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JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX ALIMENTARIUS COMMISSION  
Ninth Session, Rome, 6-17 November 1972

ALINORM 72/12

REPORT OF THE EIGHTH SESSION OF THE  
CODEX COMMITTEE ON FOOD ADDITIVES  
Wageningen, 29 May - 2 June 1972

INTRODUCTION

1. The Codex Committee on Food Additives held its eighth session in Wageningen, The Netherlands, from 29th May to 2nd June 1972, under the chairmanship of Dr. G.F. Wilmink. The session was opened by the Director-General of Agriculture and Food, Ir. J. Wellen, who welcomed the participants. Ir. Wellen expressed his great interest in the work of the Codex Alimentarius Commission and noted that much had been achieved since its inception in 1963. However, many important and urgent problems remained to be solved, particularly in the field of food additives. After wishing the Committee success, particularly in reaching agreement on the general principles for the use of food additives and on the definitions of the terms "food additive" and "contaminant", Ir. Wellen declared the eighth session of the Codex Committee on Food Additives open.

2. The session was attended by government delegates from the following 30 countries: Algeria, Arab Rep. of Egypt, Australia, Austria, Belgium, Brazil, Canada, Czechoslovakia, Denmark, Federal Rep. of Germany, Finland, France, Hungary, Ireland, Italy, Japan, Mexico, the Netherlands, Norway, Philippines, Poland, Portugal, Spain, Sweden, Switzerland, Tunisia, U.K., U.S.A., Venezuela and Yugoslavia as well as observers from Sierra Leone and South Africa. The following International Organizations, were also represented: Council of Europe, International Federation of Glucose Industries (IFG), International Glutamate Technical Committee, International Organization of the Flavour Industry (IOFI), International Organization for Standardization (ISO), Organization of Manufacturers of Cellulose Products for Foodstuffs in the EEC (OFCA), International Federation of Pectin Producers, Association amidonnerie de Maïs, Bureau de liaison des Syndicate européens (CEE) des Produits aromatiques, European Economic Community (EEC), Office International de la Vigne et du Vin, Fédération Internationale des Industries et du Commerce en Gros des Vins, Spiritueux, Eaux-de-vie et Liqueurs, International Union of Nutritional Sciences (IUNS). A list of participants, including officers from FAO and WHO, is set out as Appendix I to this report.

ADOPTION OF THE AGENDA.

3. The Committee adopted the provisional agenda with slight rearrangements of some of the items.

MATTERS ARISING FROM SESSIONS OF THE COMMISSION AND CODEX COMMITTEES (Ref. CX/FA 72/5)

4. Sulphur dioxide in wine - The Committee received a report from the representative of the International Wine and Vine Office (OIV) on the question of levels of sulphur dioxide in wine. It was pointed out that, on the recommendation of the eighth session of the Commission, the OIV had carried out an international survey on the question of replacing sulphur dioxide by another substance and had also considered the question of reducing the levels of sulphur dioxide in wine. The OIV had concluded that, for the present, sulphur dioxide could only partially be replaced by the use of improved techniques or other additives but had agreed, in principle, that the reduction of the levels of sulphur dioxide in wine was desirable. The Committee was informed that a General Assembly of IOV would be held in Budapest in September 1972, which would consider ways and means of lowering the level of sulphur dioxide in wine.

5. The Committee also considered a memorandum by Prof. E.J. Bigwood, representative of the International Union of Nutritional Sciences (IUNS), which pointed out that legal tolerances for sulphur dioxide in wine were generally too high and no longer corresponded to actual technological requirements. There was a need, therefore, to reduce not only the legal tolerances but also the actual quantities of this substance in wine. The memorandum described recent investigations in Belgium on the probable intake of sulphur dioxide, which showed that the ADI established by the Expert Committee on Food Additives was exceeded by adult persons who regularly consumed wine in moderate amounts or who consumed excessive amounts of beer

6. The Committee noted with satisfaction the efforts of the OIV and the studies carried out in Belgium. It requested the Joint FAO/WHO Expert Committee on Food Additives (henceforth referred to as the "Joint Expert Committee on Food Additives") to reexamine sulphur dioxide in the light of any new toxicological information which might be available and also requested FAO and WHO to continue with their studies concerning the dietary intake of this substance. It was pointed out that the Joint Expert Committee on Food Additives<sup>1</sup> attention should be directed to the importance of considering the toxicity of the substance in the light of the existence of free and bound forms of sulphur dioxide in food. Regarding the priority to be given to the evaluation of this substance see para 84 and Appendix V.

7. Direct Contact Refrigerants - The Committee was informed that the Commission at its eighth session, had requested the Joint ECE/Codex Group of Experts on Quick Frozen Foods to consider the use of direct contact refrigerants. The Group of Experts had considered this matter at its last session and had agreed to an offer of the delegation of Belgium to supply information on the use of direct contact refrigerants and on possible residues. The delegation of Belgium informed the Codex Committee on Food Additives that it had taken steps to obtain this information, which it would make available to the Group of Experts. The delegation of the U.K. drew the Committee's attention to a review which had recently been carried out in their country on direct contact refrigerants and undertook to make this information also available to the Group of Experts.

8. The Committee requested Participants to send any information they had on this subject to the chairman of the Group of Experts on Quick Frozen Foods and the Codex Committee on Food Additives. It was understood that, in due course, the

recommendations of the Group of Experts would be placed before this Committee for consideration.

9. Contaminants in Fish - The Committee was informed that the Codex Committee on Fish and Fishery Products had considered the question of mercury in fish and possible safe maximum levels for this contaminant, but was not in a position to make any recommendation in view of insufficient data available to it. The Committee was also informed that the Expert Committee on Food Additives had considered the question of contaminants, including mercury, and had made certain recommendations (see para 21). It was decided to await publication of the 16th Report of the Joint Expert Committee on Food Additives, before proceeding with further consideration.

10. Commercial Enzyme Preparations - The Committee was informed that the Commission, at its eighth session, had considered the General Standard for Commercial Enzyme Preparations at Step 5 but had decided not to proceed further with this standard in view of the fact that the 15th session of the Joint Expert Committee on Food Additives had elaborated specifications of identity and purity for enzymes for use in food. The Committee also noted that the Codex Committee on Food Hygiene, at its eighth session, had considered the hygiene section of the General Standard for Commercial Enzyme Preparations and had made certain amendments to that section.

11. The Committee agreed to give further consideration to this subject at a later session. In doing so it would have regard to the specifications for enzymes established by the Joint Expert Committee on Food Additives and would also take into account the decisions of the Codex Committee on Food Hygiene. The previous General Standard for Commercial Enzyme Preparations would be used as a background document. It was understood that governments interested in making comments on the specifications for enzymes could do so at Step 3 of the Procedure for the Elaboration of Codex Specifications for Food Additives.

12. Procedure for the Elaboration of Codex Specifications for Food Additives - The eighth session of the Codex Alimentarius Commission had adopted with only a minor modification the procedure for the elaboration of Codex specifications for food additives, which this Committee had proposed at its 7th session.

13. Proposed Third Joint FAO/WHO Conference on Food Additives - The Committee received a report by the representatives of FAO and WHO concerning the preparations which were being made to hold the Third Joint FAO/WHO Conference on Food Additives. The Committee was informed that FAO had made budgetary provision to hold the above conference in 1973 but that no such provision had been made by WHO for that year. The representative of WHO stated that efforts were being made to provide for financial support for the holding of the Joint Conference on Food Additives in 1974. The representative of FAO pointed out that steps were being taken to seek the views of governments concerning the items to be discussed by the Conference, as requested by the eighth session of the Commission. He stated that one of the items on the agenda, arising from the U.N. Conference on the Human Environment (Stockholm 1972), would be a discussion of the effects of environmental contamination on food and that other items would be a review of the work programme of the Joint Expert Committee on Food Additives and the consideration of the relationship between that Committee and the Codex Committee on Food Additives.

14. The Committee, recalling the draft agenda which it considered at its seventh session, and noting the statement of the representative of FAO, was of the opinion that it

would be desirable to hold the Third Joint FAO/WHO Conference on Food Additives as soon as possible and preferably in 1973.

15. Specification for Gelatin - At its last session, the Committee agreed that the specification for gelatin needed revising to include bacteriological requirements. Delegations had been requested to supply information to FAO. The representative of FAO informed the Committee that information had been received from two countries as well as from WHO, but that further information was needed before the specification for gelatin could be revised by the Joint Expert Committee on Food Additives. The Committee again requested delegations to send relevant information to FAO (to the Chief, Joint FAO/WHO Food Standards Programme).

16. Lead in Fruit Juices - The Chairman of the ECE/Codex Alimentarius Group of Experts on Fruit Juices, Prof. Pilnik, informed the Committee that the Group of Experts had taken note of several working papers according to which the 0.3 mg/kg of lead stipulated now in the fruit juice standards might have to be replaced by a higher figure as had been done for lemon juice only (1.0 mg/kg). The Group of Experts had, however, postponed such a decision for other fruit juices until further work has been carried out, taking into consideration the source of contamination of these products (container, environment, pesticide residue) as well as the analytical methods used. (ALINORM 72/14, para3 39, 41, 42, 43).

17. Contaminants in Concentrated Fruit Juices - It was pointed out to the Committee, in connection with concentrated fruit juices, that it was normal practice to dilute a concentrated fruit juice prior to its consumption and that, therefore, the Joint ECE/Codex Alimentarius Group of Experts had adopted the approach of defining the quality of a concentrated fruit juice as a function of the single-strength juice. The contaminants in the concentrated juice would have to be within the limits given in the standard for the corresponding single-strength fruit juice, after reconstitution a deliberate exception had been made in the case of sulphur dioxide so as to avoid high levels.

18. Microbial Toxins in Food - The Committee considered the text adopted by the Codex Committee on Food Hygiene for Codex commodity standards, as follows:

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

- (a) should be free from microorganisms capable of development under normal conditions of storage; and
- (b) should not contain any substances originating from microorganisms in amounts which may be toxic."

