Heptanal dimethyl acetal		2015	2541	
Heptanal glyseryl acetal (2-hexyl-4-hydroxymethyl-1,3-dioxolan and 2-hexyl-5-hydroxy-l,3-dioxane)		2016	2542	
4-Heptanol	B2	555	-	
Heptyl cinnamate		2104	2551	
3-Heptyp-5-methyl-2(3H) furanone	B2	-	3350	
trans-3-Heptenyl acetate		-	3493	
trans-3-Heptenyl-2-methylpropanoate	B2	-	3494	
Hexyl 2-methyl-3(4)-pentenoate				
a-Hexylcinnamaldehyde	B2	129	2569	
Hexyl 2-furoate		361	2571	
2-Hexylidene cyclopenthanone	B2	167	2573	
Hydroquinone monoethyl ether		2258		
Hydroxycitronellal	B2	100	2583	
Hydroxycitronellal diethyl acetal	B2	44	2584	
Hydroxycitronellal dimethyl acetal	B2	45	2585	
Hydroxycitronellol	B2	559	2586	
2-Hydroxy-2-cyclohexen-l-one	B2	-	3458	
2-Hydroxymethyl-6,6-dimethyl-Bicyclo (3.1.1.) hept-2-enyl formate		-	3405	
2-Hydroxy-3,5,5-trimethyl-2-cyclohexenone	B2	-	3459	
6-Hydroxy-3,7-dimethylocatnoic acid lactone	B2	-	3355	

3-(Hydroxymethyl)2-heptanone	B2	592	2804
3-(Hydroxymethyl)-2-octanone	B2	-	3292
Isoamyl acetoacetate		227	3551
Isoamyl cinnamate		335	2063
Isoamyl pyruvate		431	2083
Isobornyl acetate		2066	2160
Isobornyl butyrate	B2	564	-
Isobornyl phenylacetate		566	-
Isobutyl acetoacetate		242	2177
Isobutyl anthranilate		253	2182
Isobutyl benzyl carbinol	B2	2031	2208
Isobutyl cinnamate		327	2195
Isobutyl N-methylanthranilate	B2	649	-
Isobutyl salicylate		434	2213
Isojasmone		167	3552
beta-Isomethyl ionone	B2	650	
cis-5-Isopropenyl-cis-2-methylcyclopentan-1-carboxaldehyde		-	3645
Isopropyl cinnamate	B2	325	2939
Isopropyl phenylacetate		2158	2956
Isopropyl tiglate		-	3229
y-Ionone	B2	4139	3175
Isoamyl furylbutyrate	B2	2080	2070
Isoamyl furylpropionate	B2	2092	2071
Isobornyl formiate	B2	565	2162
Isobornyl isovalerate	B2	452	2166
Isobornyl propionate	B2	412	2163
Isobutyl furylpropionate	B2	2093	2198
Isoegenyl butylether	B2	2151	-
Isoegenyl formate	B2	356	2474
Isoegenyl phenylacetate	B2	237	2477
Iso-a-methy1ionone	B2	169	2714
p-Isopropyl phenyl acetaldehyde	B2	132	2954
3-(p-Isopropyl)-phenyl propanal	B2	2261	2957
Isoquinoline	B2	4871	2978
2-Keto-4-butanethiol	B2	-	3357
Licorice	B2		
Linalyl anthranilate		256	2637
Linalyl cinnamate		329	2641
Linalyl phenylacetate		-	3501
Maltyl isobutyrate		-	3462
3-Mercapto-2-butanol	B2	-	3502
2-Mercapto thiophene	B2	478	-
5 or 6-Methoxy-3-ethyl-pyrazine		-	3280
5 or 6-Methoxy-3-methyl-purazine		-	3183
2-Methoxy-5 or 6-isopropylpyrazine		11344	3358
4-Methyl-5-(beta-acetoxy ethyl) thiazole-3-methyl-5-ethylpheno	B2	580	-
Methyl thiazol acetate	B2	-	3205
2-Mercapto-3-butanol	B2	-	3502

3-Mercapto-2-butanone	B2	-	3298	
3-Mercapto-2-pentanone	B2	-	3300	
2,3 or 10-Mercaptopinane	B2	-	3503	
2-Mercaptopropionic acid	B2	4156	3180	
l-(p-Methoxyphenyl)-l-penten-3-one	B2	164	2673	
Methoxypyrazine	B2	-	3302	
p-Methylbenzyl acetone	B2	160	3074	
a-Methylbenzyl butyrate		2083	2686	
Methylbenzyl disulphide	B2	-	3504	
a-Methylbenzyl formate		574	2688	
a-Methylbenzyl isobutyrate		2088	2687	
a-Methylbenzyl propionate		425	2689	
4-Methylbiphenyl		2292	3186	
p-Methylcinnamaldehyde		10352	3640	
2-Methyl-3,5 or 6-ethoxy-pyrazine		11921	3569	
3-[(2-Methyl-3-furyl)-thio]-4-heptanone		11922	3570	
4-[(2-Methyl-3-furyl)-thio]-5-nonanone		11923	3571	
Methyl p-tert-butylphenylacetate	B2	577	2690	
d-Methylcinnamaldehyde	B2	578	2697	
6-Methylcoumarin	B2	579	2699	
Methyl decine carbonate	B2	2111	2751	
Methyl-beta-naphthyl Ketone	B1			7
2-Methyl-3-furanthiol	B2	4172	3188	
Methyl furfuracrylate	B2	2267	-	
2-Methyl-3,5 or 6-furfuryl-thiopyrazine	B2	(2287)	3189	
3-(5-Methyl-2-furyl) butanal	B2	_	3307	
bis (2-Methyl-3-furyl) disulfide	B2	-	3259	
bis (2-Methyl-3-furyl) tetrasulfide	B2	-	3260	
Methyl heptine carbonate	B2	481	2729	
5-Methyl-5-hexen-2-one	B2	-	3365	
a-Methyl ionone		143	2711	
a-Methyl-beta-hydroxypropyl-(a-methyl-beta-mercaptopropyl) sulphide	B2	-	3509	
2-Methyl-3-(p-isopropylphenyl)-propion-aldehyde (Cyclamen aldehyde)		133	2743	
Methyl 2-methyl-3-furyl disulfide		11924	3573	
4-Methyl-2-pentyl-l,3-dioxolane		-	3630	
2-Methyl-4-phenyl-2-butanol		10281	3629	
4-(Methylthio) butanol		-	3600	
2-Methylundecanal		2010	2749	
Methyl-iso-butylcarblnyl acetate	B2	2073	-	
Methyl-beta-ionone	B2	144	2712	
Methyl-delta-ionone	B2	2145	2713	
a-Methyl-p-methoxy-cinnamaldehyde	B2	584	3182	
2-Methyl-5-methoxythlazole	B2	4034	3192	
Methyl 4-(methylthlo) butyrate	B2	-	3412	
2-Methyl-4-(methylthio) furan	B2	-	3366	
2-Methyl-3,5 or 6-methylthio-pyrazlne	B2	(2290)	3208	
2-Methyloctanal	B2	113	2727	

Methyl octine carbonate	B2	479	2726
2-Methyl-4-pentenoic acid	B2	-	3511
2-Methyl-4-phenylbutanal	B2	134	2737
3-Methyl-2-phenylbutanal	B2	135	2738
Methyl 4-phenylbutyrate	B2	308	2739
3-Methyl-5-propyl-2-cyclohexen-l-one	B2	4178	3577
2-(2-Methylpropyl) pyridine	B2	-	3370
3-(2-Methylpropyl) pyridine	B2	-	3371
2-(l-Methylpropyl) thiazole	B2	-	3372
Methyl styryl carbinol	B2	2032	2880
3-Methylthiobutanal	B2	-	3374
4-Methylthiobutanal	B2	-	3414
4-Methylthio-2-butanone	B2	-	3375
Methyl thiofuroate	B2	-	3311
3-Methylthio-l-hexanol	B2	-	3438
4-Methylthio-4-methyl-2-pentanone	B2	-	3376
2-Methyl-3-tolyl-propanal	B2	587	2748
Musk ambrette	B2	495	2758
2-Naphthalenthiol	B2	-	3314
beta-Naphtyl anthranilate	B2	2170	2767
beta-Naphtyl ethylether	B2	2058	2768
beta-Naphtyl methyl ketone	B1	147	2723 5
beta-Naphtyl isobutyl ether	B2	2273	-
2,6-Nonadienal diethyl acetal		660	3378
1,9-Nonanedithiol	B2	-	3513
Nonanoyl 4-hydroxy-3-methoxybenzylamide	B2	590	2787
1,3-Nonanediol acetate	B2	2075	2783
1,4-Nonanediol diacetate		11927	3579
3-Nonanon-l-yl acetate	B2	2076	2786
2-trans-6-trans-Octadienal	B2	-	3466
Octanal dimethyl acetal		42	2798
3-Octen-2-ol		-	3602
1,8-Octanedithiol	B2	-	3514
6-0ctenal	B2	664	-
Octyl formate		342	2809
Octyl heptanoate		366	2810
Octyl phenylacetate		230	2812
Paraldehyde	B2	594	-
Phenethyl anthranilate		258	2859
Phenethyl 2-furoate		362	2865
Phenethyl senecioate		246	2869
Phenoxyacetic acid		2005	2872
Phenylacetaldehyde 2,3-butylene glycol acetal		669	2875
Phenylacetaldehyde diisobutyl acetal		595	3384
Phenylacetaldehyde glyceryl acetal		41	2877
2-Phenyl-3-(2-furyl)-prop-2-enal		11928	3586
l-Phenyl-2-methyl-propan-2-yl butyrate			
Phenylethyldimethylcarbinyl isobutyrate	B2	2086	2736
3-Phenylpropyl formate		351	2895

3-Phenylpropyl hexanoate		321	2896	
3-Phenylpropyl isovalerate		462	2899	
3-Phenylpropyl propionate		419	2897	
l-Phenyl-3(5)-propylpyrazole	B2	2277	-	
Piperonyl formate	B2	2154	-	
Pentyl 2-furyl ketone	B2		3418	
Phenoxyethyl isobutyrate	B2	2089	2873	
4-Phenyl-2-butyl acetate	B2	671	2882	
2-Phenyl-3-carbethoxy-furan	B2	-	3468	
Phenylethyl methyl carbinol	B2	85	2879	
Phenylethyl methyl ethyl carbinol	B2	86	2883	
5-Phenylpentanol	B2	674	-	
3-Phenyl-4-pentenal	B2	-	3318	
2-Phenyl-4-pentenal	B2	-	3519	
2-Phenyl-l-propanol	B2	2257	2732	
2-Phenylpropanal dimethyl acetal	B2	2017	2888	
1,2-Propanedithiol	B2	-	3520	
2-Phenylpropionaldehyde	B2	126	2886	
l-Phenyl-2-propyl butyrate	B2	2276	3197	
2-Phenylpropyl butyrate	B2	285	2891	
3-Phenylpropyl cinnamate	B2	597	-	
2-Phenylpropyl isobutyrate	B2	2087	2892	
2-(3-Phenylpropyl) tetrahydrofurane	B2	489	2898	
Piperonyl acetate	B2	2068	2912	
Piperonyl acetone	B2	165	2701	
Piperonyl isobutyrate	B2	305	2913	
Propenylguaethol	B2	170	2922	
p-Propyl anisole	B1	2026	2930	5
Propyl cinnamate		324	2938	
Propylene glycol dibenzoate	B2	-	3419	
Propyl 2-methyl-3-furyl disulfide		-	3607	
Propyl furylacrylate	B2	2090	2945	
3-Propylidenephtalide	B2	494	2952	
o-Propylphenol	B2	-	3522	
Propyl thioacetate	B2		3385	
Pseudocyclocitral	B2	2133	-	
Pyrazine ethanethiol	B2	(2285)	3230	
Pyrazine methanethiol	B2	-	3299	
Pyrazinyl methyl sulfide	B2	(2288)	3231	
2-Pyridine methanethiol	B2	2279	3232	
Resorcinol dimethyl ether	B2	189	2385	
Rhodinyl acetate		223	2981	
Rhodinyl phenylacetate		2163	2985	
Santalyl phenylacetate		239	3008	
Sucroseoctaacetate	B2	4219	FDA/GRAS	
Terpinyl isobutyrate		300	3050	
Tetrahydrofurfuryl acetate		2069	3055	
l,5,5,9-tetramethyl-13-oxatri-cyclo				

