

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
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WORLD HEALTH
ORGANIZATION

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

14th Session

REPORT OF THE ELEVENTH SESSION OF THE
CODEX COMMITTEE ON FATS AND OILS

London, 23-27 June 1980

INTRODUCTION

1. The Codex Committee on Fats and Oils held its Eleventh Session in London from 23 to 27 June 1980 under the Chairmanship of Mr. A.W. Hubbard of the United Kingdom. The session was opened by Mr. G.P. Jupe, Under-Secretary of the Ministry of Agriculture, Fisheries and Food, responsible for work on food standards, who welcomed participants on behalf of the Government of the United Kingdom.
2. The session was attended by representatives of 30 countries and observers from 13 countries and international organizations. The list of participants including officers from FAO and WHO and the Committee Secretariat is contained in Appendix 1 to this Report.

ADOPTION OF THE AGENDA

3. The Committee adopted the provisional agenda CX/FO 80/1 with an amendment proposed by the delegation of the United States that Agenda Items 7 and 8 should be considered together. The Chairman proposed that a Working Group should be set up to consider Agenda Item 10 (Review of Methods of Analysis). This proposal received general support and it was agreed that a Working Group consisting of representatives from Canada, France, Greece, Ireland, the Netherlands, Spain, United Kingdom, USA, IUPAC, ISO, 100C and FOSFA, would deliberate and report its findings under Agenda Item 10 (see paras 57-60).

MATTERS OF INTEREST ARISING FROM SESSIONS OF THE CODEX
ALIMENTARIUS COMMISSION AND OTHER CODEX COMMITTEES

4. The Committee had before it documents CX/FO 80/2, 80/2-Add. 1, 80/2-Add.2. It was reported that the Commission at its 13th Session had confirmed that the economic impact of any standard being developed could be considered at all stages of its development. In addition, the Commission had also agreed that, the nutritional aspects relating to standards should be considered for appropriate nutritionally important products. The Commission had noted a large number of amendments to the provisions for food additives in the standards for fats and oils submitted at Step 8 and had recognised that some countries had difficulties in accepting all the provisions. The Commission had concluded, however, that since the standards covered products of world-wide economic and nutritional importance, it would agree to adopting them. It had been pointed out that when examining these standards with a view to accepting them,

governments would be in a position to indicate specified deviations. The Commission had also accepted the wording of the "carry-over" principle for inclusion in Codex Standards. The Committee noted that the Committee on Food Additives had requested that provisions for food additives should indicate a maximum level where an ADI existed.

5. The Commission had agreed to seek the views of Commodity Committees on the Draft Guidelines on the Labelling on Non-Retail Containers prepared by the Codex Committee on Food Labelling. The Committee then considered CX/FO 80/2-Add.2 which contained the Draft Guidelines. The delegation of the Netherlands stated that the status of these guidelines was not clear and since they were to be circulated to Governments for comment, it was desirable for the Committee's comments to be brief and restrict their considerations to the need for such Guidelines. This view was supported by the delegations of the United Kingdom and United States. The FAO Secretariat noted the Guidelines were not being developed within the Codex "Step" procedure and were due to be further discussed at the next meeting of the Codex Committee on Food Labelling with the view to finalizing them. However, the Commission had felt that Commodity Committees should be able to comment directly on the scope of the guidelines. In addition there was a need for a consistent approach to labelling of all commodities. The delegation of Belgium observed that the guidelines at present did not indicate the scope or the size of container to which the guidelines might be applicable. The delegation of Switzerland supported by the observer from the International Organization of Consumers Unions (IOCU) supported the development of guidelines for non-retail containers since it was not always possible to predict the end use of a consignment of fat or oil once it had left the place of manufacture although very large bulk freight containers may require less strict labelling requirements. However, the Chairman pointed out the exemption clause (Section 5.9) in the Guidelines. In conclusion the Committee felt that there might be a need for guidelines on the labelling of large containers for retail and catering uses. The Committee did not wish to make any comments on the detail in the guidelines at this stage.