It was pointed out that the development of toxic substances depended on the presence in the food of microorganisms which produced such substances and that, therefore, paras (a) and (b) were directly linked. It was agreed that the text of para (b) would be more suitable if it were to refer to amounts of substances which "may represent a hazard to health" rather than "which may be toxic" as it would be necessary to define the precise meaning of the word "toxic" in relation to health hazard. The Committee was of the opinion that it was desirable to specify in para (a) that the microorganisms referred to were pathogenic. The Committee agreed that it would eventually be necessary to lay down limits for specific toxic substances and appropriate methodology to measure them, but that until such time the paras (a) and (b) would be acceptable.

19. Methods of Analysis of Colours, Metallic Contaminants and Solvent Residues in Food -The Committee was informed that the Codex Committee on Methods of Analysis

and Sampling was in the process of elaborating Codex referee methods to determine the above substances in food. It was agreed that the synopsis of methods of analysis for certain contaminants and solvent residues contained in the monographs of the Joint Expert Committee on Food Additives should be referred to the Codex Committee on Methods of Analysis and Sampling for consideration.

#### REPORTS OF THE 15th AND 16th SESSIONS OF THE JOINT EXPERT COMMITTEE ON FOOD ADDITIVES

20. The WHO representative reported on the 15th session of the Joint Expert Committee on Food Additives, which was held in June of 1971 in Rome. The attention of the Committee was drawn to the listing of certain commercial enzyme preparations of animal, plant and microbial origin of which a total of 17 out of 27 were judged to be acceptable limited only by "good manufacturing practice". Another group of substances studied were the modified starches of which 10 out of 12 evaluated were temporarily accepted to be limited only by good manufacturing practice. In addition some miscellaneous compounds were evaluated and 5 out of 10 of these substances were given an ADI; 3 were recommended to be limited in use only by good manufacturing practice. The attention of the Committee was drawn to the recommendations concerning the problem of additives in baby foods and to the technological efficacy study of certain antioxidants.

21. The WHO representative reported that the proceedings of the 16th session of the Joint Expert Committee on Food Additives had not yet been approved for publication, but that the agenda of the Committee had included three major metallic contaminants, i.e. lead, cadmium and mercury and, in addition, a number of food additives previously evaluated. These included the colour amaranth and the additives octyl gallate and diethyl pyrocarbonate. Specification for caramel colour (ammonia process) had been prepared. In case of the contaminants the Joint Expert Committee on Food Additives had not judged it appropriate to set ADIs for these elements and, therefore, recommended a provisional "tolerable weekly intake" in view of the cumulative effect of these substances in the human body and their occurrence in the environment.

#### ESTIMATION OF THE INTAKE OF FOOD ADDITIVES

22. The WHO representative stressed the importance of the study of the estimation of the intake of food additives and indicated that this work would be continued. He cited the need to evaluate the work thus far accomplished before continuing with the same approach. He reported that a consultation was planned to be held at WHO in the autumn of 1972 to evaluate the work completed and to develop recommendations for further calculations. The Committee requested delegations to send information and comments to WHO in this respect and recommended that the computerized estimation of potential food additives intake be continued. It was also suggested that the calculation would be more useful if a comparison were made of the potential intake for each substance on a country by country basis as far as possible. The need for accurate food consumption survey data was stressed as a basic requirement for the development of such data and governments were requested to send to FAO/WHO information on total diet studies and other investigations directed towards the estimation of the actual intake of food additives (to be sent to Dr. J. Munn, WHO, with a copy to the Chief, Joint FAO/WHO Food Standards Programme).

#### ENDORSEMENT OF FOOD ADDITIVES

23. The Committee had before it a paper prepared by the Secretariat containing provisions requiring endorsement (CX/FA 72/8 and Add.I). The decisions of the Committee are given in Appendix II to this report. In endorsing food additives the Committee took into account the recommendations of the Joint Expert Committee on Food Additives, the potential intake of individual additives, where such information was available, and the opinion of Codex Commodity Committees regarding the need for the use of the additives. In the absence of a toxicological evaluation by the Joint Expert Committee on Food Additives, it was decided not to endorse or temporarily endorse the use of certain additives. In this connection the Committee stressed that this decision did not necessarily mean that the safety of the substance was in doubt. It should be noted that in agreeing to the endorsement of food additives from a point of view of health hazard, delegations did so without prejudice to their countries' position regarding the need for the additive from a technological or other point of view, or to those countries' position regarding the full acceptance of the sections on food additives in individual Codex standards at Step 9 of the Codex Procedure. The opinion expressed by the Committee and by delegations concerning individual provisions for food additives are given in the following paragraphs.

24. Copper in the Standards for Cocoa Beans, Nib, Mass Press Cake and Dust and Cocoa Powders and Chocolate - Some delegations were of the opinion that the maximum levels provided for copper in the above standards were too high and that it would be necessary to know the source of contamination of these products. The Committee agreed to endorse the contaminant copper temporarily but requested the Commodity Committee to review the maximum levels in an endeavour to reduce them as far as possible.

25. Clarifying and Filtering Agents in the Standards for Apple Juices, Grape Juices, Concentrated Apple and Grape Juices - The Committee noted the decision of the eighth session of the Commission not to list individual processing aids in the above standards and agreed to draw up appropriate lists of clarifying and filtering agents (see paras 64 and 65 of this report).

26. Acidifying and De-acidifying Agents in Standards for Grape Juices and Concentrated Grape Juices - The Committee agreed that these substances were self-limiting and that, therefore, there was no need to request the Commodity Committee to propose maximum levels for them. Although the Committee considered that the addition of potassium tartrate led to a reduction of tartaric acid in these juices and, therefore, did not represent a problem from a point of view of total load of tartaric acid in view of the small ADI of tartaric acid, it only temporarily endorsed this substance awaiting specifications to be drawn up by the Joint Expert Committee on Food Additives.

27. Calcium Carbonate (Pure Precipitated) in the Standards for Grape Juices and Concentrated Grape Juices - It was pointed out that it was necessary to specify that the substance endorsed was the pure precipitated carbonate since this, in fact, was the de-acidifying agent used in practice. The Committee requested the Secretariat to examine the specification drawn up by the Joint Expert Committee on Food Additives to see whether it corresponded to the precipitated form of calcium carbonate. The representative of OIV stated that that Organization had drawn up appropriate specifications for all substances used in the preparation of fruit juices.

28. Tin in the Standards for Tomato Juice, Canned Carrots, Canned Mature Processed Peas, Grape Juices, Concentrated Grape Juices, Concentrated Apple Juice and Concentrated Orange Juice - The Committee was informed that recent additional

toxicological information was available on tin. It was also noted that all efforts were being made by the Commodity Committee to reduce the level of this contaminant in fruit juices. However, recent investigations had shown that a reduction in the concentration of tin by using enameled cans, resulted in an increase in the levels of lead and that, therefore, it was a question of weighing the relative risks of higher levels of tin to lower levels of lead and vice versa. In temporarily endorsing the various maximum levels for tin (see Appendix II) the Committee did so with the understanding that they would be reviewed in the light of new information two years after the publication of the respective Codex standards at Step 8. Some delegations were of the opinion that the maximum levels laid down for tin were unduly high. The Committee requested that information on levels of tin in fruit juices should be made available to the Joint ECE/Codex Group of Experts on Fruit Juices.

29. Choline Salts in the Standards for Foods with Low Sodium Content and Salt Substitutes - In endorsing choline salts the Committee noted that specifications would be drawn up by the Joint Expert Committee on Food Additives for those choline salts actually used in the formulation of salt substitutes. As regards anti-caking agents for use in the preparation of salt substitutes, it was pointed out to the Committee that it may have been more appropriate to include other anti-caking agents in addition to colloidal silica and calcium silicate.

30. Contaminants in the Standard for Infant Formula - The opinion was expressed by some delegations that the wording of the section dealing with contaminants should be redrafted to make it clear that manufacturers should make all efforts to ensure that this product be free, as far as it is possible, from residues of antibiotics, hormones and other contaminants. The Committee decided to recommend to the Commodity Committee the following amended wordings "The product shall be free, as far as practicable, from residues of hormones, antibiotics and other contaminants". It was noted that the Joint Expert Committee on Food Additives had made recommendations concerning antibiotic residues in food but the Committee agreed that it was premature to consider laying down maximum limits in food for these residues within the Codex framework.

31 Additives in the Standard for Canned Crab Meat - The Committee decided to postpone consideration of the section on food additives in this standard, with the exception of calcium di-sodium EDTA and monosodium glutamate, and requested the Commodity Committee to reconsider the need for the maximum levels of phosphates, as these levels would contribute substantially to the already heavy load of phosphates resulting from the use of these substances in food. It was pointed out to the Committee that, for toxicological reasons, hexametaphosphate should be limited to approximately 8-10% of total phosphates. It was noted that limits would be proposed by the Commodity Committee for citric and L-tartaric acid, aluminium sulphate and phosphoric acid. The Committee also requested clarification of the meaning of "singly or in combination".

32. Additives in the Standard for Quick Frozen Shrimps or Prawns - A number of delegations were of the opinion that the use of colours in this product could not be justified technologically. Others were of the opinion that the maximum levels proposed for phosphates was excessive. It was also pointed out that the need for sulphites was questionable in a product the quality of which was preserved by a process such as quick freezing. The Committee decided to postpone further consideration of the additives section of the standard and requested the Commodity Committee to provide justification for the high levels of phosphates, to clarify the need for sulphites and to propose a maximum level for L-ascorbic acid.