(8,3,0,$0^{4,9}$) tridecane	B2	-	3471
Tolualdehyde glyceryl acetal		46	3067
p-Tolylacetaldehyde	B2	130	3071
o-Tolyl acetate		2078	3072
p-Tolyl isobutyrate		304	3075
p-Tolyl phenylacetate		236	3077
Trideca-4,7-dienal	B2	684	-
a-Terpinyl anthranilate		259	3048
Terpinyl cinnamate		330	3051
Tetrahydrofurfuryl butyrate	B2	2081	3057
Tetrahydrofurfuryl cinnamate	B2	4224	3320
Tetrahydrofurfuryl propionate	B2	2096	3058
Tetrahydrolinaloöl	B2	77	3060
Tetrahydro-pseudo-ionone	B2	2053	3059
Tetramethyl ethylcyclohexenone	B2	168	3061
Thiogeraniol	B2	-	3472
Thioguaiacol	B2	2219	-
2-(p-Tolyl)-propanal	B2	131	3078
2,6,6-Trimethyl-l-cyclohexen-l-acetaldehyde	B2	-	3474
3,5,5-Trimethylhexanal	B2	-	3524
3,5,5-Trimethyl-l-hexanol	B2	-	3324
1,2,3-Tris[(1'-ethoxy)-ethoxy]-propane		11930	3593
9-Undecenal	B2	123	3094
10-Undecenal	B2	122	3095
10-Undecen-l-yl acetate		2062	3096
Vanillin acetate	B2	225	3108
Vanillidene acetone	B2	691	-
Vetiveryl acetate		2284	-

9. FLAVOUR ENHANCERS

Aspartate, monosodium	B2
Glutamate, L-Arginine	B2
Glutamate, L-Lysine	B2

	Status	JECFA Reference
10 MISCELLANEOUS		
Acetone peroxide	B2	
Beexwax	B2	
Carnauba wax	B2	
Chlorine	B2	
Condensed tannins	B2	
Diethyline glycol manoethyl ether	B1	6
Dioctyl sodium sulphosuccinate	B1	3, 6
Glycerol esters of wood rasin	B1	1, 4
Licorice	B2	
Saccharate of lime	B2	
Shellac	B2	
Sorbitol	B1	8
Sorboyl palmitate	B1	1, 4

	Sucrose acetate isobutyrate	B1	3, 8
	Thaumatin	B2	
	Thermally oxidized soyabean oil	B1	9
	Wood flour	B2	
11	PROCESSING AIDS		
	Asbestos	B2	
	Bentonite	B1	4
	Diatomaceous earth	B1	3
	Perlite	B2	
12	PRESERVATIVES		
	Calcium metabisulfite	B1	9
	Parahydroxybenzoate, butyl	B2	

REFERENCES

1. Evaluation of Certain Food Additives (Eighteenth Report of the Expert Committee) FAO Nutrition Meeting Report Series No. 54, 1974; WHO Technical Report Series No. 557, 1974 and Corrigendum

2. Evaluation of Certain Food Additives (Twenty-first Report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series No. 617, 1978.

3. Evalution of Certain Food Additives (Twentieth Report of the Expert Committee). FAO Food and Nutrition Series No. 1,1976; WHO Technical Report Series No. 599, 1976.

4. Evaluation of Certain Food Additives (Twenty-third Report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series No. 648, 1980.

5. Evaluation of Certain Food Additives (Twenty-fourth Report of the Joint FAO/WHO Committee on Food Additives). WHO Technical Report Series No. 653, 1980.

6. Evaluation of Certain Food Additives (Twenty-fifth Report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series No. 669, 1981.

7. Evaluation of Certain Food Additives (Twenty-sixth Report of the Joint FAO/WHO Expert Committee on Food Additives) WHO Technical Report Series No. 683, 1982.

8. Evaluation of Certain Food Additives (Twenty-seventh Report of the Joint FAO/WHO Expert Committee on Food Additives) WHO Technical Report Series No. 696, 1983.

ALINORM 85/12
APPENDIX VI

GENERAL REQUIREMENTS FOR NATURAL FLAVOURINGS

1. Scope

These general requirements apply to natural flavourings used as ingredients for food manufacture, sold other than by retail.

2. Definition

2.1 For the purpose of the Codex Alimentarius, "natural flavourings" are concentrated preparations, used to impart flavour with the exception of only salty, sweet or acid tastes. Their aromatic part consists exclusively of "natural flavours and/or natural flavouring substances" as defined in the Guide to the Safe Use of Food Additives (CAC/FAL 5-1979).

2.2 They may contain food additives and food ingredients as far as these are necessary for the production, storage and application of the flavourings and as far as these are nonfunctional in the finished food.

3. Maximum limits for certain substances having biological activity present in food as consumed as a result of the use of natural flavouring materials

		Maximum level, in mg/kg in the final product ready for consumption		
No	Substance	Food	Beverages	Exceptions
1.	Agaric acid	20	20	100 mg/kg in alcoholic beverages and in food containing mushrooms
2.	Aloin	0.1	0.1	50 mg/kg in alcoholic beverages
3.	beta-Azarone	0.1	0.1	1 mg/kg in alcoholic beverages 1 mg/kg when seasoning used at low levels in food
4.	Berberine	0.1	0.1	10 mg/kg in alcoholic beverages only
5.	Cocaine	cocaine-free by agreed test		
6.	Coumarin	2	2	10 mg/kg in special caramels in alcoholic beverages
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

8.	Hypericine	0.1	0.1	1 mg/kg in pastilles (lozenges) 2 mg/kg in alcoholic beverages
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
10.	Quassine	5	5	10 mg/kg in pastilles (lozenges) 50 mg/kg in alcoholic beverages
11.	Quinine	0.1	85	300 mg/kg in alcoholic beverages 40 mg/kg in fruit curds
12.	Safrole	1	1	5 mg/kg in alcoholic beverages above 25% 15 mg/kg in food containing mace and nutmeg
13.	Santonin	0.1	0.1	1 mg/kg in alcoholic beverages above 25%
14.	Thujones (alpha and beta)	0.5	0.5	10 mg/kg in alcoholic beverages above 25% 5 mg/kg in alcoholic beverages containing less than 25% 35 mg/kg in bitters 25 mg/kg in food containing sage 250 mg/kg in sage stuffings

4. Hygiene

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

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

(a) shall be free from micro-organisms capable of development under normal conditions of storage (of the flavourings and of the finished food) and

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

REPORT OF THE AD HOC WORKING GROUP ON PROCESSING AIDS

The following participated in the meeting (see Appendix I for addresses):

Richard Ronk (Chairman)	USA
A.W. Randell	FAO
A. Feberwee (Chairman CCFA)	
D.F. Dodgen	USA
S.W.C. Smith	Australia
A. Schlosser	Austria
Ch. Crémer	Belgium
G. Penna	Italy
F. Puddu	Italy
A. Holm 01sen	Denmark
J. Fredsted	Denmark
E Lueck	CEFIC
Jäger	Federal Republic of Germany
C.G. vom Bruck	Federal Republic of Germany
G.M. Koornneef	Netherlands
P.S.J.P. Fernandez	Brazil
A. Carbajo	Spain
P. Rossier	Switzerland
T. Avigdor	Switzerland
T. Kappeler	Switzerland
R. Kumton	Thailand
S. Siwawej	Thailand
M.J. Griffiths	UK
R. Stabel	Norway
W. Koch	Federal Republic of Germany
W. Krönert	Federal Republic of Germany
P. Kuhnert	Federal Republic of Germany
S. Gardner	IFGMA
M. Fondu	Belgium
Ph. Mouton	CIAA
J.L. Mahler	AMFEP
D.A. Toet	AMFEP
R. Top	Netherlands
L.G. Ladomery	FAO
I.R. Moraes	Brazil
H. Mollenhauer	FAO

1. The Chairman reported that a re-draft of the inventory of processing aids had been sent to the members of the Working Group in October 1983. In this document, the substances were grouped according to function, and each substance was assigned to one or more of the following four categories:

(i) processing aids that clearly fit the definition of processing aid;

(ii) substances that are both processing aids and food additives (e.g. different functions in different foods);

(iii) those substances that, because of carry-over residues, would seem to be usually considered only as food additives;

(iv) those substances that might actually have simultaneous functions as processing aids and functionality in the finished food.

In addition, it was proposed that food additives (as defined in CAC "Guide to the Safe Use of Food Additives", 1979, p.6) be allowed for use as processing aids without requiring a duplicate listing of the food additives in any processing aid inventory.

As indicated in CX/FA 84/12 - CX/FA 84/12 add. 1 (one document), comments were submitted by six governments and from international organizations.

2. The comments raised inter alia the following issues, which were discussed by the Working Group:

- It was agreed that a preamble or introduction is needed to explain the purpose of the inventory
- The purpose of the inventory would be to provide information on the use of processing aids, and to identify those substances which, in CCFA's opinion, should be evaluated by JECFA because of questions concerning the levels of residues or reaction products occuring in food
- The Working Group decided that the current definitions of "food additives" and "processing aid" need not be revised
- However, the format of the inventory would list separately, as the primary inventory, those substances that are used only as processing aids. (i.e. those substances assigned category 1 only)
- An appendix to the inventory would list all of the substances reported (i.e. those assigned category 1, 2, 3 or 4)
- It was recognized that any food additive, even if not included in the primary inventory or the appendix, may be used as a processing aid, and is eligible for addition to the list. In some cases, however, the processing aid use of a food additive may require a separate JECFA evaluation, apart from the use of the substance, as a food additive only. To make the inventory more useful, it was agreed that a later version would indicate which of the substances had already been evaluated by JECFA.

3. Before the next meeting, the revised primary inventory (category 1 only), together with the master list (category 1 - 4 combined) will be sent to Codex contact points with a request that any existing information (residues, etc.) on the category 1 substances should be submitted to the Working Group. Based on the information received, the Working Group will decide at its next meeting what kind of additional data are needed to identify those processing aids which should be referred to JECFA. Such information might include levels of use, ranges of residues, and other appropriate information. The Chairman at the request of the Working Group agreed to develop an appropriate questionnaire. This will be re-submitted to members of the Working Group, governments and Codex contact points prior to the next meeting. In addition, Commodity Committees and governments will be queried about ranges of possible processing aid residues.

4. As indicated in CX/FA 84/12 add. 2A, governments and interested international organizations were asked in CL 1983/31-FA, August 1983, to send comments on a re-draft of the Carry-Over Principle which combined the texts adopted by the 11th and 13th

sessions of the CAC, Eight comments were received and were discussed by the Working Group. A further re-drafting of the Carry-Over Principle as now proposed by the Working Group is attached, (see Annex I).

APPENDIX VII
ANNEX I

A RE-DRAFT OF THE PRINCIPLE RELATING TO THE CARRY-OVER OF FOOD ADDITIVES INTO FOODS

(At step 3)

SECTION 1 - SCOPE

For the purposes of the Codex Alimentarius, the Principle relating to the Carry-over of Food Additives into Foods (the "Carry-Over Principle") applies to the presence of additives in food as a result of the use of raw materials or other ingredients in which these additives are used.

SECTION 2 - APPLICATION

The Carry-Over Principle applies to all foods covered by Codex Standards, unless otherwise specified in such standards (see Section 4).

SECTION 3 - CONDITIONS UNDER WHICH THE CARRY-OVER PRINCIPLE APPLIES

The presence of an additive in food, through the application of the Carry-Over Principle, is generally permitted if:

(a) the additive is permitted in the raw materials or other ingredients (including food additives) by an applicable Codex Standard or under any other acceptable provision which takes into account the safety aspects of food additives;

(b) the amount of the additive in the raw materials or other ingredients (including food additives) does not exceed the maximum amount so permitted;

(c) the food into which the additive is carried over does not contain the food additive in greater quantity than would be introduced by the use of the ingredients under proper technological condition or manufacturing practice, and

(d) the food additive carried over is present at a level which is non functional, i.e., at a level significantly less than that normally required to achieve an efficient technological function in its own right in the food.