6. The Commission also had given the Committee permission to proceed with the amendment to the Recommended International Standard for Olive Oils (CAC/RS 33-1970). The delegation of the United Kingdom proposed that the draft amendment in CX/FO 80/2-Add.1 be accepted. This was agreed and the Chairman proposed that the amendment (see Appendix II). be circulated at Step 3 and, if no adverse comments were received then the Secretariat should prepare a paper concerning the advancement of the amendment for the next session of the Commission. This was agreed.

7. The FAO Secretariat informed the Committee that the Commission at its 13th Session had decided to request Codex Committees to include into their Agendas an item concerning the review of acceptances. The Committee was further informed that a summary of acceptance notifications from Governments was published periodically, the latest issue being CAC/Acceptances Rev.1 and ALINORMS 79/5 and 79/38. In addition, other notifications had been received from two countries. The Committee noted that specified deviations had been indicated in relation to the food additive provisions contained in Codex Standards for Fats and Oils. The FAO Secretariat suggested that in view of the above the Committee might wish to reconsider its approach to the provisions for food additives at a future session.

8. The Committee was also informed of the Commission's view that it was important to obtain more information from Governments as to whether they would permit the free distribution of foodstuffs complying with Codex Standards even if the relevant standard had not been accepted by that country. In this context, the FAO Secretariat had been

requested to revise the wording on " non-acceptance" for the next session of the Committee on General Principles. It was stated that the adoption of Codex Standards depended largely on the extent of food law in individual countries and that there might be different problems in countries with well developed food legislation as compared to others which had not yet established an extensive food legislation. It was suggested that this question might also be considered at the next session of the Codex Committee on General Principles.

CONSIDERATION OF DRAFT STANDARDS AT STEP 7 FOR

- (a) "X" Restricted Range low fat spreads (39% - 41% fat).
- (b) Low fat spreads (35% - 45% fat).
- (c) Fat spreads/Spreadable Table Fats (35% - 70% fat).

9. The Committee had before it documents CX/FO 80/3, CX/FO 80/3-Add.1 and Conference Room Documents Nos 1 and 4. Separate comments from Denmark were also circulated. Discussion of the proposals began with an attempt to decide what level of fats should be covered. It emerged that the delegations of Austria, Federal Republic of Germany, Netherlands, Portugal, Spain and Switzerland were in favour of Appendix 1 of CX/FO 80/3 which set out a standard for low fat spreads (39-41% fat). The delegation of France was in favour of a wider range of 35-41%; whereas the delegation of Yugoslavia suggested that a standard for a fat range of 35-55% would be appropriate. Australia, Finland, Japan, New Zealand, Sweden and IOCU were all in favour of Appendix III, a standard for fat spreads/spreadable table fats with a fat content of between 35-70% fat. The delegation of the United States supported the elaboration of a standard on the basis of Appendix III to CX/FO 80/3, but expressed the view that the definition of the range should not be too rigid since it was not possible to be sure of the optimum composition of the product as the fat content could range from 70% to perhaps as low as 20% fat.

10. The delegation of the Netherlands suggested that it might be possible to have two products in one standard (i.e. put Appendix I and III together). Various ways of doing this were discussed. It became clear, however, that the consensus opinion was that there should be a standard for low fat spread with a restricted fat range of 39-41% as there was a well defined product on the market fitting this description. Although the Committee was aware of other products with a wider fat content, it was clear that there was little information about these (e.g. international trade) and in the circumstances it was decided that it would be better to proceed first with a standard for the low fat products (39-41%) at Step 7. The delegations of the United States and New Zealand entered a reservation because they considered that there should be a broader standard to take account of technological developments since there were already products of a fat content of 60% downwards available in their countries.

11. The delegation of the United Kingdom suggested that it might be possible to have a maximum fat content of up to say 41% and no minimum limit. If this was done it would allow for products with less than 39% fat. There was, however, no support for this suggested line of action.