33. Smoke Flavours in Cooked Cured Hams and Cooked Cured Pork Shoulder - It was pointed out to the Committee that three processes might be used to produce smoked ham or pork shoulder, (a) involving the use of synthetic smoke flavours, (b) exposure to wood smoke, and (c) condensing wood smoke on salt or glucose and injecting the solution thus obtained into the tissue. The procedure under (b) and (c) resulted in variable trace levels of 3,4-benzpyrene depending on the wood used, whereas this problem was not encountered where method (a) was used. The Committee requested the Joint Expert Committee on Food Additives to examine the natural smoke agents and their synthetic equivalents provided for in the above standards as soon as possible. It was decided to temporarily endorse the provision for smoke agents with the following amendment: "Natural smoke agents and their extracts as defined in the Codex Alimentarius and their synthetic equivalents". It was understood that this provision would become effective as soon as the various smoke agents were defined in terms of the specifications and toxicological evaluation of the Joint Expert Committee on Food Additives. Delegations were requested to send information on the smoke agents as well as on other smoking processes to the Joint Expert Committee on Food Additives (to Dr. J. Munn, WHO, with a copy to the Chief, Joint FAO/WHO Food Standards Programme).

34. Natural Flavourings in the Standards for Cooked Cured Hams, Cooked Cured Pork Shoulder, Canned Tropical Fruit Salad and Canned Mature Processed Peas - The Committee agreed to amend the provision for natural flavourings as follows:

"Natural flavours as defined in the Codex Alimentarius and their identical synthetic equivalents".

It was considered that the expression "except those which are known to represent a toxic hazard" was redundant as only additives found safe were permitted for use in food, while including reference to a Codex definition of natural flavours would ensure that only safe and suitable flavours were added to food.

35. Additives in the Standards for Cooked Cured Hams and Pork Shoulder - In the absence of an evaluation of guanylate and inosinate by the Joint Expert Committee on Food Additives, the Committee could not endorse these substances and agreed that they be marked "postponed pending evaluation" rather than "not endorsed" as in the previous Report. It was decided that these two substances be referred to the Joint Expert Committee on Food Additives for evaluation (see para 84 and Appendix V of this Report).

36. Additives in the Standard for Canned Luncheon Meat and Canned Chopped Meat - The Committee was informed that the Commodity Committee had decided to separate these standards into three standards and that, as a result, the various provisions for food additives might be amended. It was, therefore, decided to postpone consideration of the additives section of these standards (see para 59 concerning the redrafting of the provision for natural flavours).

37. Colours in the Standard for Canned Pears - A number of delegations were of the opinion that the use of colours in this product could not be justified and that, furthermore, the maximum limit proposed was excessive. As a general remark some delegations stated that the more additives were provided for in Commodity standards the more difficult it would be for governments to accept Codex standards, unless the use of these additives were fully justified. It was noted that azo-rubine had not been cleared toxicologically by the Joint Expert Committee on Food Additives. The Committee agreed to endorse tartrazine and temporarily endorse Ponceau 4R.



38. Mint Flavour in Canned Green Peas - The Committee decided to amend the provision for "Mint" flavour (mint oil), natural mint flavour" to "Mint flavour (mint oil)" so as to bring it into line with the standard for Canned Pineapple at Step 9 of the Procedure.

39. Sulphur Dioxide in the Standard for Raisins - The Committee noted that the Commodity Committee had reduced the maximum level of 2000 mg/kg to 1500 mg/kg for this additive in bleached raisins. Some delegations were of the opinion that the level of 1500 mg/kg was still excessive in view of the already large potential intake of this additive from various food sources including wine and beer. Furthermore, it was pointed out that raisins were consumed by children and that there was a risk of exceeding the ADI by that group of the population. On the other hand, it was argued that the standard covered a range of products, including semi-dry raisins, with a water content of approximately 16% and that, therefore, a maximum level of 1500 mg/kg would be appropriate. The Committee decided to postpone the endorsement of this additive and requested the Commodity Committee to reconsider the maximum level it had proposed.

40. Additives in the Standard for Jams (Fruit preserves) and Jellies - The Committee requested the Commodity Committee to reconsider the need for L-tartaric and fumaric acids in view of the low ADI recommended by the Joint Expert Committee on Food Additives and, as a consequence, the risk that the intake of these acids might result in exceeding their respective ADIs. In view of these considerations and also the fact that the maximum limit proposed by the Commodity Committee was tentative, the Committee decided to postpone the endorsement of these acidifiers. It was also decided to request the Commodity Committee to clarify the need for the Na, K and Ca salts of these acids as well as for Na and K carbonates and hydrogen carbonates. The Commodity Committee was requested to propose a maximum level for agar agar and to specify the esters of para-hydroxy benzoic acid. It was noted that the ethyl, methyl and propyl esters had been cleared toxicologically by the Joint Expert Committee on Food Additives. The Committee postponed the endorsement of calcium chloride, lactate and metabisulphite and decided to await definite proposals for the maximum levels of these substances. The Commodity Committee's attention was brought to the maximum level for SO<sub>2</sub> of 100 mg/kg in the standard which had been previously endorsed and which would have to be considered in relation with the provision for calcium metabisulphite.

41. Additives in the General Standard for Citrus Marmalade - The Committee noted that the Joint Expert Committee on Food Additives had established separate specifications for caramel colour, one produced using the ammonia process and another not produced in that way. Caramel colour produced by the ammonia process had been given a temporary ADI, while the other type had been cleared without limitation except by good manufacturing practice. In endorsing these colours the Committee took these recommendations of the Joint Expert Committee on Food Additives into consideration (see Appendix II). As regards the use of acids and their salts, carbonates and bicarbonates, preservatives and firming agents the same conclusions were reached as given in para 40 of this Report, concerning the Standard for Jams (Fruit Preserves) and Jellies.

42. Additives in the Standard for Canned Tropical Fruit Salad - The Committee agreed that the provision for natural flavours would cover natural fruit essence and decided to bring this to the attention of the Commodity Committee.

43. Tin in the Standard for Canned Carrots - In the light of the discussions concerning levels of tin in fruit juices and other products (see para 28) the Committee

requested the Commodity Committee to review the proposed maximum level of 250 mg/kg in the light of actual levels of tin found in this product.

44. Additives in the Standard for Canned Mature Processed Peas - The Commodity Committee was requested to specify the individual calcium salts and to propose maximum levels in terms of calcium. Following the objection by a number of delegations to the excessive use of colours in food, the Committee agreed to postpone the endorsement of wool green BS and tartrazine and requested the Commodity Committee to reconsider the need for the use of colours and the maximum levels proposed. The Commodity Committee was also requested to specify what other synthetic flavours it wished to include in the standard in addition to the natural flavours and to reconsider the maximum level of tin of 250 mg/kg in the light of actual levels found in this product (see also paras 28 and 34).

45. L-Tartaric acid in the Standard for Canned Plums - The Committee agreed to postpone the endorsement of this acid pending the establishment of a maximum level by the Commodity Committee.

46. Caramel Colour in the Standard for Canned Mushrooms - The Committee reached the same conclusions as given in para 41 of this Report.

47. Ascorbic Acid in the Recommended International Standard for Canned Peaches - The Committee agreed that the amendment (i.e. ascorbic acid not limited) should be further specified by proposing maximum levels for this substance before it could be considered for endorsement. It was understood that ascorbic acid meant L-ascorbic acid.

48. Additives in the Standards for Milk Powders, Evaporated Milks, Condensed Milks and Cream Powders - The Committee agreed to include the potassium salts of the various acids provided for in these standards, it being understood that the Joint Expert Committee on Food Additives would elaborate specifications for the salts Used in commerce. It was pointed out to the Joint FAO/WHO Committee of Government Experts on Milk and Milk Products that the provision for mono- and diglycerides in the standard for milk powders should read "mono- and diglycerides of edible fatty acids".

49. Additives in the Standard for Blue-veined Cheese - The Committee noted that the yellow colour of cheese could be removed by either the use of colours in trace amounts (optical bleaching) or by using bleaching agents such as benzoyl peroxide. A number of delegations were strongly in favour of using only the former method for this purpose. Noting that (a) benzoyl peroxide had been only evaluated as a flour-treatment agent, (b) that the Committee of Government Experts had not received information on the problem of residues of benzoyl peroxide in the cheese and possible interaction between cheese and the bleaching agent, and (c) that a number of countries did not permit the use of bleaching agents, the Committee decided to await the receipt of information from the Committee of Government Experts before taking further action and requested that Committee to consider the question of optical colour correction versus chemical bleaching of cheese.

50. Additives in Individual Cheese Standards (Herrgardsost, Hushallsost, Norvegia, Adelost, Blue Veined Cheese) - The Committee agreed that it would be preferable to lay down maximum levels for the phosphates and also the nitrates on the final product. As regards nitrates the Committee postponed the endorsement of these substances pending clarification of the concentration of nitrates in the whey and the question of nitrosamine formation in cheese (see para 54, ALINORM 70/12).

51. Additives in the Standard for Provolone - As regards the proposed use of benzoyl peroxide, the Committee reached the same conclusions as given in para 49 above. The Committee also agreed to request the Committee of Government Experts to propose maximum levels for hexamethylenetetramine in the final product, expressed as formaldehyde. The delegation of Italy agreed to supply information to the Committee of Government Experts (to be sent to Dr. F. Winkelmann, FAO, with a copy to the Chief, Joint FAO/WHO Food Standards Programme). The representative of FAO stated that the Joint Expert Committee on Food Additives had examined the efficacy of hexamethylenetetramine as a preservative.

52. Chlorates in the Standard for Emmentaler - The Committee, noting that the Committee of Government Experts had not received information on the possible effects of chlorates on cheese, and noting that the Joint Expert Committee on Food Additives had recommended that this substance was not suitable for use in food, but noting that there was evidence that chlorate was converted to chloride in cheese, agreed to postpone endorsement pending receipt of information from the Committee of Government Experts and clarification of possible health hazards.

53. Additives in Standards for Cream Cheese, Rahm (Frisch) Käse - The Committee of Government Experts was requested to reconsider the antioxidants taking into account the desirability of laying down (a) maximum levels on a fat basis (in view of the variation in the content of fat which the antioxidant was intended to protect), and (b) an overall maximum level for the antioxidants as in the Recommended Standards for fats and oils.