SECTION 4 - SPECIAL CONDITIONS

4.1 An additive carried over into a particular food in a significant quantity or in an amount sufficient to perform a technological function in that food as a result of the use of raw materials or other ingredients in which this additive was used, shall be treated and regarded as an additive to that food, and shall be provided for in the Section on Food Additives of the applicable Codex Standard.

SECTION 5 - STATEMENTS IN CODEX STANDARDS REGARDING CARRIED OVER ADDITIVES

5.1 Where the Carry-Over Principle does not apply to a food, i.e., where the presence of additives carried over is not permitted in the food, this should be clearly stated in the relevant Codex standard using the following statement;

"no food additives shall be present as a result of Carry-Over from raw materials or other ingredients".

5.2 Where reference to the applicability of the Carry-Over Principle is specifically made in a Codex Standard, the following statement should be used:

"Section 3 of the Principle relating to the Carry-Over of Additives into Foods shall apply".

NOTE: Extract of the Carry-Over Principle from the 13th Session of the Codex Alimentarius Commission (ALINORM 79/38, para 156)

The Commission concurred with the view of the Codex Committees on Food Additives and Labelling that food additives carried over in accordance with section 3 of the Carryover Principle would not be declared on the label in the list of ingredients.

REPORT OF THE WORKING GROUP ON SALT STANDARD

The following participated in the meeting (see Appendix I for addresses):

M.A. Perinelli, Chairman	Italy
N. Rao Maturu, Rapporteur	FAO
Iram R. Moraes	Brazil
Paulo A. Aguiar	Brazil
Roger Rutishauser	Switzerland
T. Satasuk	Thailand
Paul F. Hopper	USA
S. Muennarintr	Thailand
H. Yamanaka	Japan
D.C. deGroot	Netherlands
Mignon	CEES
Teissedre	GEES

1. The Working Group chaired by Dr. M.A. Perinelli had the following documentation available to it for its consideration of the draft standard for Food Grade Salt.

Matters arising from the 15th Session of CAC. CX/FA.84/4-Add. 1 Governments comments received in reply to CL 1983/20-FA and CL 1983/27-FA on Contaminant levels in Food Grade Salt (CX/FA 84/13, CX/FA 84/13A, CX/FA 84/13A-Add.1).

2. The Working Group noted that the Commission held the standard at Step 8 and asked

i) the Codex Committee on Food Additives to re-examine the sections especially on contaminants and

ii) other relevant Codex Committees to review the sections on labelling, food hygiene and methods of analyses with a view to endorsing them.

3. In an attempt to review the contaminant content in the draft Codex standard for Food Grade Salt, the WG reviewed the replies received from the governments in response to CL 1983/20-FA and CL 1983/27-FA on the contaminant content of salt and methods used for this determination.

4. The WG analysed the extensive analytical data received from 20 governments which was summarized in Annex 2 of CX/FA 84/13A. Data received pertained to As, Cu, Pb, Cd and Hg content of different varieties of salt, vacuum salt, common solar salt, refined solar salt and rock salt. The summary contained the frequency distribution of the different contaminants reported by the different governments.

5. The WG analysed the frequency distribution of the different contaminants reported by the different governments by studying the cumulative frequency of the contaminant concentration as shown in graphs 1 to 4 attached.

6. The graphs showed that there was normal distribution of mercury, cadmium and arsenic in salt and did not reveal possible contamination from other sources. The 99.9% per centile showed a concentration of 0.5 mg/kg for arsenic, 0.4 mg/kg for cadmium and 0.05 mg/kg for mercury. The graph for lead did not show normal distribution and revealed a possible contamination from other sources. The 99.4% percentile showed a

concentration of 2 mg/kg for lead. The data for copper could not be analysed since most of the data on copper presented by Norway related to salt used specially for fishery products which contained smaller amounts of copper.

7. Based on the data available to the WG it decided to arrive at representative figures for the contaminant content of Food Grade Salt. The views of the members were divided.

8. The Chairman of the WG based on the analysis of cumulative graphs expressed the opinion that 99.9% percentile provided a representative figure for the content of arsenic, cadmium and mercury in salt. There were problems to arrive at such figures for lead (cumulative graph showed no normal distribution) and copper (data received was insufficient). The following figures for the contaminant levels for salt were suggested by the chairman:

Arsenic	0.5 mg/kg
Cadmium	0.4 mg/kg
Mercury-	0.05 mg/kg
Copper	2 mg/kg
Lead	2 mg/kg

9. The other members of the WG did not agree to the suggestions made by the chairman and expressed the opinion that the original figures below existing in the standard should be maintained:

Arsenic	1 mg/kg
Copper	2 mg/kg
Lead	2 mg/kg
Cadmium	0.5 mg/kg
Mercury	0.1 mg/kg

The reasons put forward were as below:

i) Samples were not sufficiently representative
ii) Different methodology had been used for the analysis
iii) No reproducibility data was provided

10. The Chairman, Dr. Perinelli did not agree with the views of the rest of the members of the WG and expressed the opinion that data submitted was significant enough.

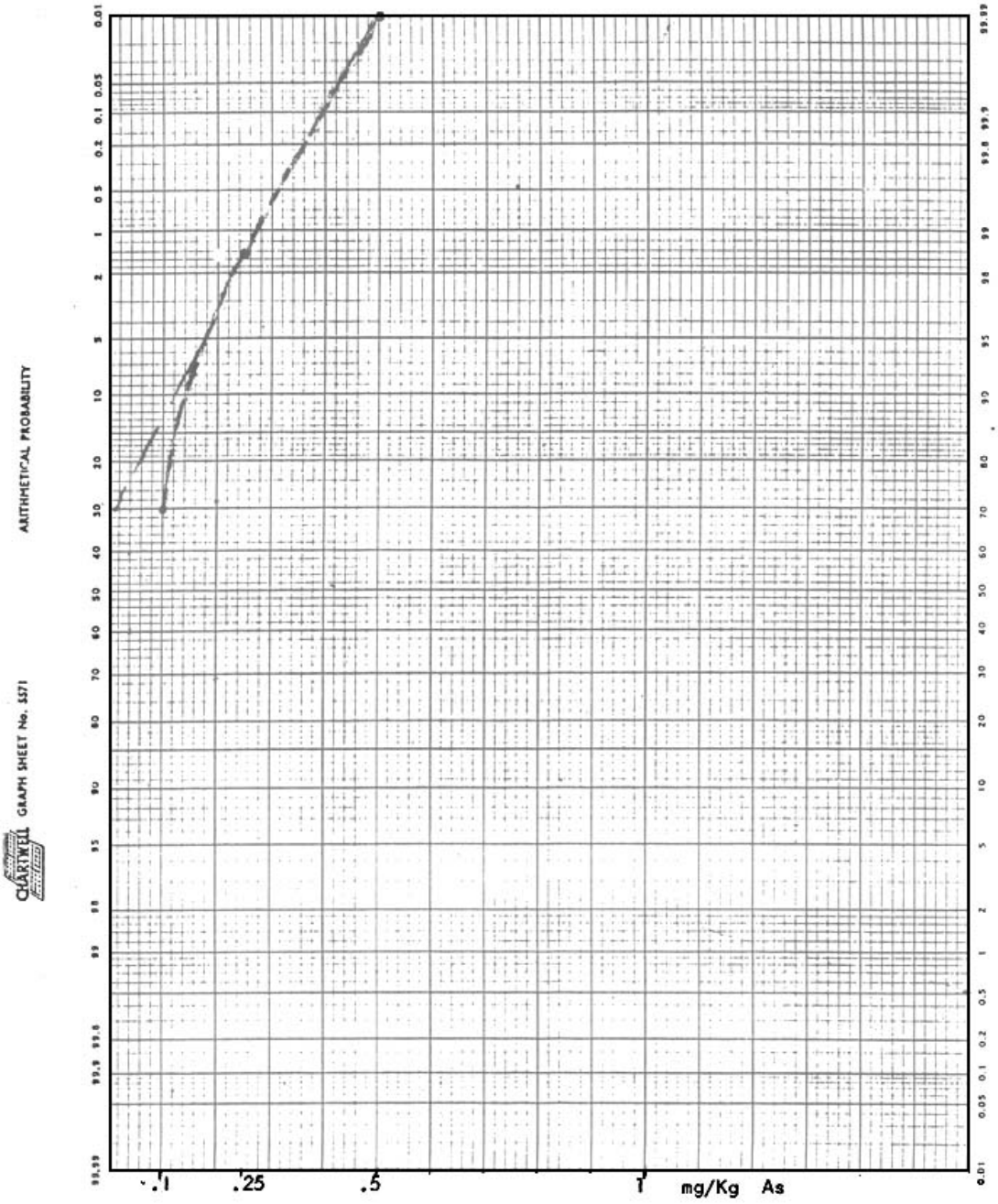
The WG agreed that the discussion of the WG should be reflected in the report and left it to the plenary for taking a decision concerning figures for representative levels of the contaminants in Food Grade Salt.

The Working Group stressed the need for elaboration of sampling plans for salt and for establishing procedures for checking compliance. The Working Group noted that except for the maximal levels of contaminants, the draft standard for Food Grade Salt was in good shape, the food additive provisions had been endorsed by CCFA and the food hygiene provisions by CCFH.

The Working Group modified the section on Food Labelling in the light of comments received from the 17th Session of CCFL. The WG, however, noted that the advice received from the 17th Session of CCFL as regards labelling of Food Grade Salt was unclear and expressed the opinion that if the present text was not in a form suitable for endorsement by CCFL, that Committee should suggest an amended text which if needed could be considered by CCFA.

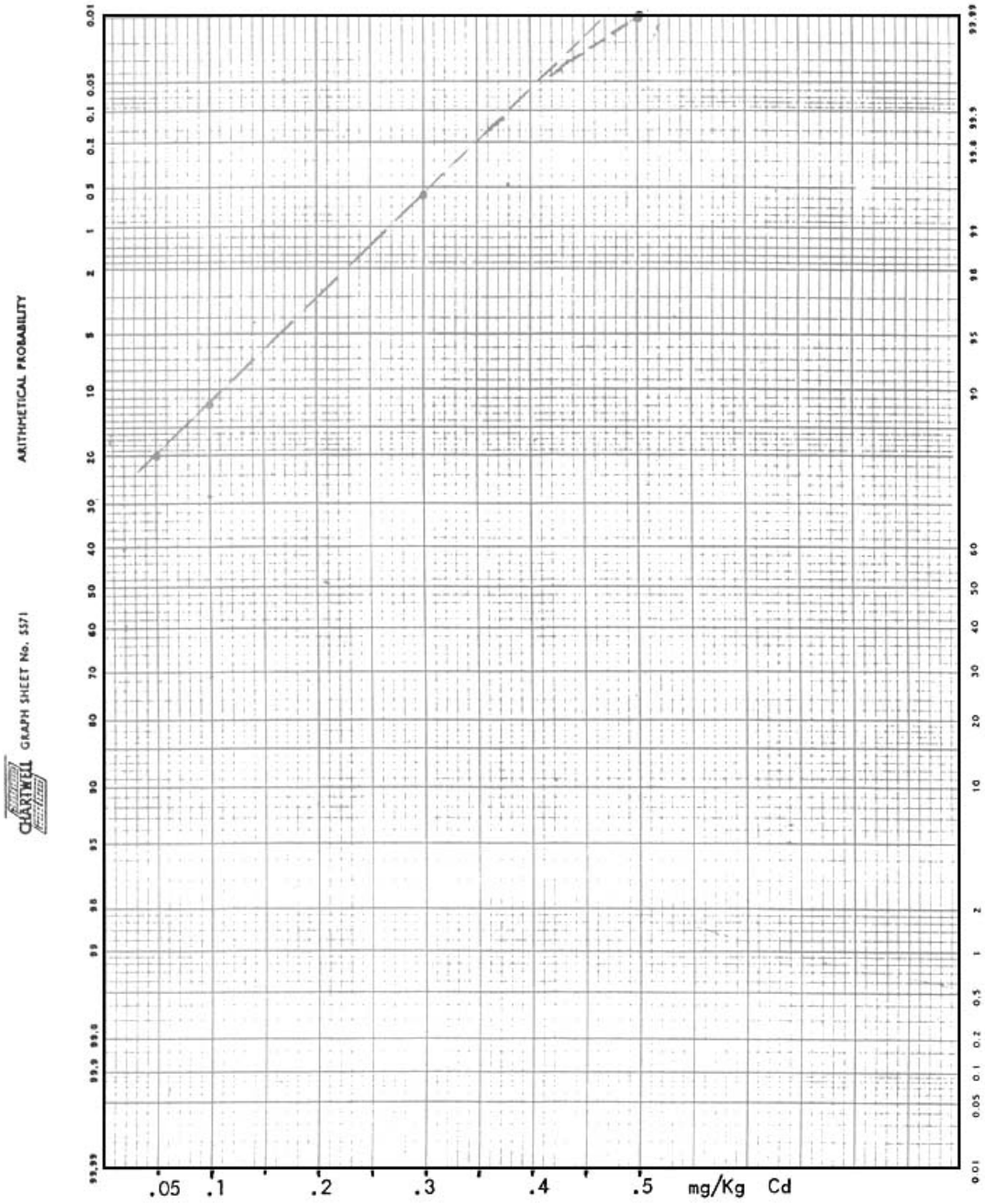
The WG noting that salt containing nutrients (e.g. iodized salt) will definitely have a shelf life of more than 3 months, preferred to express the date marking by date of minimum durability (for the text see section 7.7.1 of the Standard for Food Grade Salt). The methods of analysis are complete but have not yet been endorsed by the CCMAS.