12. The delegation of Denmark suggested that the name of the product might be "minarine 39-41% fat". There was some discussion on this and the term was found to be generally acceptable, but some delegations namely the Federal Republic of Germany, Ireland and France wanted a provision to allow countries to use designations in relation to the laws and customs of the country concerned. The delegation of the United States, however, mentioned that the question of designation had been raised at the Codex

Committee on General Principles and it would be necessary for this Committee to take account of those discussions. The Chairman explained that the use of the designation in relation to the laws and customs of the country was not a favoured procedure for Codex Standards but, if it was not possible to proceed on any other basis, then it could be used. However, it was necessary to put a footnote in the standard so that governments' would have to specify their position on this particular requirement. The FAO representative informed the Committee that the General Standard for the Labelling of Prepackaged Foods was being revised and the use of coined or fanciful names in connection with prepackaged food was under discussion in the Labelling Committee; but no final decisions had yet been made.

13. The delegation of the Netherlands suggested it might be possible to accept "minarine" or another name used in the laws or customs of the country. The delegation of the United Kingdom raised the point that, if a coined name was to be used, it would need to be accompanied by a descriptive term. The delegation of Ireland felt that if the Committee decided on "minarine" or "halverine" this could be considered as the name.

14. It was however finally agreed that the term "minarine" should be used and would replace "X" in the standard in Appendix 1 of CX/FO 80/3.

15. The delegation of Belgium put forward the view that the description "low fat spread" would describe the end use of the product under discussion. It was used for spreading, and was unsuitable for cooking purposes particularly frying as it led to spluttering at high temperatures. This suggestion was supported by France. The delegation of the United Kingdom felt that if it was considered necessary to refer to any restriction on the use of the product it could be provided for in the labelling. The delegation of Belgium thought the restriction could be included in the scope, description or title. Netherlands and Switzerland expressed the view that the present product definition was quite acceptable, if there was a need for special directions this could be dealt with on the label.

16. In connection with Section 3.1.1 the delegation of the Federal Republic of Germany suggested another phrase to replace "milk products". This was "dried milk, dried skimmed milk, whey and whey powder". This amendment was not supported by the Committee.

17. The delegation of Egypt informed the Committee in respect of Section 3.1.2 that it restricted the use of lard and did not allow the use of rapeseed oil, but agreed to specifying this as a deviation when accepting the standard.

18. The delegation of the Netherlands pointed out that Section 3.4.6 specified "suitable milk products". The idea was to allow for whey and whey products therefore it might be more suitable to include a term "whey and whey powder". It was agreed that as milk products appeared in Section 3.1.1 and the Codex definition would cover whey and whey powders that Section 3.4.6 could be deleted.

19. The Chairman explained to the Committee that the Secretariat had received several comments on the provisions for food additives in the standard and that these would be included in the final report (see Appendix IV). There then followed a detailed discussion on the provisions for food additives including the acceptance that sorbic acid (Section 4.5.1) should be permitted at levels not exceeding 2000 mg/kg and that the sodium, potassium and calcium salts of lactic and citric acids should be permitted. (Sections 4.8.1 and 4.8.2).

20. The Committee considered the technological justification for the use of all additives listed. The delegation of the Netherlands suggested that reference to the standard for margarine should be sufficient since many of the additives were the same and only justification for the use of Thickening Agents (Section 4.4) would be required. The Chairman reminded the Committee of the difference in philosophy towards the use of additives in the various member countries and that technological justification was influenced by this philosophy. Justification for the use of the various classes of additives (e.g. emulsifiers) could be prepared, but assessing the relative importance of each additive would be extremely time-consuming and difficult. In any event, the Committee was not in a position at this Session to prepare a detailed technological justification for the need for the additives listed. The Committee agreed with the proposal by the delegation of Belgium that the standard should go forward to the Codex Committee on Food Additives and any points raised by this Committee should be considered by an Informal Working Group and a paper prepared to prior the next meeting of the Fats and Oils Committee. The Working Group would prepare the paper by correspondence (see also para. 24).

21. The delegation of the United Kingdom pointed out that their national legislation permitted lead and arsenic to be present in these products at levels not exceeding 1.0 mg/kg. However, there was no support in the Committee to increase the maximum permitted levels of these contaminants in the standard.