#### GENERAL CONCLUSIONS OF THE COMMITTEE

54. The Committee agreed that, in view of the fact that it had endorsed the use of a large number of food additives in a great variety of foods, it was necessary to carry out a thorough survey of the potential intake of individual additives resulting from these endorsed uses and taking also into account all other possible uses. WHO was requested to continue its computerized programme concerned with the estimation of the potential intake of food additives. Noting that at future sessions it would have a decreasing amount of work concerning endorsement and noting the concern of a number of delegations regarding the possibility of some additives exceeding the ADI as a result of the endorsement of the use of such additives, the Committee requested the Secretariat to prepare a working paper on this subject for its next session and agreed that it would devote sufficient time to this important question. Governments were urged to carry out surveys of food additive intake so that a more reliable estimate could be made of the potential hazards resulting from the permitted uses of food additives. Such data should be sent to Dr. J. Munn, WHO as soon as possible (see also para 22 of this Report).

55. It was further agreed that the General Principles for the Use of Food Additives should be made available to Codex Commodity Committees together with the request by this Committee that, in proposing food additives, due consideration should be given to their technological justification as recommended in the General Principles on the Use of Food Additives.

56. The Committee noted that, in accordance with its terms of reference, one of its responsibilities was to make recommendations to the Commission concerning the acceptability or otherwise of food additive provisions in Codex Standards. In doing so it considered all aspects of the problem including

- (a) the opinion of Codex Commodity Committees concerning technological justification;
- (b) the toxicological evaluation of the Joint Expert Committee on Food Additives;
- (c) the specifications of identity and purity;
- (d) the potential intake of the food additive; and
- (e) other relevant questions not dealt with by other bodies.

#### LISTS OF FOOD ADDITIVES

57. Status of Lists of Food Additives - The Committee had before it a working paper by the Secretariat (CX/FA 72/9-Add.I) containing the decision of the 13th session of the Executive Committee concerning the status of lists of food additives. The Committee noted that the Executive Committee had decided that food additives which had been cleared for use in food or given a temporary clearance by the Joint Expert Committee on Food Additives should be listed in a list A. The Executive Committee had also agreed that additives which were currently under consideration either by the Expert Committee or the Codex Committee on Food Additives, but which had not been cleared from a toxicological point of view should be listed in a list B and that a further list C should be drawn up to include those additives which had been found to be unsafe for use in food by the Joint Expert Committee on Food Additives.

58. The Committee also noted that Lists A and C would have an advisory character and would not be sent to governments for acceptance in accordance with the Codex Procedure for the Elaboration of Codex Standards. It was envisaged that further additives would be added to or subtracted from these Lists as new information came to light. Regarding List B the Committee agreed that it should be considered a working list for use essentially within the framework of the Codex Alimentarius Commission and decided that governments should be requested to send comments on that list so that priority lists could be established which would be referred to the Expert Committee on Food Additives for evaluation. List B should be provided with suitable explanatory notes to make it clear to the reader that it was subject to further consideration by the Codex Committee and Expert Committee on Food Additives. While the Committee was in agreement with the conclusions of the Executive Committee, it considered that List A should be subdivided into two parts, one containing those additives which had been given a full evaluation and another which contained those additives cleared on a temporary basis. The Committee requested the Secretariat to provide full references to publications or monographs of the Expert Committee on Food Additives, including publications dealing with technological efficacy.

59. Natural and Artificial Flavours - The Committee had before it a working paper prepared by the Secretariat (CX/FA 72/10). The Committee agreed that it would be desirable to clarify the various provisions for natural flavours and their identical synthetic equivalents appearing in Codex standards. The representative of the Council of Europe informed the Committee that, on a basis of new data, a new version of the Council of Europe list of flavouring substances would be prepared and published towards the end of 1972. The Committee also received a report from the International Organization of Flavour Industry (CX/PA 72/10-Add.I) which contained proposals for the subdivision of flavouring substances into three categories, i.e. (a) natural flavours, (b) flavouring substances which were prepared by chemical synthesis or extracted using a chemical process and which were identical to their natural counterparts, (c) artificial flavouring

substances which had not yet been identified in natural products intended for human consumption. The Committee discussed the definitions proposed by the International Organization of Flavour Industry and adopted them with some amendments as shown below:

"Natural flavours and flavouring substances are preparations and single substances respectively, acceptable for human consumption, obtained exclusively by physical processes from vegetable, sometimes animal, raw materials, either in their natural state or processed for human consumption.

Nature-identical flavouring substances are substances chemically isolated from aromatic raw materials or obtained synthetically; they are chemically identical to substances present in natural products intended for human consumption, either processed or not.

Artificial flavouring substances are those substances which have not yet been identified in natural products intended for human consumption, either processed or not."

60. The Committee again requested the Expert Committee on Food Additives to consider the approach adopted by the Council of Europe concerning the evaluation of flavouring substances.

61. Lists of Carrier and Extraction Solvents - The Committee had before it a working paper prepared by the Netherlands (CX/FA 72/11) and a working paper containing comments of the International Organization of the Flavour Industry (CX/FA 72/II-Add.I). In discussing the document prepared by the Netherlands, opinion was divided whether or not it was desirable to maintain the subdivision of the lists of these solvents on the basis of specified use. The Committee agreed not to make any changes to such a presentation but decided to rediscuss this matter at its next session in the light of government comments. It was agreed that those carrier or extraction solvents which had been evaluated and found acceptable for food use by the Expert Committee on Food Additives would be made available to governments as advisory lists in accordance with the decision recorded in para 58 of this Report. The Secretariat was requested to take into account the paper prepared by the International Organization of the Flavour Industry when submitting the list of solvents to governments for comment.

62. Lifting and Definition of Flavour Enhancers - The Committee considered a working paper prepared by the delegation of Japan (CX/FA 72/12) and a paper containing additional information and comments from the U.S.A. and the International Glutamate Technical Committee (CX/PA 72/II-Add.I). It was agreed that there was no necessity to define flavour enhancers in view of the fact that a Codex Advisory List would be drawn up for these substances. However, it was agreed that the list would also contain substances which, at higher concentration, had flavour properties. In discussing the substances which should be included in the list of flavour enhancers, the Committee decided to include substances proposed by the International Glutamate Technical Committee together with ethylmaltol, maltol, L-glutamic acid, L-lysine L-glutamate and L-arginine L-glutamate. It was agreed that the same procedure should be followed concerning the publication of this list of additives as described in paragraph 58 of this Report.

63. List of Flour-Treatment Agents - The Committee had before it a paper (CX/FA 72/13) containing comments received from France and information received from the U.S.A. concerning additional flour-treatment agents of interest to industry. The Committee noted that the 8th session of the Commission had agreed to treat the list of flour-treatment agents as an indicative open list and had requested this Committee to

reconsider it in the light of information supplied by the U.S.A. Noting the objection of a number of delegations to the use of flour-treatment agents, other than ascorbic acid at a level of 200 mg/kg, the Committee decided that the same procedure should be followed as described in para 58, concerning the publication of advisory lists. The Committee requested the Expert Committee on Food Additives to consider the additional flour-treatment agents (chlorine and acetone peroxide) as well as the higher level of treatment proposed by the U.S.A. for benzoyl peroxide,

64. Index on Food Additives - The Committee considered the index of food additives prepared by the Secretariat (CX/FA 72/2) containing lists of food additives fully referenced to reports and monographs of the Expert Committee on Food Additives and giving an indication of the status of the evaluation of food additives. The document included additional lists of food additives, to those established by the Committee, which the Secretariat had drawn up on the basis of technological function, taking into consideration the class titles included in the General Standard for the Labelling of Prepackaged Foods at Step 9 of+ the Procedure. The Committee agreed that these additional classes of food additives be made available as advisory lists to governments in accordance with its decisions recorded in para 58. The Committee decided to combine the list of emulsifiers and thickening agents under the heading "Emulsifiers, Stabilizers and Thickening Agents". The Secretariat was instructed to provide the various lists of food additives with appropriate cross references to food additives with multiple technological use and to publications of the Joint Expert Committee on Food Additives, including those dealing with technological efficacy.

65. Asbestos - In connection with the list of processing aids, the observer from the International Federation of Pectin Producers pointed out that the use of asbestos proposed by the Commodity Committee as a filtration aid had still not been cleared by the Joint Expert Committee on Food Additives. He stressed the importance of this agent to the fruit juice industry and stated that the hazard to the health of workers as a result of inhaling asbestos dust was not necessarily relevant to the possible hazard of ingesting trace amounts in fruit juices. The Committee noted that asbestos had been considered by the 14th session of the Joint Expert Committee on Food Additives but that no evaluation was possible in view of lack of information on (a) the types of asbestos used, (b) the treatment given to the filter to prevent migration into the food, (c) possible residues, and (d) the method for determining such residues in food. However, the Joint Expert Committee had stated that the use of asbestos in processes in which it was essential would cause no health hazards to the consumers, provided that crocidolite was not used and that residues in food were kept to negligible levels in accordance with good manufacturing practice. The Committee decided to refer asbestos to the Joint Expert Committee on Food Additives for re-evaluation.

#### DEFINITIONS FOR FOOD ADDITIVE AND CONTAMINANT

66. The Committee had before it a paper prepared by the Secretariat (CX/FA 72/14) and Addendum I containing comments from France. The Committee agreed that the purpose of the definitions was to clarify the various terms used in the Codex Alimentarius and that it would not be mandatory for governments to adopt the definitions in their legislation. Nor were the definitions intended to delineate the terms of reference of the Codex Committees on Food Additives or Pesticide Residues. The Committee agreed that the definition of "food additives" should include processing aids which were added intentionally to food but which did not always leave residues in the final product. On the other hand residues resulting from substances used intentionally in the production of food, i.e. in agriculture and animal husbandry, would not be included in that

definition. The Committee made a number of amendments to the definition to also make it clear that it did not include processes such as irradiation or substances used to improve the nutritional quality of food.