The WG recommended that the revised draft standard for food grade salt (see Annex I) which is at Step 8 of the procedure be considered for adoption by the 16th Session of CAC after representative figures for contaminant content are agreed upon by the plenary.



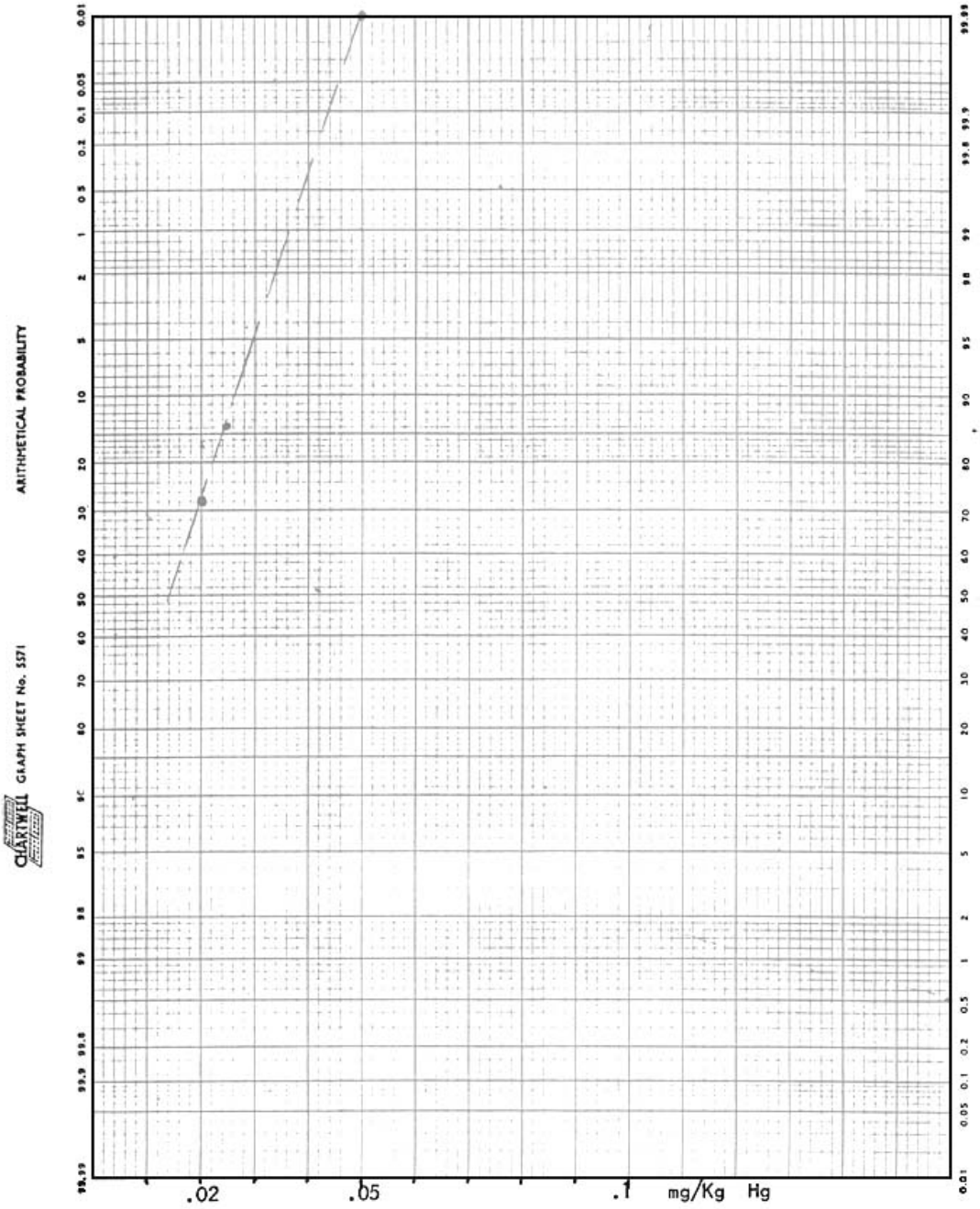
Cumulative frequency distribution of ARSENIC concentration in salt.

Data from: Hungary, Italy, Netherlands, Poland, Portugal, United States, Belgium.



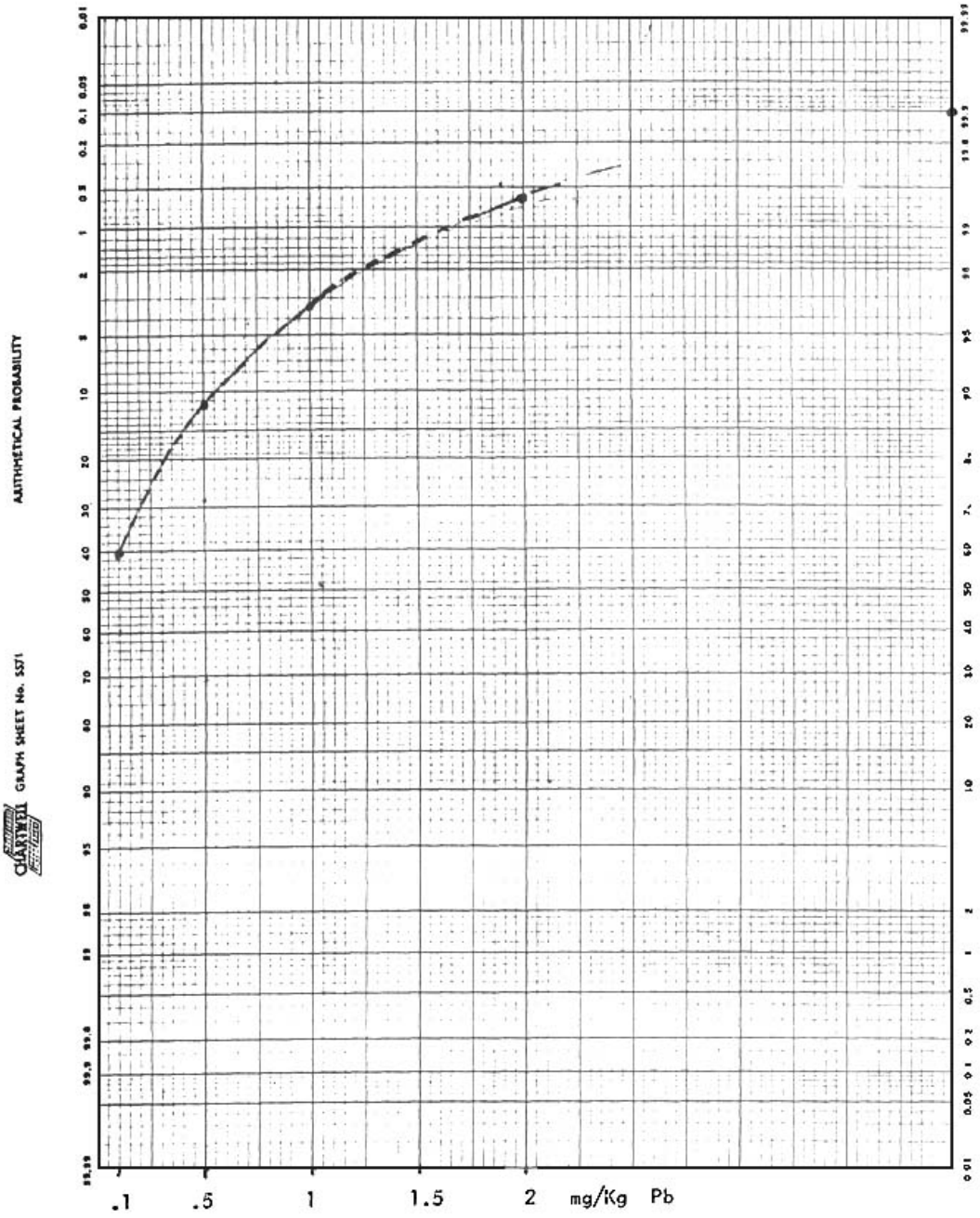
Cumulative frequency distribution of CADMIUM concentration in salt.

Data from: Fed.Rep. of Germany, Finland, Hungary, Italy, Japan, Netherlands, Poland, United Kingdom, Belgium.



Cumulative frequency distribution of MERCURY concentration in salt.

Data from; Finland, Italy, Netherlands, Poland, Portugal, United Kingdom, Belgium.



Cumulative frequency distribution of LEAD concentration in salt.

Data from: Finland, Hungary, Italy, Netherlands, United Kingdom, Belgium.

APPENDIX VIII
ANNEX I

DRAFT CODEX STANDARD FOR FOOD GRADE SALT
(Advanced to Step 8 of the Codex Procedure)

1. SCOPE

This standard applies to salt used as an ingredient of food, both for direct sale to the consumer and for food manufacture. It applies also to salt used as a carrier of food additives and/or nutrients. Subject to the provisions of this standard more specific requirements for special needs may be applied. It does not apply to salt from origins other than those mentioned in section 2, notably the salt which is a by-product of chemical industries.

2. DESCRIPTION

Food grade salt is a crystalline product consisting predominantly of sodium chloride. It is obtained from the sea, from underground rock salt deposits or from natural brine.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Minimum NaCl Content

The content of NaCl shall not be less than 97Z on a dry matter basis exclusive of additives

3.2 Naturally Present Secondary Products and Contaminants

The remainder comprises natural secondary products, which are present in varying amounts depending on the origin and the method of production of the salt, and which are composed mainly of calcium, potassium, magnesium and sodium sulphates, carbonates, bromides, and of calcium, potassium, magnesium chlorides as well. Natural contaminants may also be present in amounts varying with the origin and the method of production of the salt.

3.3 Use as a carrier

Food grade salt shall be used when salt is used as a carrier for food additives or nutrients for technological or public health reasons. Examples of such preparations are mixtures of salt with nitrate and/or nitrite (curing salt) and salt mixed with small amounts of fluoride, iodide, iron, vitamins, etc., and additives used to carry or stabilize such additions.

4. FOOD ADDITIVES (Endorsed by Codex Committee on Food Additives)

4.1 All additives used shall be of food grade quality.

4 2 Anticaking Agents

		Maximum Level in the Final Product
4.2.1	Coating agents; Carbonates, calcium and/or magnesium; Magnesium oxide; Phosphate, tricalcium; Silicon dioxide, amorphous; Silicates, calcium, magnesium, sodium alumino, or sodium calcium alumino	20 g/kg singly or in combination
4.2.2	Coating hydrophobic agents; Aluminium, calcium. magnesium, potassium or sodium salts of myristic. palmitic or stearic acids	
4.2.3	Crystal modifiers; Ferrocyanides, calcium, potassium* or sodium*	10 mg/kg* singly or in combination expressed as $[Fe(CN)_6]^{5-}$
4.3	Emulsifiers	
	Polysorbate 80	10 mg/kg
4.4	Processing Aid	
	Dimethylpolysiloxane	10 mg of residue/kg

* Sodium and potassium ferrocyanides, maximum level may be 20 mg/kg when used in the preparation of"dendritic"salt.