22. The Committee made no comments on the provisions in the Hygiene and Packaging provisions (Sections 6 and 7 respectively). The Committee discussed whether the fat content of the product should be declared. The delegation of Norway observed that a product with a specific name such as "minarine" might not require a specific declaration of fat content. However, the Committee agreed that a section requiring the declaration of fat content in close proximity to the name should be added to the labelling requirements at Section 8.1.2. It was agreed to delete the requirement to describe the product as "Restricted Range Low Fat Spread" in Section 8.1. The delegation of the Federal Republic of Germany informed the Committee that "minarine" type products could not be used for frying and that any restrictions to their use should be indicated on the label. This was agreed by the Committee.

23. The delegation of New Zealand proposed that reference to the presence of milk and/or dairy products should be contained only in the list of ingredients. The delegation of the United Kingdom proposed that the words "unless more than 50% of the fat content is butterfat" be deleted from Section 8.7.1. Both proposals were accepted by the Committee.

STATUS OF DRAFT STANDARD FOR MINARINE

24. The Committee agreed that the Secretariat would write to Canada, United States, Netherlands and Federal Republic of Germany concerning the technological justification for the food additives when the views of the Codex Committee on Food Additives were known. The Committee advanced the Draft Standard for Minarine to Step 8 of the Procedure. The standard, as amended, is contained in Appendix III to this report.

25. The Committee then considered fat spreads other than minarine. Some countries wished to hold the standard as set out at Appendix III to CX/FO 80/3 at Step 6 but others wished to advance an amended standard. The FAO Secretariat clarified the position regarding the standard. The reduced fat margarine (39-41%) standard as such had been adopted by the Commission at Step 5 and was therefore now being discussed at Step 7. Appendix III had also been considered to be at Step 7 since the 39-41% range had been

included in it with the intent to have only one standard covering the whole range of fat spreads. If minarine (39-41%) Was to be taken out of that standard in Appendix III, the standard covering all other fat spreads would have to be considered at Step 3.

26. The Chairman suggested that the way to amend Appendix III to cover products other than minarine might be to put in an exclusion clause under "scope". The delegation; of France and the Netherlands were in favour of putting the fat content in square brackets and suggested a lower limit of 42% m/m. The delegations of the United States and New Zealand suggested an upper limit Of 60% m/m, but no lower limit. The delegation of the United Kingdom proposed a lower limit of 35% m/m but no upper limit. Belgium thought that there must be a minimum level otherwise products with very low fat levels (5-10% fat) such as certain types of cheese would be included and such products were outside the scope of this standard. The Committee agreed that governments would be requested to comment on the fat content and placed the relevant provision in square brackets.

STATUS OF THE STANDARD

27. The delegation of the United States suggested that if Appendix III as amended, was moved to Step 5 of the Procedure then it could be considered by the Commission at its meeting in Autumn 1981. The amendments should include the scope section to exclude minarine, and modified Sections 2.2.1, 2.2.2 and 3.2 and this and other provisions would need to be further discussed by this Committee. The name of the food would be in square brackets. The Committee agreed to advance the Proposed Draft Standard for Fat Spreads/Spreadable Table Fats, as amended in Appendix V to this report, to Step 5 of the Procedure.

CONSIDERATION OF PROPOSALS FOR A STANDARD FOR VEGETABLE GHEE AND A STANDARD FOR MIXED VEGETABLE AND ANIMAL GHEE

28. The Committee had before it working paper CX/FO 80/4 and a conference room document prepared by Denmark on this matter. The Chairman explained that the standard was at a very early stage of development and that it was necessary at this meeting to indicate those areas of the proposed draft standard which required comments from member governments.