67. The Committee made a number of editorial amendments to the definition of "contaminants" and agreed that residues resulting from the use of substances, such as antibiotics and hormones used in animal husbandry would be included but pesticide residues would be excluded from the definition. As regards foreign matter, such as insect fragments, rodent hair and other objectionable matter, this would also be excluded from the definition.

68. The Committee decided to set up a small drafting group to prepare an amended version of the definitions of food additives and contaminants. It was decided that there was no need, at this time, to develop a definition of a "process" to describe, for example, treatment by ionizing radiation. The Secretariat was requested to submit the definitions to the Commission for adoption. The definitions are given in Appendix III of this Report.

#### GENERAL PRINCIPLES FOR THE USE OF FOOD ADDITIVES

69. The Committee considered the working paper containing government comments on the above General Principles (CX/FA 72/7)j which were referred back for reconsideration by the 7th session of the Commission in the light of comments. The Committee also had before it Addenda I, II and III to the above working paper containing additional government comments. The Committee agreed to set up a small drafting group to prepare a revised version of the General Principles for the Use of Food Additives in the light of the decision of the Committee.

70. The Committee decided to delete reference to contaminants as the General Principles dealt with the use of substances added intentionally to food. It also agreed that the General Principles should stress the technological necessity and justification for the use of additives and the requirement for toxicological clearance and acceptability of the additive for use in food. The Committee made a number of editorial amendments and decided that, in redrafting the General Principles the Drafting Committee should follow the same layout and wording as in the text proposed by the U.K. The amended text of the General Principles for the Use of Food Additives is given in Appendix IV of this Report. The Secretariat was requested to submit the General Principles to the Commission for adoption. It was agreed that these Principles should be printed and made available to governments and Codex Commodity Committees for information.

#### CARRY-OVER PRINCIPLE

71. The Committee had before it a paper prepared by the Netherlands Secretariat (CX/PA 72/15) containing comments on the proposed carry-over principle which had been sent to governments for comment after the 7th session. The paper also contained proposals to amend the carry-over principle in the light of comments received. The Committee agreed on the need to draw up such principles. Some delegations were not in favour of applying them to food generally or did not consider that there was a need for them. The Committee was of the opinion that this problem should be given further consideration and decided to ask governments to reconsider the carry-over principle in the light of the comments received (CX/FA 72/15 and Addenda 1, 2 and 3) and to send their comments to the Secretariat. The Secretariat was requested to draw up a revised version of the carry-over principle on the basis of comments received.

#### SPECIFICATIONS FOR FOOD ADDITIVES

72. The Secretariat informed the Committee that very few replies had been received in response to requests for comments on the specifications established by the Joint Expert Committee on Food Additives, and that, therefore, no paper had been prepared for this session. It was pointed out that, in view of the formidable amount of work involved in preparing comments on the large number of specifications submitted to governments, the low number of replies did not necessarily mean that the specifications were generally acceptable. It was pointed out that specifications for food additives were closely related to the toxicological evaluation of the additives and that, therefore, any substantive change would have to be referred to the Joint Expert Committee on Food Additives in accordance with the new Procedure. The Committee agreed that it was necessary to establish priorities for the consideration of specifications and instructed the Secretariat to prepare a paper containing a few selected specifications taking into consideration (a) the availability of comments, (b) availability of the FAO/WHO Monographs containing the specifications, (c) the additives in Step 9 Standards and (d) the opinion of the Joint Expert Committee on Food Additives concerning the need to re-evaluate certain specifications established at earlier sessions of that Committee. It was agreed that, as a start, the specifications for food colours, polyphosphates and certain other food additives in Step 9 Standards could be considered by the next session of the Committee.

#### SPECIFICATIONS FOR FOOD GRADE SALT

73. The Committee had before it a paper by the Netherlands delegation containing a draft specification for food grade salt. The Secretariat drew the Committee's attention to the Executive Committee's decision that the Coordinating Committee for Europe should consider whether or not a standard for food grade salt needed to be elaborated and make recommendations to the Commission in this connection. Should the decision of the Commission be not to proceed with the elaboration of a Codex standard for salt, the Committee was of the opinion that it would be desirable to continue the elaboration of a specification for food grade salt and decided to request the Commission to approve, in that event, further work by this Committee on the above specification. The Committee adopted some amendments to the draft specification and decided that, awaiting the decision of the Commission, the amended specification (see Appendix VT) should be sent by the Secretariat to governments and interested International Organizations for comments.

#### REPORT OF THE FAO/IAEA/WHO EXPERT COMMITTEE ON FOOD IRRADIATION

74. The Committee considered the report of the Joint FAO/IAEA/WHO Expert Committee and the comments which were received from governments (CX/FA 72/3). It agreed that the consideration of the irradiation of foods and the recommendations on the above Expert Committee were matters which were within its terms of reference, but were not of a high priority. Noting that the question of methodology to determine the wholesomeness of the foodstuffs so treated was still under discussion by scientists and that further work was in progress in this field, the Committee decided to await further scientific evidence before discussing the subject of food irradiation.

#### REPORT OF THE JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES CONCERNING ANTIBIOTICS

75. The Committee considered the 12th Report of the Joint FAO/WHO Expert Committee on Food Additives and the comments that were received from governments (CX/FA 72/4). It agreed that the consideration of the question of residues in foods resulting from the use of antibiotics in animal feeds were within its terms of reference but



noted that the question of the toxicological evaluation of antibiotic residues in foodstuffs to determine possible hazard to health was still under consideration and also that more work was required in this field. It was, therefore, decided to postpone consideration of the recommendations of the Expert Committee on Food Additives until a future session.

#### ADDITIVES IN SOFT DRINKS

76. The Committee had before it a working paper prepared by the delegation of Canada (CX/FA 72/18) and a revised version of the Appendix contained in the paper. The Committee agreed that the paper would be of assistance to WHO in its computerized programme on the estimation of the potential intake of food additives. The Committee was further of the opinion that it would be desirable to establish an advisory list of additives for use in soft drinks and requested the delegation of Canada to draw up such a list and to propose tentative maximum levels for the food additives in soft drinks. The Committee was informed that the paper had been drawn up on the basis of information supplied by industry which drew attention to the fact that certain types of soft drinks might be consumed in large amounts. The information contained in the paper referred in the main to carbonated beverages. Governments were requested to send supplementary information, including actual levels of use and consumption data, to Canada (Dr. D. Smith, Food and Drug Directorate, Carlingwood Plaza, Ottawa, Ontario), with a copy to WHO. For the purposes of providing information on this subject to Canada, soft drinks were considered to include non-alcoholic beverages and their bases (liquid, concentrate or powder) whether carbonated or non-carbonated, but to exclude tea, coffee and undiluted fruit juices. It was agreed that the advisory list drawn up by Canada would be examined in the light of the General Principles for the Use of Food<sup>A</sup> Additives at the next session.

#### GENERAL STANDARD FOR THE LABELLING OF FOOD ADDITIVES AS SUCH

77. The Committee discussed a draft standard for the labelling of food additives as such prepared by the United Kingdom (CX/FA 72/19). The delegation of the U.K. informed the Committee that in drawing up the draft standard it had considered the International Recommended Standard for the Labelling of Prepackaged Foods since, in its opinion, the General Labelling Standard would also, with some amendments, apply to the labelling of the food additives sold as such. The Committee agreed that it was desirable to elaborate a standard for the labelling of consumer packaged food additives and also for food additives packed in bulk. It was noted, however, that there was a much smaller trade in food additives at the retail level than sale in bulk. The question was raised whether the Committee should propose an amendment to the General Standard on the Labelling of Prepackaged Foods or whether a separate text should be elaborated to cover food additives sold as such. The Committee agreed that, for practical reasons, a separate general labelling standard should be elaborated. The question was also raised whether it was within the terms of reference of this Committee to elaborate such a general standard. Considering that it was responsible to make recommendations to the Commission on all matters concerning food additives, it was pointed out that the consideration of the labelling requirements of food additives sold as such would fall within its responsibilities in consultation with the Codex Committee on Food Labelling. On the other hand, the labelling of foods and the declaration of food additives in food was clearly a matter for consideration by the Codex Committee on Food Labelling.

78. The Committee did not discuss the draft prepared by the U.K. in detail and requested participants and other interested governments to send their comments on the U.K. draft (to Mr. H. Goodall, U.K.). The U.K. agreed to continue to act as rapporteur in

this field and to prepare an amended version of the general standard for the next session. It was understood that after the Committee had agreed on the first draft of such a general labelling standard the Commission should be requested to indicate what procedure should be followed concerning its further elaboration.

#### NEW CLASS NAMES FOR FOOD ADDITIVES

79. The Committee considered a paper prepared by the Secretariat containing proposals for the addition of further class names for food additives in the General Standard for the Labelling of Prepackaged Foods (CX/FA 72/20). The Committee agreed that the discussion of this paper should be only a preliminary one in view of the fact that the above general standard had only recently been sent to governments for acceptance at Step 9 of the Codex Procedure.

80. It was pointed out to the Committee that some of the class names in the General Labelling Standard referred to botanical or chemical groups of additives rather than to groups based on technological function. The Committee agreed that class names based on the technological use of the additive were preferable as they were more informative to the consumers. A number of delegations pointed out, however, that in their countries' legislation there was a tendency to decrease the number of class, titles used to declare the presence of food additives on the label and that reference was given to the declaration of the actual additive used. The Committee agreed that it would not be necessary to add more than a few additional class names to the existing list appearing in the General Labelling Standard.

81. The Committee was in general agreement with the proposals of the Secretariat, but decided to amend the proposed class title of "artificial sweetener" to "non-nutritive sweetener". The participants were requested to comment on the paper of the Secretariat, so that a working paper could be drawn up by the Secretariat for the next session of the Committee. It was noted that the amended list of class titles would, after adoption by this Committee, be sent to the Codex Committee on Food Labelling for further elaboration. The Committee did not reach any conclusions concerning the requests of the Codex Committee on Pish and Fishery Products and the Committee of Government Experts on Milk and Milk Products to establish class names for phosphates and pH adjusting agents.