5. CONTAMINANTS

Food grade salt may not contain contaminants in amounts and in such a fora that may be harmful to the health of the consumer. In particular the following maximum limits shall not be exceeded:

5.1	Arsenic	– not more than 1 mg/kg expressed as As
5.2	Copper	– not more than 2 mg/kg expressed as Cu
5.3	Lead	– not more than 2 mg/kg expressed as Pb
5.4	Cadmium	– not more than 0.5 mg/kg expressed as Cd
5.5	Mercury	– not more than 0.1 mg/kg expressed as Hg

6. HYGIEHB (Endorsed by the Codex Committee on Food Hygiene).

In order to ensure that proper standards of food hygiene are maintained until the product reaches the consumer, the method of production, packaging, storage and transportation of food grade salt shall be such as to avoid any risk of contamination.

7. LABELLING (To be endorsed by the Codex Committee on Food Labelling)

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

7.1 The Name of the Product

7.1.1 The name of the product, as 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" or "Cooking Salt" or "Table Salt".

7.1.3 Only when salt contains one or more ferrocyanide salts, added to the brine during Che 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

If one or more food additives or nutrients are present in the product sold as such, a complete list of ingredients shall be declared in descending order of proportion in accordance with Section 3.2(b) and 3.2(c) of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1981). Food additives shall be declared by the use of both class names and specific names or recognized numerical identification.

7.3 Net Contents

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

7.4 Name and Address

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

7.5 Country of Origin

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

7.5.2 When the product undergoes processing in a second country which change it. nature the country in which the. processing is performed shall be considered to be the country of origin for the purposes of labelling.

7.6 Lot Identification

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

7.7 Date marking

When salt is used as a carrier for nutrients and sold as such for public health reasons, date marking is needed whenever the shelflife of the product is valid to the end of a given time.

7.7.1 The "date of minimum durability" (preceded by the words "best before") shall be declared by the month and year. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year only, and the shelflife, of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

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

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

7.8 Bulk Packs (To be amended following the Report of the Codex Committee on Food Labelling on Non-retail Containers)

In the case of salt in bulk, the information required in Sections 7.1 to 7.6 shall either be placed on the non-retail container or be given in accompanying documents.

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

8.1 Sampling (To be elaborated) [1]

[1] Method being developed by the Ad-Hoc Working Group on Methods of Analysis and Sampling of Salt.

8.2 Determination of Sodium Chloride Content

This method allows the calculation of sodium chloride content, as provided for in Section 3.1, on the basis of the results of the determinations of sulphate (Method 8.4), halogens (Method 8.5), calcium and magnesium (Method 8.6), potassium (Method 8.7) and loss on drying (Method 8.8). Convert sulphate to $CaSO_4$ and unused calcium to $CaC1_2$, unless sulphate in sample exceeds the amount necessary to combine with calcium, in which case convert calcium to $CaSO_4$, and unused sulphate first to $MgSO_4$ and any remaining sulphate to Na_2SO_4. Convert unused magnesium to $MgCl_2$. Convert potassium to KC1. Convert unused halogens to NaCl. Report the NaCl content on a dry matter basis, multiplying the percentage NaCl by 100/100-P, where P is the percentage loss on drying.

8.3 Determination of Insoluble Matter

According to ISO 2479-1972 "Determination of matter insoluble in water or in acid and preparation of principal solutions for other determinations",

8.4 Determination of Sulphate Content

According to ISO 2480-1972 "Determination of sulphate content. Barium sulphate gravimetric method".

8.5 Determination of Halogens [2]

[2] An alternative method for the oletermination of halogens by using silver nitrate is being studied

According to ISO 2481-1973 "Determination of halogens,, expressed as chlorine. Mercurimetric method" (for the recovery of mercury from the laboratory waste, see Annex of ECSS/SC 183-1979).

8.6 Determination of Calcium and Magnesium Contents

According to ISO 2482-1973 "Determination of calcium and magnesium contents. EDTA complexometric methods".

8.7 Determination of Potassium Content

According to ECSS/SC 183-1979 "Determination of potassium content by sodium tetraphenylborate volumetric method" or alternatively according to ECSS/SC 184-1979 ' "by flame atomic absorption spectrophotometric method".

8.8 Determination of the Loss on Drying (Conventional Moisture)

According to ISO 2483-1973 "Determination of the loss of mass at 110°C".

8.9 Determination of Copper Content

According to method ECSS/SC 144-1977 "Determination of copper content, Zincdibenzyldithiocarbamate photometric method".

8.10 Determination of Arsenic Content

According to method ECSS/SC 311-1982 "Determination of arsenic content. Silver diethyldithiocarbamate photometric method".

8.11 Determination of Mercury Content

According to method ECSS/SC 312-1982 "Determination of total mercury content. Cold vapour atomic absorption spectrometric method".

8.12 Determination of Lead Content

According to method ECSS/SC 313-1982 "Determination of total lead content. Flame atomic absorption spectrometric method".

8.13 Determination of Cadmium Content

According to method ECSS/SC 314-1982 "Determination of total cadmium content. Flame atomic absorption spectrometric method".

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APPENDIX IX

REPORT OF THE WORKING GROUP ON SPECIFICATIONS

The following participated in the meeting (see Appendix I for addresses):

A. Schlossar	–	Austria
P.S.J.P. Fernandez	–	Brazil
I.R. Moraes	–	Brazil (part time)
I. Meyland	–	Denmark (English rapporteur)
H. Pyysalo	–	Finland
Vromant	–	France (part time)
Thiele	–	Fed. Rep. of Germany
B. Dakay	–	Philippines (part time)
J. Hofstetter	–	Switzerland (French rapporteur)
S. Muennarintr	–	Thailand
W.H.B. Denner	–	United Kingdom
J. Modderman	–	United States of America (Chairman)
R. Haigh	–	European Economic Community
Duhau	–	ISO Technical Committee 93 (Starch products)(part time)
A.W. Randell	–	FAO (part time)

Report of the Working Group on Specifications

The Working Group, chaired by Dr. J. Modderman (USA), had the following tasks: (1) Consider actions of the Codex Alimentarius Commission on Codex Advisory Specifications, (2) Consider comments on JECFA specifications published in FAO Food and Nutrition Paper No. 25, FNP 25 (CL 1982/33-FA and CL 1983/26) , (3) Consider comments on "tentative" JECFA specifications (CL 1983/32-FA). Delegates from Austria, Brazil, Denmark, Finland, France, Federal Republic of Germany, Philippines, Switzerland, Thailand, United Kingdom, United States of America, the European Economic Community, the ISO Technical Committee 9 3 (Starch products) and the FAO, participated in the Working Group.

1. The Working Group studied the Report of the 15th Codex Alimentarius Commission, ALINORM 83/43, paras. 143-151. The Working Group noted with satisfaction that the Commission had approved the CCFA's position on the status of Codex Advisory Specifications and had approved the procedures of CCFA's endorsement of JECFA specifications in light of government comments. In view of the Commission's affirmation of CCFA's role in endorsement of Codex Advisory Specifications, the Working Group agreed that their review of government comments would continue as it had in previous years (see classification of JECFA specifications at item 5).

2. The Working Group observed that although they had recommended many JECFA specifications for endorsement, some with editorial corrections, there was no formal publication of Codex Advisory Specifications. The FAO representative stated that the Secretariat was aware of this and that it was studying procedures by which this issue might be resolved.

3. The Working Group discussed the status of specifications for substances which had no JECFA ADI allocated. It was noted that JECFA had in some cases established specifications in advance of the toxicological review. The Working Group agreed that the technical review of such specifications within the Codex system of endorsement would be of value to those nations who use these substances. The Working Group decided to designate these specifications with an asterisk in its assignment of JECFA Specifications.

4. In reply to the CLs on JECFA specifications the Working Group received comments from Australia, Canada, Czechoslovak Socialist Republic, Denmark, Federal Republic of Germany, Ireland, Democratic Republic of Malagasy, Netherlands, Poland, Spain, Thailand, USA, Association of Microbial Food Enzyme Producers (AMFEP), Chr. Hansen Labs, International Natural Gums Association for Research (INGAR), Marinalg International and Tara Development Group. Marinalg International submitted data on the tentative JECFA specifications for Xanthan gum.

The Working Group assigned specifications to five categories based on the technical comments received in reply to CL 1982/33-FA and CL 1983/32-FA requesting comments on FNP No. 25. These categories are the same as those used at the previous CCFA. The categories are:

Category I – Specifications which are suitable for submission to the Commission for final adoption as Codex Advisory Specifications.

Category II – Specifications which will be suitable for submission to the Commission for final adoption as Codex Advisory Specifications, when minor editorial corrections have been made.

Category III – Specifications which require substantive changes before they are considered suitable as Codex Advisory Specifications and which should be held at Step 2 pending further advice from JECFA.

Category IV – Specifications which have been revised by recent sessions of JECFA.

Category V – Specifications which are incomplete and have been designated by JECFA as tentative.

Discussions of the Working Group were generally based on the English language version of FNP 25. Specific comments on misprints or language corrections relate to the English language version.

General technical comments

5. During their review of government comments on JECFA specifications, the Working Group provided the following advice to the FAO Joint Secretary of JECFA:

- The Working Group noted that some countries used the JECFA specifications by reference as legal texts. For this reason, the Working Group recommended that more attention should be paid to consistency of presentation (especially the structural formulae) and to the elimination of printing errors.
- Chemical names in JECFA specifications should be according to the IUPAC system.
- Avoid lengthy lists of specifications criteria when fewer criteria can provide the required degree of assurance of identity and purity.

- Replace analytical reagents which are occupational hazards with safer substitutes, where possible.
- Several specifications have microbiological criteria, it should be possible to develop a general method for these criteria.
- JECFA specifications designate brand names for instruments and apparatus in the test methods. Although JECFA's Guide to Specifications states that alternative apparatus may be used, the Working Group recommended that certain methods should be written in a more general form. For example, chromatographic methods should describe the desired performance characteristics of the apparatus with specific brandnames given as examples.

6. The Working Group noted that specifications from the 27th JECFA, FAO Food and Nutrition Paper No.28, were in the format recommended by the Working Croup ; at its previous meeting and that the revised General Methods, FAO Food and Nutrition Paper No.5, Revision 1, 1983, were in loose-leaf form. The Working Group expressed its appreciation to the FAO for these changes.

Specific technical comments

Only major recommendations are listed. Minor changes and editorial corrections have been given to FAO Joint Secretary of JECFA.

Category I (recommended for adoption by the Commission)

Ethyl cellulose

Ethyl lactate

- Isopropyl acetate

Magnesium phosphate, dibasic

Nitrogen

Potassium polyphosphates

Sodium aluminium phosphate, basic

- Stearyl monoqlyceridyl citrate
- Streptomyces fradiae - protease
- 1,2,3-Trichlorotrifluoroethane

Category II (recommended for adoption by the Commission after editorial corrections

	Corrections
Ammonium carbonate	-Change "Chemical name" into "Chemical discriptioii -Functional use: change"buffering agent, neutralising agent" into "acidity regulator" and add "raising agent"
Ammonium phosphate, dibasic	-Functional use: change "leavening agent" into "raising agent" and "buffering agent" into "acidity regulator".
• Citral	-Molecular weight: change "152.44" into "152.24"
Ethyl formate	-Structural formula -Assay: change "not more" into "not losa".
Ethyl heptanoate	-Chemical formula.

Euqenol	-Misprints.
Linalool	-Misprints.
Linalyl acetate	-Structural formula. Description: change "odour into "bergamot-lavender odour".
Magnesium silicate (synthetic)	-Move Silicon dioxide method from Purity test:; to Method of Assay.
• Quinine hydrochloride	-Misprint.
• Quinine sulfate	-Misprint.
DL-Sodium hydrogen malate	-Functional use: change "buffering agent" into "acidity regulator".
• Succinylated monoglycerides	-Misprint.