#### TIME AND PLACE OF NEXT SESSION

82. The Committee noted that its next session had been tentatively scheduled for the end of 1973 by the Commission and was informed by the Chairman that, in all probability, the session would again be held in Wageningen.

#### FUTURE WORK

83. The Committee agreed that it had sufficient items under consideration and that it was not necessary to consider further work.

#### OTHER BUSINESS

84. Priority Lists - The Committee reviewed the priority lists adopted at the seventh session containing additives referred to the Joint Expert Committee on Food Additives for evaluation. It was agreed that a new priority list should be drawn up consisting of three parts, i.e. A, B and C, the first list containing the most urgent additives and matters to be considered by the Joint Expert Committee on Food Additives (See Appendix V).

85. Reports and Meetings for the Joint FAO/WHO Expert Committee on Food, Additives - The Committee agreed to draw again to the attention of FAO and WHO the

need to make available to it in good time the most recent results of the deliberations of the Joint Expert Committee on Food Additives, as has been customary in the past. The Committee also agreed that there was a need to hold more frequent meetings of the Joint Expert Committee on Food Additives and requested the Commission to bring this matter to the attention of FAO and WHO.



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ENDORSEMENT OF FOOD ADDITIVES IN CODEX COMMODITY STANDARDS

Abbreviations: GMP Good Manufacturing Practice

CCFA : Codex Committee on Food Additives

JECFA : Joint FAO/WHO Expert Committee on Food Additives

## COCOA PRODUCTS AND CHOCOLATE

1. Proposed Draft Standard for Cocoa Beans, Nib, Mass, Press Cake and Dust  
(Appendix II, ALINORM 72/10)

(a)	Phosphoric acid	2.5 g/kg expressed as P <sub>2</sub> O <sub>5</sub>	endorsed	
(b)	Natural flavours, as defined in the Codex Alimentarius and their synthetic equivalents, other than those which would imitate natural chocolate or milk flavours	limited by GMP	temporarily para 60 endorsed pending evaluation by JECFA	para 60
(c)	Copper (Cu)	20 mg/kg Cocoa beans, nib and mass	temporarily para 24 endorsed pending reconsideration by Commodity Committee	para 24
(d)	Copper (Cu)	50 mg/kg Cocoa press cake )	Committee	
(e)	Arsenic (As)	1 mg/kg	Cocoa beans	temporarily endorsed
(f)	Lead (Pb)	2 mg/kg	nib, mass, press cake and dust	

2. Proposed Draft Standard for Cocoa Powder and Sweetened Cocoa Powder  
(Appendix IV, ALINORM 72/10)

(a)	Phosphoric acid	2-5 g/kg expressed as P <sub>2</sub> O <sub>5</sub> on the cocoa fraction	endorsed	
(b)	Natural flavours, etc.	(Same as under I(b) above)		
(c)	Copper (Cu)	50 mg/kg	temporarily endorsed pending reconsideration by Commodity Committee	para 24
(d)	Arsenic (As)	1 mg/kg	temporarily endorsed	
(e)	Lead (Pb)	2 mg/kg	endorsed	

## 3. Proposed Draft Standard for Chocolate and Proposed Draft Standard for

Composite and Flavoured Chocolates (Appendices V and VI, ALINORM 72/10)

(a)	Polyglycerol polyricinoleate	5 g/kg		temporarily endorsed pending re-evaluation by JECFA	
			Total emulsifiers		
(b)	Sorbitan monostearate	10 g/kg	15 g/kg	endorsed	
(c)	Sorbitan tristearate	10 g/kg		endorsed	
(d)	Polyoxyethylene sorbitan monostearate	10 g/kg		endorsed	
(e)	Natural flavours, etc.	(Same as under I(b) above)			
(f)	Copper (Cu)	[20 mg/kg]		Postponed pending confirmation of the limits by Commodity Committee	para 24 )
(g)	Arsenic (As)	[1 mg/kg]			
(h)	Lead (Pb)	[2 mg/kg]			

FRUIT JUICES

4. Draft Standard for Apple Juice (Appendix II, ALINORM 71/14(A))

(a)	Processing Aids		Endorsed	para 25
	Clarifying and filtering agents as approved by the Codex Alimentarius Commission and used in accordance with GMP"			

5. Draft Standard for Concentrated Apple Juice (Appendix VI, ALINORM 72/14)

(a)	Ascorbic acid	limited by GMP	Endorsed	
(b)	Processing aids	(Same as under 4(a) above)		
(c)	Tin (Sn)	150 mg/kg on the reconstituted juice	temporarily endorsed for two years after adoption of the Standard at Step 8	Para 28
(d)	As, Pb, Cu, Zn, Fe	(See under 8)		



6. Draft Standards for Grape Juices and Concentrated Grape Juices (Appendices II-V, ALINORM 72/14)

(a)	<u>Acidifying agents</u> Citric acid Malic acid	limited by GMP	endorsed	para 26
(b)	<u>De-acidifying agents</u> (Vinifera type grape juices only)	limited by GMP	endorsed	para 26
	Calcium carbonate (pure precipitated)	limited by GMP	endorsed	para 26,27
	Potassium tartrate	limited by GMP	temporarily endorsed, pending drawing up of specification by JECPA	para 26
(c)	Tin (Sn)	150 mg/kg 1/ (Vinifera type) 250 mg/kg 1/ (Concord type)	temporarily endorsed for two years, after adoption of the Standard at Step 8	para 28
(d)	<u>Processing aids</u>	(Same as under 4(a) above)		

<sup>1</sup>

In case of concentrated juices these maximum levels refer to the reconstituted juice.

7. Draft Standard for Concentrated Orange Juice (Appendix VII, ALINORM 72/14)

(a)	Tin (Sn)	250 mg/kg on the reconstituted juice	temporarily endorsed for two years after adoption of the Standard at Step 8	para 28
-----	----------	--------------------------------------	---	---------

8. Draft Standards for Concentrated Fruit Juices under 5, 6 and 7

Contaminants: (As, Pb, Cu, Zn, Pe) endorsed or temporarily endorsed as appropriate  
 The maximum levels for these contaminants in concentrated juices shall be those laid down for the corresponding single strength fruit juice but expressed on the reconstituted fruit juice. (See Appendix II, ALINORM 71/12)

9. Recommended International Standard for Tomato Juice (CAC/RS 49-1971)

Proposed amendment	temporarily endorsed for two years after adoption at Step 8	para 28
Tin (Sn)		
250 mg/kg		

SPECIAL DIETARY FOODS

10. Recommended International Standard for Special Dietary Foods with Low Sodium Content (including Salt Substitutes) (CAC/RS 53-1971)

- |     |   |   |  |         |
|-----|---|---|--|---------|
| (a) | Choline salts of acetic, carbonic, lactic, tartaric, citric or hydrochloric acids, mixed with other choline-free salt substitutes | The choline content not to exceed 3% m/m of the salt substitute mixture         | endorsed, para 29 subject to drawing up of specifications by the JECFA | para 29 |
| (b) | Lactic acid   | Limited by GMP  |  |         |
| (c) | Malic acid  |   |  |         |
| (d) | Colloidal silica  | Not more than 1% m/m of salt substitute mixture, individually or in combination | Endorsed   |         |
| (e) | Calcium silicate  |   |  |         |

FISH AND FISHERY PRODUCTS

11. Proposed Draft Standard for Canned Crab Meat (Appendix III, ALINORM 72/18)

- |     |                          |   |   |         |
|-----|--------------------------|---|---|---------|
| (a) | Calcium disodium EDTA    | 250 mg/kg (*)                                 | endorsed  |         |
| (b) | Monosodium glutamate     | 800 mg/kg (*)                                 |   |         |
| (c) | Sodium hexametaphosphate | 1000 mg/kg expressed as                       | Postponed pending clarification or reconsideration by the Commodity Committee |         |
| (d) | Sodium pyrophosphate     | 5000 mg/kg )P <sub>2</sub> O <sub>5</sub> (*) |   | Para 31 |
| (e) | Citric acid              |   |   |         |
| (f) | Tartaric acid            |   |   |         |
| (g) | Aluminium sulphate       |   |   |         |
| (h) | Phosphoric acid          |   |   |         |

(\*) On the final product singly or in combination.

12. Recommended International Standard for Canned Shrimps or Prawns (CAC/RS 37-1970)

The proposed amendment is to replace beta-carotene by the following:

- |                         |  |  |                              |
|-------------------------|--|--|------------------------------|
| Canthaxanthine CI.75135 | 30 rag/kg of the final product, singly or in combination with other colours specified in the | endorsed, subject to any decision of the CAC | paras 99, 101, ALINORM 72/18 |
|-------------------------|--|--|------------------------------|