Category III (not recommended for adoption)

	Recommended chnage
Ammonium hydrogen carbonate	-Functional use: change "leavening agent" into "raising agent" -Increase limit for sulfur compounds to 70 ppm.
Butylated hydroxyanisole	-Consider adding a test for Specific Absorption. -Revise test for Phenolic impurities and Method of assay.
Calcium polyphosphates	-Increase limit for Fluoride to 50 ppm.
Gum arabic	-Decrease limit for Total ash to 4%. -Consider addition of microbiological criteria.
Pentapotassium triphosphate	-Assay: change into "Content not less than 85% of $k_5P_3O_{10}$ on the dried basic, the remainder being principally other potassium phosphates". -Consider the divergence between assay given on "dried" basis while P_2O_5-content is on "as is" basis.
• Polyvinylpyrrolidone	-Consider limits for Assay and Aldehyde.
Saccharin	-Revise test for Benzoic and Salicylic acids.
Sorbitan monolaurate	-Revise Assay and Method of assay.
Sorbitan monooleate	-Revise Assay and Method of assay.
Sorbitol	-Functional use: add stabilizer. -The Working Group want to stress their desire for addition of a limit for Nickel. -Consider- addition of limits for Chloride and Sulfate. -Revise the wording of Assay and clarify Method of assay.

Category IV (recently revised by JECFA, number of session given in brackets)

Amaranth	-(28.)
Annatto extracts	-(28.)
Carmines	-(28.)
Curcumin	-(28.)
Grape skin extract	-(28.) -There is a need for anthocyanine colours from other sources than grape skin to be evaluated by JECFA.
alpha-Ionone	-(28.) -Misprints.
beta-Ionone	-(28.) -Misprints.

• Lithol rubine BK	-(28.)
DL-Magnesium lactate	-(27.) -Functional use: change "buffering agent" into "acidity regulator"
•) 1-Magnesium lactate	-(27.) -Functional use: change "buffering agent" into "acidity regulator"
Modified starches	-(27.)
•) Patent Blue V	-(28.)
Sunset yellow FCF	-(28.)
Turmeric	-(28.) -There is a need for Turmeric oleoresin to be evaluated by JECFA.
<u>Category V</u> (tentative specifications)	
Acesulfame potassium	-Consider chromatographic test for organic impurities
Ammonium polyphosphates	
Anoxomer	-Numerous printing errors, the specification seems to include too many test.
• Boot red	
Bone phosphate	-Information supplied Lo JECFA -Consider Assay
• Chlorophyllin copper complex, sodium and potassium salts	-Information supplied to JECFA
• Diethyl Lartratc	
• Estragole	
• Euqenyl methyl ether	-Information supplied to JECFA
Polydimethylsiloxane	-Assay: change "silicone" into "silicon". -Information supplied to JECFA.
•) Boot red	
Bone phosphate	-Information supplied Lo JECFA -Consider Assay
• Chlorophyllin copper complex, sodium and potassium salts	-Information supplied to JECFA
• Diethyl Lartratc	
• Estragole	
• Euqenyl methyl ether	-Information supplied to JECFA
Polydimethylsiloxane	-Assay: change "silicone" into "silicon". -Information supplied to JECFA.
Quinoline yellow	-Misprint
Sodium aluminium phosphate, acidic	-The specification seems to cover two different substance or a maniture – the footnote is emphasized -Functional use: “leaving agent” into “raising agent”
• Surcose acetate isobutyrate	-Information supplied to JECFA

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APPENDIX X

REPORT OF THE WORKING GROUP ON CONTAMINANTS

The following participated in the meeting (see Appendix I for addresses)

S.A. Slorach, Chairman	Sweden
H.P. Mollenhauer, Rapporteur	FAO
S.W.C. Smith	Australia
Ch. Crémer	Belgium
M. Fondu	Belgium
D.C. Kirkpatrick	Canada
Tuula Mäki	Finland
P. Straeter	Federal Republic of Germany
Langguth	Federal Republic of Germany
P. Kuhnert	Federal Republic of Germany
P. Rossier	Switzerland
T. Kappeler	Switzerland
R. van Venetië	Netherlands
Ranee Kumton	Thailand
R.J. Ronk	USA
R. Cristal	USA
D.F. Dodgen	USA
J.C. Howell	USA
A. Castro	Cuba
P.A. Aguilar	Brazil
Enrica Quattrucci	Italy
A. Feberwee	(Chairman CCFA)
M. Gilbert	UNEP-IRPTC
H. Galal Gorchev	WHO
G. Vettorazzi	WHO
L. Ladomery	FAO
N. Rao Maturu	FAO
D.H. Grose	IOCU

Opening of the meeting

1. The Chairman of the CCFA, Mr. A. Feberwee, welcomed the participants of the WG which had been established at the 16th Session of CCFA and approved of by the CAC at its 15th Session (ALINORM 83/12A para 246-259). In his introduction, he emphasized the importance that CCFA and Governments in general attributed to the subject of food contamination; he wished the WG every success in this new area of responsibility. He then introduced Dr. S.A. Slorach, Head of the Food Research Department of the Swedish National Food Administration, as the Chairman of the WG.

Introduction

2. Dr. S.A. Slorach took the Chair and gave a brief review of the develop ments that led to the formation of the WG. The provisional Agenda, that had been sent out to all countries who had expressed the wish to participate, was adopted without amendment .

Mandate

3. The mandate given to the WG by the CCFA and approved by the CAC (CCFA 16th Report, para 256andApp. XIV, para 27, ALINORM 83/12A) was rather broad, stating that the WG was to deal with contaminants.
   After some discussion of possible amendments it was decided, that the mandate should exclude pesticide residues and related compounds and veterinary drug residues.

4. The subject of contaminants originating from packaging material other than metal cans was raised. The WG was of the opinion that these contaminants were also included in its mandate, however, this question will also be discussed in the Plenary Session of the CCFA (Agenda item 14). For contaminants originating from metal cans the procedure has already been established in that maximum permitted levels are proposed by the respective Commodity Committee and put before CCFA for endorsement.

Definition of terms

5. It was decided to leave the Codex definition of the term contaminant un changed. The amendment to the mandate of the WG had clarified the specific area of its concern within the field of "contaminants".

6. According to the discussions in the CCFA at its previous meeting, three types of contaminant levels were envisaged:
   "legal limits", "action levels", and "guideline levels".
   After discussing the meaning of various terms, it was decided to adopt only two different terms:

   (a) maximum permitted level ("legal limits"), being levels that are established in legal instruments such as laws and regulations. Any food containing more than the stipulated level, would have to be taken off the market, banned, etc. by the appropriate authorities.
   It was explained, that the term "action level" also referred to a legal limit in some countries.

   (b) guideline level
   means a level above which a health risk may exist. When contaminant levels

exceed the guideline levels, the authorities should take appropriate action to prevent any risk to the consumer. However, the fact that the contaminant level exceeds the guideline level does not automatically imply that the food is unfit for human consumption or that it cannot be offered for sale.

7. It was pointed out that the question of whether to establish a maximum permitted level or a guideline level could not be decided generally, but depended on the individual contaminant and food.
   It was also mentioned that the term guideline level was used in a similar sense in the WHO guidelines for drinking-water quality.

Report on Joint FAO/WHO Food Contamination Monitoring Programme (JFCHP) (see Recommendations 2(a), (b) and (c))

8. Dr. H. Galal Gorchev, responsible for the JFCMP in WHO, reported on the programme. She gave a brief overview of the work and results of that programme and introduced a number of JFCMP-publications (see Annex 1) covering various aspects of monitoring contaminants in food. Document (6) contained reviews of the most recent data on dietary intake of contaminants: it was prepared especially for the 17th Session of the CCFA.

9. Of particular interest to CCFA in these publications are the data on the occurrence of lead, cadmium and aflatoxins in foods and on their dietary intakes from 10 Collaborating Centres.

10. In the discussion the possibilities of cooperation between JFCMP and CCFA were examined. The participants of the WG fully appreciated the fact that according to the mandate of its sponsoring organization (UNEP), the activities of JFCMP were limited to environmental contaminants, and that the priorities of JFCMP might not always be those of CCFA.
    However, a large number of results and data of interest to CCFA have already been collected by JFCMP.
    It was reemphasized that JFCMP was a major source of much needed information for the work on contaminants by the Codex Alimentarius.
    Contaminants of major interest to CCFA, such as aflatoxins, lead and cadmium are, in fact, included in the JFCMP already. In a recent study, JFCMP has also taken up the study of tin as a contaminant in food. On the other hand, there are some areas of concern to CCFA which are not dealt with by JFCMP at present, one example being mercury. According to the Technical Advisory Committee of the JFCMP, mercury contamination was not a major problem and for that reason, collection of monitoring data on mercury had not been initiated.
    Members of the WG, however, stated that in certain regions, especially in communities with high intakes of fish and fishery products, the total diet may contain elevated levels of mercury.
    Therefore, monitoring data would be required for assessing any health hazards, that might arise.
    As another example of specific concern, aflatoxin contamination of peanut butter was mentioned.

11. Concerning future cooperation, it was stated that if CCFA wished JFCMP to take on certain work it would be best to approach the JFCMP Technical Advisory Committee in writing. Any such case could be brought up at the Committee meetings by the Chairman of CCFA who is being invited regularly as an observer in fulfilment of Recommendation No. 2(b).

A case in point would be monitoring of fish and fishery products for mercury. The WG recommended that this should be given high priority for health reasons, in that some groups of the population with a high proportion of fish in their diet might be at risk. Furthermore, mercury levels in fish gave rise to severe problems in international trade: a large number of countries have already set up different maximum permitted levels for mercury in fish, ranging from 0.2 to 5.0 mg/kg (see CX/FA 83/18, App. IIIc).
In order to assess the situation as regards health risks and non-tariff trade barriers, monitoring data are required.

A CL may be sent to governments (Codex Contact Points) requesting monitoring data on total mercury in fish and total diet.
Collection of such data will constitute a "Special study" under the JFCMP. The data will be collected on forms and instructions provided by the JFCMP. Data received from Codex Contact Points will be sent to the JFCMC at WHO for coding and computer processing.
A summary and evaluation of these data will subsequently be provided to CCFA.
With reference to Recommendation 2(c) that JFCMC should be invited to report at appropriate intervals, it was suggested that the annual meetings of CCFA would be such appropriate occasions.

Report on International Register of Potentially Toxic Chemicals (IRPTC) (See Recommendation No. 3)

12. Mr. M. Gilbert of UNEP reported on IRPTC. (see also CX/FA 83/18 para. 24-26). IRPTC is an activity centre of UNEP located at WHO-headquarters in Geneva. Its main objective is to develop control files on chemicals containing sufficient information to assist national authorities which are responsible for the control of chemicals. The Governing Council of UNEP requested IRPTC, inter alia, to give priority to providing countries with information on legal or administrative limitations, bans and regulations placed on potentially toxic chemicals in producing countries.

13. In November 1983 IRPTC has published a compilation of legislative information on 450 chemicals from 12 countries. One aspect of the legislative mechanisms which were studied by IRPTC was food stuffs.
The IRPTC-legal file also contains data pertinent to those contaminants which the CCFA wishes to study: the major problem with any such legal file, however, is up-dating.

14. Besides relying on its own files, IRPTC has the possibility to collect data on legislation from about 110 countries through its network of IRPTC- National Focal Points. Requests from CCFA could be fed into that system. However, if the work load in this field would rise significantly, a bud getary problem may have to be faced. The representative of IRPTC concluded that any suggestion from CCFA concerning the legal file would be welcome.

Report by FAO

(Recommendations I(d) and 3)

15. Referring to Recommendation ltd) - strengthening food control in developing countries, it was stated that the work is steadily progressing within the budgetary possibilities. Most recent activities include two workshops, of which had been held in India with the aim of improving the analytical capability of developing countries in the determination of contaminants n food. This segment of food control is important,

not only for the health control of the population but also to ensure the quality of food products for export.

16. Concerning Recommendation No. 3 - Gathering information on legislation - it was stated that except for the brief survey carried out when compiling document CX/FA 83/18 the customary approach of sending out circular letters to Governments; had, so far, produced small returns.
    Besides drawing on resources of IRPTC, an extended desk study, including direct approach to sources of legal information might produce better results.

17. In discussing the subject of information on legal and other administrative limits for contaminants in food, the WG stressed the urgent need for information on any maximum permitted levels or guideline levels for specific contaminants in specific foods that have been promulgated by Governments, in order to keep abreast of the situation, and possibly make efforts to minimize any differences that might create barriers to trade.