## Standard

- MEAT PRODUCTS
13. Draft Standards for Cooked Cured Hams and Pork Shoulder (Appendices III and VII, ALINORM 71/16)
- |     |  |                                       |   |         |
|-----|--|---------------------------------------|---|---------|
| (a) | Natural flavourings as defined in the Codex Alimentarius and their identical synthetic equivalents                         | Limited by GMP                        | temporarily para 34 endorsed, pending evaluation by the JECPA               | para 34 |
| (b) | Natural smoke solutions, and their extracts as defined in the Codex Alimentarius and their identical synthetic equivalents | Limited by GMP                        | temporarily para 33 endorsed, pending toxicological evaluation by the JECPA | para 33 |
| (c) | Guanylic acid, Na salt   | 500 mg/kg expressed as guanylic acid  | postponed para 35   | para 35 |
| (d) | Inosinic acid, Na salt   | 500 mg/kg expressed as inosinic acid  | pending toxicological evaluation by the JECFA                               |         |
| (e) | Monosodium glutamate   | 2000 mg/kg expressed as glutamic acid | endorsed  |         |
14. Draft Standard for Canned Corned Beef (Appendix IV, ALINORM 72/12)
- |     |                                   |                                      |          |  |
|-----|-----------------------------------|--------------------------------------|----------|--|
| (a) | Ascorbic acid and its sodium salt | 500 mg/kg expressed as ascorbic acid | endorsed |  |
|-----|-----------------------------------|--------------------------------------|----------|--|
- PROCESSED FRUITS AND VEGETABLES
15. Draft Standard for Canned Mandarin Oranges (Appendix II, ALINORM 72/20)
- |     |                  |          |          |  |
|-----|------------------|----------|----------|--|
| (a) | Methyl cellulose | 10 mg/kg | endorsed |  |
|-----|------------------|----------|----------|--|
16. Draft Standard for Canned Pears (Appendix III, ALINORM 72/20)
- |            |                        |                                    |  |         |
|------------|------------------------|------------------------------------|--|---------|
| <u>(a)</u> | Tartrazine (CI, 19140) | 200 mg/kg singly or in combination | endorsed   |         |
| <u>(b)</u> | Ponceau 4R (CI, 16255) | 200 mg/kg singly or in combination | temporarily endorsed                                     |         |
| <u>(c)</u> | Azo Rubine (CI, 14720) | 200 mg/kg singly or in combination | postponed, pending toxicological evaluation by the JECFA | para 37 |
17. Draft Standard for Canned Green Peas (Appendix V, ALINORM 72/20)

	(a)	Mint flavour (mint oil)	Limited by GMP	endorsed	para 38
	(b)	Starch sodium succinate		postponed pending evaluation by the JECFA	
	(c)	Distarch phosphate, hydroxypropyl			
	(d)	Distarch phosphate (phosphorus oxychloride treated)	10 g/kg singly or in combination (with other starches and thickeners already endorsed)	temporarily endorsed pending re-evaluation by the JECFA	
	(e)	Distarch phosphate, acetylated			
	(f)	Distarch glycerol, acetylated			
	(g)	Distarch glycerol			
18.	<u>Draft Standard for Raisins</u> (Appendix VI, ALINORM 72/20)				
	(a)	Sulphur dioxide	1500 mg/kg (applies to bleached raisins only)	postponed pending reconsideration by the Commodity Committee	para 39
	(b)	Sorbitol	5 g/kg	endorsed	
19.	<u>Proposed Draft General Standard for Jams (Fruit Preserves) and Jellies</u> (Appendix VII, ALINORM 72/20) and <u>Proposed Draft General Standard for Citrus Marmalade</u> (Appendix VIII, ALINORM 72/20)				
	(a)	Citric acid	[In sufficient amount to maintain the pH at a level of 2.8-3.5, or total acidity of 5 g/kg]	postponed pending reconsideration by the Commodity Committee	paras 40, 41
	(b)	Malic acid			
	(c)	Lactic acid			
	(d)	L-Tartaric acid			
	(e)	Fumaric acid			
	(f)	Na, K and Ca salts of the acids under (a) to (e) above	Limited by GMP	postponed, pending clarification by the Commodity Committee	paras 40, 41
	(g)	Na and K carbonates and hydrogen carbonates	Limited by GMPs		

(h)	Dimethyl polysiloxane	10 mg/kg	temporarily endorsed, pending re-evaluation by the JECFA	
(i)	Agar-agar	Limited by GMP (in Jams (Fruit Preserves) and Jellies, only)	postponed pending proposal of maximum levels by the Commodity Committee	para 40
(j)	Sodium benzoate	1000 ing/kg singly or in combination, for use in non-hermetically sealed containers	postponed subject to reconsideration by the Commodity Committee	paras 40, 41
(k)	Sorbic acid or its K salt			
(l)	Esters of parahydroxy-benzoic acid			
(m)	Calcium chidride	2000 mg/kg, expressed as Ca, singly or in combina-tion^		
(n)	Calcium lactate			
(o)	Calcium metabisulphite			
(p)	Caramel colour			
		Limited by GMP (in Citrus Marmalade only)	temporarily para 41 endorsed if made by ammonia process,endorsed if made by other processes	para 41

20. Proposed Draft Standard for Canned Tropical Fruit Salad (Appendix IX, ALINORM 72/20)

(a)	Erythrosine (to colour cherries only when artificially coloured cherries are used)	Limited by GMP	temporarily endorsed	
(b)	Natural fruit essence	Limited by GMP	included under 20 (c)	para 42

	(c)	Natural flavours as defined in Codex Alimentarius and their identical synthetic equivalents	Limited by GMP	temporarily endorsed 42 pending evaluation by the JECPA	paras 34, 42
	(d)	Ascorbic acid	150 mg/kg	endorsed	
21.	Proposed Draft Standard for Canned Carrots (Appendix X, ALINORM 72/20)				
	(a)	Tin (Sn)	250 mg/kg calculated as Sn	postponed, pending reconsideration by the Commodity Committee	paras 28 43
22.	Proposed Draft Standard for Canned Mature Processed Peas (Appendix XI, ALINORM 72/10)				
	(a)	Edible calcium salts, calculated as anhydrous calcium chloride	250 mg/kg	postponed pending specification of the calcium salts intended	para 44
	(b)	Wool Green BS (Green S) CI.44090	100 mg/kg singly or in combination	postponed pending reconsideration of the technol need by the Commodity	para 44
	(c)	Tartrazine CI.1914O			
	(d)	Natural flavours as defined in the Codex Alimentarius and their identical synthetic	Limited by GMP )	temporarily, endorsed pending evaluation by the JECPA	paras 34, 44
	(e)	Other synthetic flavours		postponed, pending clarification by the Commodity Committee	paras 34 44
	(f)	Tin (Sn)	250 mg/kg calculated as Sn	postponed pending reconsideration of the level by the Commodity Committee	paras 28, 44
23.	Draft Standard for Canned Plums (Appendix III, ALINORM 71/20 and para 233, ALINORM 71/31)				



establishment of  
maximum level by  
the Commodity  
Committee

- 26 Recommended International Standard for Canned Tomatoes (CAC/RS 13-1969 and paras 243-244, ALINORM 71/31)

Proposed Amendment:

- |     |                        |  |          |
|-----|------------------------|--|----------|
| (a) | Calcium chloride       | 0.080% total calcium ion content in the                                    | endorsed |
| (b) | Calcium sulphate       | styles "diced", "sliced" and "wedges";                                     |          |
| (c) | Calcium citrate        | 0.045% total calcium ion content in the                                    |          |
| (d) | Mono-calcium phosphate | styles "whole", "whole and pieces" and "pieces", singly or in combination. |          |

27. Recommended International Standard for Powdered Dextrose (icing Dextrose) (Appendix IV and para 190, ALINORM 71/31)

- |     |  |  |          |
|-----|--|--|----------|
| (a) | Sulphur dioxide                                      | 20 mg/kg   |          |
| (b) | Calcium silicate                                     |  |          |
| (c) | Calcium phosphate, tribasic                          |  |          |
| (d) | Magnesium carbonate                                  |  |          |
| (e) | Magnesium stearate                                   | 1.5% m/m singly or in combination, provided that starch is not present |          |
| (f) | Silicon dioxide, amorphous ) (dehydrated silica gel) |  | endorsed |
| (g) | Magnesium trisilicate                                |  |          |
| (h) | Sodium calcium aluminosilicate                       |  |          |
| (i) | Arsenic (As)   | 1 mg/kg  |          |
| (j) | Copper (Cu)  | 2 mg/kg  |          |
| (k) | Lead (Pb)  | 2 mg/kg  |          |

28. Proposed Draft Standard for Quick Frozen Peaches (Appendix IV, ALINORM 71/25)

- |     |                 |                |  |                      |
|-----|-----------------|----------------|--|----------------------|
| (a) | Sodium alginate | Limited by GMP | temporarily endorsed pending clarification of use and establishment of maximum level | para 38 ALINORM 71/2 |
|-----|-----------------|----------------|--|----------------------|



by the  
Commodity  
Committee

MILK PRODUCTS

29. Standard for Evaporated Milk and Evaporated Skimmed Milk and Standard for Sweetened Condensed Milk and Skimmed Condensed Milk (Standard Nos. A-3 and A-4, Appendices VI-B and VI-C, CX 5/70 - 14th Session)
- |     |   |   |          |         |
|-----|---|---|----------|---------|
| (a) | Sodium, potassium and calcium salts of hydrochloric acid, citric acid, carbonic acid, orthophosphoric acid, polyphosphoric acid | 2 g/kg singly, 3 g/kg in combination, expressed as anhydrous substances | Endorsed | para 48 |
|-----|---|---|----------|---------|
30. Standard for Whole Milk Powder, Partly Skimmed Milk Powder and Skimmed Milk Powder (Standard No. A-5, Appendix VI-D, CX 5/70 - 14th Session) and Draft Standard for Cream Powder, Half-Cream Powder and High Fat Milk Powder (Standard No. A-10, Appendix VI-F, CX 5/70 - 14th Session)
- |     |   |  |          |         |
|-----|---|--|----------|---------|
| (a) | Sodium, potassium and calcium salts of hydrochloric acid, citric acid, carbonic acid, orthophosphoric acid, polyphosphoric acid | 5 g/kg singly or in combination, expressed as anhydrous substances             | endorsed | para 48 |
| (b) | Mono- and diglycerides of edible fatty acids  | 2.5 g/kg in instant milk powder only   | endorsed | para 48 |
| (c) | Lecithin  | 5 g/kg in instant milk powder only   | endorsed |         |
| (d) | Tricalcium phosphate  |  |          |         |
| (e) | Silicates of aluminium calcium, magnesium and sodium-aluminium  |  |          |         |
| (f) | Silicon dioxide(amorphous   | 10 g/kg singly   | endorsed |         |
| (g) | Calcium carbonate   | or in combination in milk powders intended to be dispensed in vending machines |          |         |
| (h) | Magnesium oxide   |  |          |         |
| (i) | Magnesium carbonate   |  |          |         |
| (j) | Magnesium phosphate (tribasic)  |  |          |         |