18. The difficulty in obtaining such information was understood, and a number of possible sources, besides IRPTC, were mentioned, such as the FAO Legal Office, the FAO David Lubin Library, the FAO regular publications on "Food and Agriculture Legislation" and the "Food and Nutrition Bulletin" and the WHO Health Legislation Unit. Furthermore, the "Environmental Law Information Service" of the "International Union for the Conservation of Nature (IUCN)" could be approached.
    Attention was also drawn to material that could be obtained from the Bigwood Centre of the University of Brussels, and from the British Food Industries Research Association (BFIRA) in Leatherhead, U.K., which operates on a commercial basis.
    In this context a recent document issued by the FAO Fisheries Department, "Compilation of legal limits for hazardous substances in fish and fish products", FAO-Fisheries Circular - 764, Oct. 1983 was mentioned.

19. In conclusion, the WG strongly recommended the compilation of legal files on contaminants, and requested:

    (a) IRPTC to continue its valuable efforts, and

    (b) the Secretariat to circularize Governments again with detailed ques tionnaires or collect the information by contacting other sources of information directly.

<u>Review of Recommendations</u>

(ALINORM 83/.12A; App. XV).

20. The WG briefly reviewed the recommendations that had been adopted by CCFA at its 16th Session and approved by CAC at its 15th Session. Except for one amendment, the recommendations were supported and reemphasized as they stood. Recommendation No. 2(a) which has been amended should, now read:
    "2(a) The work of JFCMP should be closely coordinated with <u>and where possible take into consideration the priorities of CCFA</u>" (new text underlined)

<u>Carry-over Principle</u>

21. At its previous session the CCFA had recommended that the carry-over principle also be applied to contaminants.
    In Codex Standards the carry-over principle for contaminants could be dealt with similarly to food additives, where in every individual standard it was specified whether - in this particular case - the principle should apply.

22. The WG discussed the matter briefly and concluded that the absence of the carry-over principle for contaminants might not be a problem. It was suggested that a delegation should be asked to obtain further information on this subject from the food industry and trade.

Extremely low maximum permitted levels

23. The existence of some legal limits for contaminants in foods which are so low that they are below the detection limits of current methodology and thus cannot be controlled had been mentioned as a possible hinderance to trade. The WG considered that also on this item more background information was needed, and that a delegation should be requested to collect information on this subject.

Miscellaneous

24. Reviewing the discussions of the meeting it was stated that at this stage the WG could not begin to recommend any figures for max. perm. levels or guideline levels but emphasized Recommendation No. 1, that Governments should give preference to the instrument of guideline levels over max. perm levels, wherever possible and according to the individual contaminant in question. Before any max. perm. levels or guideline levels are established by the Codex, criteria for doing so should-be elaborated.
    The WG could, however, establish priorities by identifying critical contaminants and food products, some having been named earlier on in the discussions (see para 10). Any such material might be conveyed to JECFA for consideration at a later stage. The most important contaminants at present are lead, cadmium, mercury and mycotoxins.

Summary of conclusions and requests

25. In its discussions the WG came to the following conclusions:

    (1) It was decided that the mandate of the WG should exclude pesticide residues and related compounds and veterinary drug residues .

    (2) For establishing limits of contaminants in food, only two terms were to be used: maximum permitted level and guideline level.

    (3) Requests for cooperation with JFCMP in specific cases to be put to JFCMP Techn. Advisory Comm. in writing; a first case in point being a request for monitoring data on mercury in fish and fishery products.

    (4) CL to be sent to Member Governments requesting data on mercury in fish and the diet.

    (5) A report on JFCMP activities according to Recommendation 2(c) would be given at each meeting of CCFA.

    (6) Requests for information on contaminant legislation could be put to IRPTC for passing on to IRPTC - National Focal Points.

    (7) (7)(a) IRPTC to be requested to continue its valuable efforts in collecting information on legal aspects of contaminants in food stuffs (b) The Secreatariat is requested to circularize Governments with questionnaires, again, in order to collect more legal information, or to contact other sources of information directly.

(8) A delegation to be asked to collect information from the food industry and trade on any problems concerning the carry-over principle to contaminants.

(9) Extremely low legal limits: A delegation should be asked to find out from the food industry and trade whether extremely low legal limits for contaminants create difficulties in international trade.

(10) CCFA to begin immediately to identify critical contaminants and contaminated foods and convey this information to JECFA at a later stage.

APPENDIX X
ANNEX I

Publications by JFCMP

(1) Summary and Assessment of Data received from the FAO/WHO Collaborating Centres for Food Contamination Monitoring, National Food Administration, Uppsala 1982, (prepared under the Joint sponsorship of UNEP, FAO and WHO).

(2) Summary of Data received from Collaborating Centres, 1977 to 1980, Part A: countries, FAO- ESN/M0N/DCC/81/9A; WHO-EFP/81, 19A, 1981.

(3) Summary of Data received from Collaborating Centres - 1977 to 1980; Part B: Contaminants; FA0-ESN/M0N/DCC/81/9B; WHO-EFP/81, 19B, 1981.

(4) Summary of 1980-1981 Monitoring Data received from the Collaborating Centres; FAO-EFP/83.57 ; FAO-ESN/MISC/83/4, 1983.

Documents

(5) JFCMP - Programme Report 1981-1983, EFP/TAC. 3/WP/83.2, rev. 1.

(6) Dietary Intakes of Chemical Contaminants, a review of the data received from FAO/WHO Collaborating Centres for Food Contaminants Monitoring paper prepared by WHO for the 17th Session of CCFA, 1984, EFP 84.61.

APPENDIX XI

REPORT OF THE AD HOC WORKING GROUP ON PRIORITIES FOR FOOD ADDITIVES

The following participated in the meeting (See Appendix I for addresses).

S.W.C, Smith (Chairman)	Australia
J.V. de Silvslessa	Brazil
Paulo A.L. Aguiar	Brazil
Diane C. Kirkpatrick	Canada
J.A. Drum	Canada
T. Satasuk	Thailand
R. Kumton	Thailand
O.P. Easterday	U.S.A
Richard Ronk	U.S.A.
P. Kuhnert	Federal Republic of Germany
J. Yu	Philippines
B. Dakay	Philippines
T. Endo	Philippines
G. Vettorazzi	WHO
Alan W. Randell	FAO
N. Rao Maturu (Rapporteur)	FAO

1. The Working Group chaired by Mr. S.W.C. Smith (Australia) had the following tasks to perform:

(i) to establish a codex priority list of Food Additives and contaminants;

(ii) to analyse (a) replies received from Governments on certain migrants from packaging materials which are of potential health concern and, (b) consideration of the advice of the 28th Session of JECFA of these migrants;

(iii) to propose the terms of reference for the consultant to prepare a report on packaging materials, for consideration by the 16th Session of the Codex Alimentarius Commission,

(iv) to propose subjects for possible future work for CCFA.

Codex priority list of Food Additives and contaminants

2. The Working Group reviewed the priority list prepared at the previous session (March 1983) of CCFA (ALINORM 83/12A, Appendix XIV, Annex I). It was noted that some of the salts including Potassium Saccharin listed, had already been cleared by the 27th and 28th JECFA. These were deleted from the list. Two food colours, carthamus yellow and crocin which were proposed by the Codex Committee on Processed Fruits and Vegetables as food additive provisions in the standard for chestnut puree, were added to the list.

3. The CCFA secretariat agreed to provide more clarification for the class of additives "clarifying enzymes" included in the priority list.

4. Consideration was given to additives proposed by Governments for inclusion in the priority list. The following were added to those already existing in the list prepared at the previous session and that have not yet been toxicologically cleared by JECFA;

- Brown, F.K.: proposed by the UK. It is used as a food colour and has been allotted A.D.I. by the Scientific Committee of the EEC. New toxicological information, that should be adequate for JECFA evaluation is available.
- Extract of Quillaia: proposed by the UK for use as a foaming agent in soft drinks. The additive was considered by JECFA in 1982 (TRS 683) but no ADI was allotted at that time since specifications were not available.

5. Vegetable gums were considered to be of particular interest to developing countries and hence had been accorded high priority by the Working Group and retained in the list.

6. The revised priority list of Food Additives is given in Annex I.

7. It was noted that for most of the additives included under the headings "Additives proposed by governments and by working group on priorities" and "Additives proposed by ad hoc working group on salt" specifications elaborated by JECFA were available, as indicated in Annex I. Those additives have yet to be toxicologically evaluated.

8. The two Joint Secretaries of JECFA were informed that because of strict procedural requirements, CCFA is not empowered to endorse the food additive provisions in the commodity standards unless and until the relevant food additives which are included in the Codex priority list are toxicologically cleared by JECFA.

9. Most of the additives included in the priority list are "salts" the anions and cations of which do not appear to pose toxicological problems, and hence would probably be readily cleared by JECFA. The JECFA secretariat was of the view that it may be possible for it to find out ways and means for JECFA to express an opinion on these salts, circumventing the lengthy review procedure for their toxicological clearance, usually followed by JECFA. The Working Group welcomed this view of JECFA secretariat.

10. The Working Group informed the JECFA Secretariat that food additives proposed by Member Governments would be included in the priority list only on the assurance from the governments concerned that information considered to be adequate for JECFA evaluation would be made available. Governments should guarantee to provide adequate information on specifications and toxicology of the additive to JECFA. The governments concerned should also strive to provide the additional information required by JECFA for review and evaluation of a food additive as contained in Annex II.

11. The JECFA Secretariat agreed to make the JECFA agenda available soon after its finalization, to the Codex Secretariat in Rome to be sent to all Codex Contact Points and to participants of the Codex Committee on Food Additives. It is at this time that governments should provide all available data to the JECFA Secretariat for the evaluation of the food additive proposed by them.

12. The Codex Secretariat jointly with the JECFA Secretariat will prepare a paper for the next Session of CCFA on procedures that Member Governments should follow for sub mission of data to JECFA on food additives that they have proposed for inclusion in the Codex priority list.

Analysis of replies received from governments on certain migrants from packaging materials which are of potential health concern and consideration of 28th Session of JECFA of the migrants.

13. The Working Group was informed by the delegation of Canada of the results of an exercise carried out at the request of 16th CCFA to elicit information from governments and international organizations on vinyl chloride, styrene, acrylonitrite and diethylhexylphthalate: four substances which migrate from packaging materials into foods and which are of immediate public health concern.

Information on packaging material type, use form, use volume/year (tonnes), foods packaged, migrant present in the packaging material (mg/kg), migrant in foods (mg/kg) and national limits (legal) for migrant, provided by the countries responding to the circular letter and as contained in document CX/FA 84/11 was provided.

14. The Working Group was also informed of the evaluation of the 28th JECFA of the four different migrants. The Group noted that JECFA provisionally accepted the use of food contact materials from which these substances migrate, subject to the condition that the amount of substance migrating into food is reduced to the lowest levels technologically achievable and that information is provided on:

(i) the current lowest technologically attainable levels of each migrant in food;

(ii) justification for each existing use to verify that no satisfactory alternate exists;

(iii) estimates of intake of the migrants (together with information on procedures used to make the estimated intakes);

(iv) estimates of the lowest levels of migrants in food or food contact

(v) materials which are achievable with improved manufacturing processes;

(vi) appropriate statistical methods for evaluation of the available toxicological data.

15. The Working Group noted that acrylonitrile, vinyl chloride and diethylhexylphthalate are potential carcinogens and expressed the opinion that for these migrants from packaging materials which were of immediate public health concern, the criteria out lined by JECFA were appropriate.

16. The Working Group expressed the opinion that the CCFA should not undertake further work on packaging materials pending a review of the subject by a consultant which would be evaluated by the 16th Session of the Codex Alimentarius Commission. It was however felt that the present work undertaken by the Committee on certain migrants from packaging materials should be completed by collecting information on the actual intake of these migrants by the population. The Working Group was of the view that the Working Group on Food Additive Intake should give primary consideration to such a study.

17. The Working Group expressed its appreciation of the conduct of the exercise undertaken by the Canadian delegation.

<u>Terms of reference for the consultant to prepare a report on packaging materials for consideration by the 16th session of the Codex Alimentarius Commission</u>

18. The Working Group noted that a consultant would be engaged to prepare a paper on packaging materials, that would be considered by the 16th session of the Commission and proposed the following terms of reference for the consultant:

19. The Working Group was of the opinion that the survey to be carried out by the consultant should not include "cans" because sufficient guidance is presently available as below to the developing countries where use of cans pose health and trade problems.