31. Draft International Standard for Blue-veined Cheese
- |     |  |  |  |         |
|-----|--|--|--|---------|
| (a) | Fast Green FCF<br>CI.42053   | In an amount sufficient ) to neutralize any natural ) yellow colour of the curd  |  |         |
| (b) | Brilliant Blue FCF   |  |  |         |
| (c) | Indigotine FCF<br>CI.73015   |  | postponed<br>pending<br>reconsideration<br>by the<br>Committee of<br>Government<br>Experts | para 49 |
| (d) | Benzoyl peroxide or a mixture of benzoyl peroxide with potassium alum ( $K_3AlO_3$ ), calcium sulphate ( $CaSO_4$ ) and magnesium carbonate ( $MgCO_3$ ) | Weight of benzoyl peroxide shall not exceed 0.002% and weight of other ingredients, singly or combined shall not exceed .6 times the weight of benzoyl peroxide used |  |         |
32. Individual Cheese Standards (i.e. Herrgardsost, Hushallsost, Norvegia, ådelost, Blue veined Cheese, etc.)
- |     |  |  |  |         |
|-----|--|--|--|---------|
| (a) | Sodium dihydrogen phosphate, and disodium hydrogen phosphate | 0.02% m/m of the milk used singly or in combination, expressed as anhydrous substances | endorsed   | para 50 |
| (b) | Nitrate, sodium and potassium                                | 200 mg/kg of the milk used   | postponed<br>pending<br>information<br>from the<br>Committee of<br>Government<br>Experts | para 50 |
33. International Standard for Provolone (Appendix II-E, CX 5/70 - 11th Session)
- |     |   |   |  |         |
|-----|---|---|--|---------|
| (a) | Hexamethylenetetramine  | 600 mg/kg of the liquid used to work the curd | postponed<br>pending<br>establishment<br>of a maximum<br>level in the<br>final product by<br>the Committee<br>of Government<br>Experts | para 51 |
| (b) | Benzoyl peroxide or a mixture of benzoyl peroxide with potassium alum ( $K_3AlO_3$ ), calcium sulphate ( $CaSO_4$ ) and | Limited by GMP                                | postponed<br>pending<br>reconsideration<br>by the<br>Committee of  | para 51 |

	magnesium carbonate (MgCO <sub>3</sub> )		Government Experts	
34.	<u>International Individual Standard for Emmentaler</u> (Appendix V-B, CX 5/70 - 10th Session)			
(a)	Chlorate, Na and K	100 mg/kg	postponed pending receipt of information from the Committee of Government Experts	para 52
35.	<u>Draft International Individual Cheese Standard for Cream Cheese, Rahm (Frisch) Käse</u> (Appendix VIII-A, CX 5/70 - 14th Session)			
(a)	Gum Karaya		postponed	
(b)	Gum tragacanth		pending	
(c)	Carob bean gum		toxicological , evaluation by	
(d)	Oat gum		JECFA	
(e)	Guar gum			
(f)	Carrageenan			
(g)	Gelatine	Total of 5 g/kg of the finished product except	endorsed	
(h)	Pectin	when fruits, vegetables and meats are added		
(i)	Alginates of Na, K, Ca.NH <sub>4</sub> ("algin")	when the total is 8 g/kg of the finished product		
(j)	1,2-Propylene glycol ester ) of alginic acid			
(k)	Sodium carboxymethyl cellulose			
(l)	Dicotyl sodium sulphosuccinate	0.5% of optional additions (*)	postponed pending toxicological evaluation by JECFA	
(m)		100 mg/kg	postponed	para 53 )
(n)		200 mg/kg	pending re- consideration ) by the ) Committed of ) Government	

TABLE OLIVES

36 Proposed Draft Standard for Table Olives (Annex II, CX/TO 7I/4. December 1971)

(a)	Sorbic acid and its Na or K salts	0.5 g/kg expressed as sorbic acid (**)	
(b)	Lactic acid	15 g/kg {**}	endorsed
(c)	Citric acid	15 g/Kg (**)	
(d)	Ascorbic acid	200 mg/kg (**)	
(e)	Ferrous gluconate (solely to stabilize the colour of treated olives darkened by oxidation)	[40] mg/kg as Fe in the fruit	postponed pending confirmation of maximum level

(\*) In rennet, other coagulating enzymes, moisture binding agents under (a) to (k), fruits, vegetables and meat.

(\*\*) In the brine after equalization.

DEFINITIONS FOR "FOOD ADDITIVE" AND "CONTAMINANT"

For the purposes of the Codex Alimentarius "food additive" means any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result, (directly or indirectly) in it or its by products becoming a component of or otherwise affecting the characteristics of such foods. The term does not include "contaminants"(l) or substances added to food for maintaining or improving nutritional qualities.

For the purposes of the Codex Alimentarius, "contaminant"(l) means any substance not intentionally added to food, which is present in such food as a result of the production : (including operations carried out in crop husbandry, animal husbandry and veterinary medicine), manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food or as a result of environmental contamination. The term does not include insect fragments, rodent hairs and other extraneous matter.

(l) Pesticide residues are contaminants for the purposes of Codex Alimentarius but are separately defined.

## APPENDIX IV

### GENERAL PRINCIPLES FOR THE USE OF FOOD ADDITIVES

1. All food additives, whether actually in use or being proposed for use, should have "been or should be subjected to appropriate toxicological testing and evaluation. This evaluation should take into account among other things, any cumulative, synergistic or potentiating effects of their use.
2. Only those food additives should be endorsed, which so far as can be judged on the evidence presently available, present no hazard to the health of the consumer at the levels of use proposed.
3. All food additives should be kept under continuous observation and should be re-evaluated whenever necessary in the light of changing conditions of use and new scientific information.
4. Food additives should at all times conform with an approved specification, e.g. the Specifications of Identity and Purity recommended by the Codex Alimentarius Commission.
5. The use of food additives is justified only where they serve one or more of the purposes set out from (a) to (d) and only where these purposes cannot be achieved by other means which are economically and technologically practicable and do not present a hazard to the health of the consumer:
  - (a) to preserve the nutritional quality of the food; an intentional reduction in the nutritional quality of a food would be justified in the circumstances dealt with in sub-paragraph (b) and also in other circumstances where the food does not constitute a significant item in a normal diet;
  - (b) to provide necessary ingredients or constituents for foods manufactured for groups of consumers having special dietary needs;
  - (c) to enhance the keeping quality or stability of a food or to improve its organoleptic properties, provided that this does not so change the nature, substance or quality of the food as to deceive the consumer;
  - (d) to provide aids in manufacture, processing, preparation, treatment, packing, transport or storage of food; provided that the additive is not used to disguise the effects of the use of faulty raw materials or of undesirable (including unhygienic) practices or techniques during the course of any of these activities,
6. Approval or temporary approval for the inclusion of a food additive in an advisory list or in a food standard should:
  - (a) as far as possible be limited to specific foods for specific purposes and under specific conditions;
  - (b) be at the lowest level of use necessary to achieve the desired effect;
  - (c) as far as possible take into account of any Acceptable Daily Intake, or equivalent assessment, established for the food additives and of the probable daily intake of it from all sources. Where the food additive is to be used in foods eaten by special groups of consumers, account should be taken of the probable daily intake of the food additive by consumers in those groups.

WORKING PRIORITIES FOR THE JOINT FAO/WHO EXPERT COMMITTEE ON FOOD  
ADDITIVES

LIST A

Flavouring substances

Allura Red A.C  
Smoke and condensed smoke  
Sulphur dioxide  
Polyglycerol polyricinoleate  
Modified starches  
Potassium tartrate (\*)  
L-Glutamic acid (\*)  
Monoammonium L-glutamate(\*)  
Monopotassium L-glutamate (\*)  
Calcium L-glutamate  
L-Arginine L-glutamate  
L-Lysine L-glutamate  
Calcium 5'-guanylate  
Disodium 5'—guanylate  
Calcium 5'-inosinate  
Disodium 5'-inosinate  
Calcium 5'-ribonucleotide  
Sodium 5'-ri"bonucleotide  
Ferrous gluconate (\*)  
Calcium lactate (\*)  
Potassium chloride (\*)  
Potassium citrate (\*)  
L-Ascorbic acid  
Pimaricin Asbestos

(\*) Specifications only.

LIST B

Perlite

Xanthan gum  
Orange GGN  
Ponceau 6R  
Azo rubine  
Flour-treatment agents  
Carrier solvents  
Dioctyl sodium sulphosuccinate  
Monosodium L-aspartate

LIST C

Extraction  
solvents  
Gum karaya  
Gum tragacanth  
Carob bean gum  
Oat gum

APPENDIX VISPECIFICATION FOR FOOD GRADE SALT

Salt intended for nutrition purposes is supplied at many levels of quality, which shall all conform with the following requirements:

- (1) Sodium chloride; not less than 99.6% on a dry basis
- (2) Water; not more than [5%]
- (3) The following free-flowing agents may be used at a level not exceeding 2% on a dry basis, singly or in combination:

- (a) colloidal silicic acid
- (b) calcium silicate
- (c) magnesium silicate
- (d) sodium and potassium silicoaluminate
- (e) calcium phosphate tribasic
- (f) calcium carbonate
- (g) magnesium carbonate
- (h) magnesium oxide
- (i) calcium stearate

4. The content of potassium ferrocyanide and sodium ferrocyanide shall not exceed [10 mg/kg]

5 The following contaminants shall not exceed the maximum level indicated:

- |                        |                            |
|------------------------|----------------------------|
| (a) Arsenic:           | not more than 3 mg/kg      |
| (b) Lead               | not more than 0.01 mg/kg   |
| (c) Mercury            | not more than [0.01] mg/kg |
| (d) Total heavy metals | not more than 5 mg/kg      |
| (e) Nitrates           | not more than ? mg/kg      |
| (f) Nitrites           | not more than ? mg/kg      |

6. Salt shall not contain any harmful substances or pathogenic microorganisms.