(i) FAO is elaborating guidelines for can manufacturers and food canners on the prevention of tin and lead contamination of canned foods.

(ii) Specifications (US specifications: title 21 of the code of Federal Regulations Section 175.300 and specifications from other European countries) for lacquers are presently available.

(iii) ISO specifications for good quality tin plate are available.

(iv) The United Nations International Development Organization convened a workshop in April 1984 in India to discuss the status of tin plate manufacture and appropriate quality standards and manufacture of black plate, tin plate and coating material available in the region.

The Working Group was of the view that in the region the report of the workshop would provide useful guidance to can manufacturers for improving the quality of cans.

20. The terms of reference for the consultant should include:

(i) survey of plastic packaging materials and other packaging materials including rigid laminates, soft film wraps (saran wrap) etc.

(ii) identification of health and trade problems due to packaging materials.

(iii) study of package integrity of flexible packages in terms of microbiological safety.

(iv) review of existing national and international legislation, and

(v) recommendations for action at international level for abatement of trade problems if any and for evaluation of risk due to packaging materials.

Future work for CCFA

21. Consideration of Vitamins and minerals

The Working Group considered a proposal made by the delegation from the Federal Republic of Germany that the Codex Committee on Food Additives should undertake for consideration the use of vitamins and minerals which are chemicals governed by specifications and which are used for fortification.

The definition of the term "Food Additive" excludes vitamins and minerals. It was considered that vitamins and minerals may not fall within the terms of reference of CCFA. Also direct food additives and vitamins and minerals are regulated in different manners.

The Working Group was however of the opinion that the use of vitamins and minerals as nutrients may pose certain problems since use of excessive amounts may cause toxicity (for ex hypervitaminosis A) and hence should receive attention from the Codex. The Working Group expressed the opinion that the subject should be referred to the Codex Committee on Special dietary uses for its consideration,

22. Analysis of Food Additives in Food

The Working Group considered the analytical determination of food additives in food as an important area for possible future work of the Committee and agreed that work be initiated on this activity. The Codex secretariat was asked to issue a circular letter requesting different governments and international organizations to submit any methodology that they may have for the analysis of food additives which has been collaboratively tested,

Canada agreed to coordinate the work. In this regard the Working Group was informed of the availability of a publication on "Analysis of Food Additives" published by the Association of Official Analytical Chemists.

23. Water treatment agents

The Working Group considered treatment agents for water used in food formulation as an important area for possible future work of the Committee and agreed that work be initiated on this activity. The Working Group was of the opinion that the problem was country specific and that the treatment agents used in the countries varied a great deal depending on the nature and extent of chemical and biological contamination present in the water to be treated. "Water treatment agents" is a problem area and toxicology of these agents lags far behind. To initiate activity on the subject of water treatment agents the Working Group asked the secretariat to issue a circular letter requesting different governments and international organizations to provide information on:

1. Nature of water treatment agents used
2. Nature and extent of contamination of water to be treated
3. Nature of equipment used for water treatment and likely contamination of water resulting from its use
4. Breakdown products of water treatment agents used and the extent of residues resulting from them in the final water supply, and
5. Toxicological data on the water treatment agents.

Australia agreed to coordinate the work.

APPENDIX XI
ANNEX I

CODEX PRIORITY LIST ESTABLISHED BY THE 17TH SESSION OF CCFA

Additives proposed for inclusion in commodity standards but not yet evaluated by JECFA

- Aluminium ammonium sulphate
- Ammonium succinate
- Calcium adipate
- Calcium fumarate
- Calcium hydrogen carbonate
- Calcium succinate
- Clarifying enzymes (see para. 3 of the w.g. report)
- Guanylic acid
- Inosinic acid
- Magnesium acetate
- Magnesium adipate
- Carbon dioxide [1] (JECFA specification-1983)
- Nitrous oxide [1] (JECFA specification-1984)
- Magnesium citrate
- Magnesium succinate
- Monomagnesium phosphate monobasic
- Potassium fumerate
- Potassium inosinate
- Potassium guanylate
- Potassium sulphite
- Potassium succinate
- Potassium sulphate
- Sodium aluminium polyphosphate
- Sodium sorbate
- carthamus yellow
- Crocin

[1] For clarification of the toxicological status.

Additives proposed by governments

- Chlorine: proposed by UK (JECFA specifications 1984)
- Sodium thiocyanate: proposed by Sweden (JECFA specifications 1984)
- Alpha amylase from Bacillus licheniformis: proposed by Denmark (JECFA spec. 1984 under the term carbohydrase)
- Immobilized glucose isomerase from Bacillus coagulans: proposed by Denmark (JECFA spec. 1983)
- Glucose isomerase from Streptomyces rubiginosus: proposed by USA (JECFA specifications 1984)
- Immobilized glucose isomerase from Streptomyces olivaceus: proposed by USA (JECFA specifications 1984)
- Immobilized glucose isomerase from Streptomyces olivochromogenes: proposed by USA (JECFA specifications 1984)
- Immobilized glucose isomerase from Actinoplanes missouriensis: proposed by USA (JECFA specifications 1984)
- Brown F.K.: proposed by UK
- Extract of Quillai: proposed by UK
- Vegetable gums: proposed by W.G. on priorities

– Carrageenan: proposed by Philippines

Additives proposed by ad hoc working group on Salt (March 1983)

- Aluminium, calcium, magnesium, potassium and sodium salts of caprylic, capric, lauric and oleic acids (JECFA specification 1984)
- Potassium alumino silicate
- Aluminium calcium silicate (JECFA specifications 1984)
- Ferric ammonium citrate (JECFA specifications 1984)

APPENDIX XI
ANNEX II

EXPLANATORY NOTE ON TECHNOLOGICAL INFORMATION REQUESTED BY JECFA FOR REVIEW AND EVALUATION OF A FOOD ADDITIVE

Description

This section defines the additive which is the subject of the report. When necessary the chemical constituents of the additive are described.

Raw Material(s)

This section lists the materials which are reportedly used in commercial production of the additive. When the data is in sufficient detail, the functions of the raw materials may be designated, such as catalysts, solvents and other processing aids, and the proportions of the materials used in the process are reported. This section may be subdivided according to the different processes for manufacturing the additive if more than one commercial process is known.

A complete list of all raw materials used in each commercial process is required from additive manufacturers. The fact that some of this data may be trade secret is acknowledged. However, in the interest of encouraging the distribution of scientific knowledge the FAO and WHO will continue to encourage food additive manufacturers to submit data on raw materials in confidence to the two organizations.

Methods of Manufacture

This section describes the processes by which raw material is converted into a finished commercial product which is the food additive. Factors such as chemical reactions, reaction sequence, purification and separation procedures and side reactions will be considered. While the term Method(s) of Manufacture is readily associated with single chemical entities, additives prepared by isolation from natural products also have Methods of Manufacture which impact on the quality of and impurities in the additive.

The method(s) of manufacture described in this section include those processes known to be used in the manufacture of food additives, commercial processes which may be used in the manufacture of an additive ot processes proposed for commercial manufacture of an additive in the future.

Impurity(ies) including intermediates

This section lists all substances which may be in commercial production samples of the additive, other than the chemicals which form the desired constituent. The term "impurity(ies)" for the purpose of these reports has a broad scope. In this section the fact that no Raw Material is absolutely pure, that no Method of Manufacture is without by-products, and that no industrial facility is without environmental contamination is recognized. A partial list of sources of impurities to be considered is as follows;

- substances in Raw Materials which remain in the additive
- by-products from the method(s) of manufacture
- residues of processing aids from the method(s) of manufacture
- material migrating to the additive from equipment used in the method(s) of manufacture

. substances migrating to the additive from the environment in and around industrial facility(ies) which manufacture the additive.

Certain impurities in each additive are limited by JECFA specifications which describe the minimum requirements for suitable purity of a food additive. The Reports are not intended to duplicate the work of JECFA on specifications. The scope of the Reports will cover more substances than those limited by JECFA specifications. The list of impurities will alert the Committee to those constituents of additives which may not be limited by specifications. Furthermore, the Reports describe the level(s) of the impurity(ies) attained by typical manufacturing practice, when such data is available from manufacturers.

Functional Use (s)

This section describes the technological and/or nutritional purpose for using the additive and the levels of use on a commodity basis. The Reports distinguish between uses which are actually in practice and those which are claimed as functional by manufacturers of additives. Reference to national legislation or surveys will be described, when such data are available.

Estimate(s) of Daily Intake

This section describes estimates of the human exposure to the additive through the food chain. When available, estimates cited by JECFA will be included in the reports. The calculation procedures and assumptions made in deriving each estimate are provided for each estimate cited in the reports.

For the food additives under consideration at the twenty-fifth session of JECFA the estimates of intake ate either per capita values or estimates calculated from the functional uses. Per capita values are calculated from the known or projected volume of additive used in food divided by the number of persons consuming the food. Often per capita values are calculated for national usage of an additive where the total industrial volume of additive used for food purposes is divided by the national population. The per capita estimate assumes consumption of an additive is evenly distributed among all individuals in a group. Estimates based on functional uses are termed Possible Intakes because the method of calculation assumes there is a group of individuals for whom each food in their diet, which can possibly contain the additive according to the functional uses, does contain the additivfe. Possible Intakes can be calculated for an average food consumer, Average Possible Intake, or for a consumer who eats above the average amounts of food which contain the additive, Maximum Possible Intake. . ,

Reactions and Fate in Food

This section is divided into three subparts based on the relationship of the scientific data to the functional food uses of the additive. In each case the total composition of the commercial product called by the additive name is considered. The "additive" is composed of the desired functional substances and the impurities listed above. Products from reactions of the additive constituents are described. The Reports will cite results of experiments for which the scientific data is provided to FAO and WHO. If no data are available, statements on the general chemical reactivity of the additive may be reported.

The first subpart describes reactions of the additive which take place in model systems. Model systems include any experimental matrix other than food or living systems. Those model systems which either describe the basic chemical reactivity of additive

components or have some similarity to the additive's functional uses in food are emphasized.

The second subpart describes reactions of the additive which have been observed in food systems. Reactions which take place during commercial and consumer use of foods containing the additive will be emphasized, and those degradation products in the food at the time of consumption will be emphasized.

The third subpart describes reactions of the additive components and its degradation products in food which take place in living systems. Living systems include any living organism or in vitro model system which may be helpful in determining the probable metabolism of these substances in the human. Information on this subject will prove valuable in assessing the potential for the ingested substances to interfere with the normal utilization of nutrients consumed with the additive.

Effect (s) on Nutrients

This section summarizes both adverse and beneficial effects resulting from use of the additive. Nutritional effects are described on a commodity basis and are based on scientific data reported in the previous section.

Substitute Additive(s)

To understand the impact of each additive on the exposure of humans to related additives, a list of potential substitutes is provided. Additives on this list may possess functional uses in certain commodities which may partially substitute for use of the subject additive. This list is not comprehensive nor is it a list of those additives which can substitute for the subject additive under all circumstances. The list is an attempt to put the use of the subject additive in perspective by describing additives used for similar functions.

APPENDIX XII

STATEMENT FROM THE DELEGATIONS OF ARGENTINA, BRAZIL, CUBA PORTUGAL. AND SPAIN

The Delegations of Argentina, Brazil, Cuba, Portugal and Spain inform the Presidency of the Codex Committee on Food Additives about the following:

The contact points of the above mentioned Delegations did not receive with the necessary anticipation the documentation to be able to study and treat the subjects of the agenda of the Seventeenth Session of this Committee. Consequently, they kindly request the Presidency to take the necessary steps in order to avoid repetition of this situation in future meetings of the Committee.

Another subject the Delegations wish to request is the translation of all documents of this Committee into the Spanish language.

The Delegations request the Presidency to consider the possibility of simultaneous translation of the plenary sessions of the Committee into the three working languages of the Codex Alimentarius: English, French and Spanish.

The Delegations of Argentina, Brazil, Cuba, Portugal and Spain request enclosing of this petition in the final report of the Seventeenth Session of the Codex Committee on Food Additives.

The Hague, 11 April, 1984