FIRST DRAFT OF A STANDARD FOR VEGETABLE GHEE

29. There was a detailed discussion on the title and scope of this standard. The delegation of India stated that "vegetable ghee" was not a suitable description since the product could be confused with bovine ghee and the terms "hydrogenated vegetable oil" or "vanaspati" were the only ones permitted in his country. However it was pointed out that the former terms were not acceptable since blends of hydrogenated and non-hydrogenated products might be used for these products. The Committee accepted the proposal of the delegation of the United States that governments be asked to consider the title of the standard and that the term vegetable ghee in square brackets should be used. The delegate of India also informed the Committee that in his country blending was considered a form of adulteration. The Committee decided to place the term "blending" in square brackets.

30. The Chairman expressed the view that these products were characterised by a granular texture and a statement on these lines should be incorporated in the standard. However, the observer of FOSFA indicated that this was not always the case. The Committee agreed that a revised product definition (Section 2.2.1) should be in the draft standard.

31. The Committee then proceeded to examine the remaining sections of the draft proposal. The delegation of the Netherlands proposed that the colour range was too restrictive and that dark yellow vegetable ghees were sold. This was accepted by the Committee. The delegation of India explained that the melting point should be 35-37° C since higher melting fats were only partly assimilated by the body. The delegation of Japan expressed the view that slip point was an inaccurate means of determining the melting point of these products and suggested that the Wiley Softening Point as described in the AOCS Analytical Methods (ref: AOCS Method Cc 2-38) should be used. The Committee accepted the Chariman's proposal that governments should be asked for their comments on the need for a quality characteristic concerning melting point and asked how it should be expressed (e.g. slip point or Wiley point).

STATUS OF THE STANDARD

32. The Committee agreed that the revised text of the Proposed Draft Standard for [Vegetable Ghee] should be advanced to Step 3 of the Procedure. The standard, as amended, is contained in Appendix VI to the report.

FIRST DRAFT OF A STANDARD FOR MIXED VEGETABLE AND ANIMAL GHEE

33. The delegation of Egypt explained that ghee products containing tallow were manufactured in Egypt. It was agreed that the title of the standard should be amended to read [Mixed Animal and Vegetable Ghee] although this would be open for Government comments. Otherwise, the Committee agreed that the amendments made to the previous standard should be incorporated in this standard. The delegation of Egypt explained that, in Egypt, if products contained butter as an ingredient they were required to contain not less than 10% butter fat in order to improve their nutritional qualities.

34. The Committee decided to place the provision on packaging in square brackets and to request from Governments additional information as to whether these products were sold to the consumer in pre-packaged units only or also loose from larger containers.

STATUS OF THE STANDARD

35. The Committee agreed that the Proposed Draft Standard for [Mixed Animal and Vegetable Ghees], as amended, should be advanced to Step 3 of the Procedure. The above Standard is contained in Appendix VII to this report.

36. The Committee agreed that a standard for products containing solely animal fats should not be developed at this stage although they requested any information including their importance in world trade which would demonstrate that these products were important food items.

PROPOSALS FOR AMENDING THE RECOMMENDED INTERNATIONAL STANDARD FOR EDIBLE RAPESEED OIL- CAC/RS 24-1969

37. The Committee considered working paper CX/FO 80/5 which discussed the approaches to amending the Standard for Rapeseed Oil following the adoption by the Commission of a Standard for Low Erucic Acid Rapeseed Oil (CAC/RS 123-1979).

38. The delegation of the United States supported by the delegations from Canada, Japan, Sweden, Italy, Federal Republic of Germany, Spain, France and Denmark and Australia's written comments, suggested that the standard should be revised to cover all rapeseed oils, other than those containing less than 5% erucic acid. The observer from the EEC pointed out that such a standard was compatible with the EEC Directive under

the condition that the erucic acid content of oils for direct human consumption did not exceed 5%.

39. The Committee then proceeded to study the essential composition values given in column II of Appendix 2 to CX/FO 80/5 for rapeseed oils having an erucic acid content of more than 5%. The Committee agreed that the square brackets round the values for relative density, refractive index and iodine value should be removed and governments asked to comment on all essential composition values when the standard as amended was circulated for comment. The delegation of the Federal Republic of Germany asked for the range of values for C20:2 fatty acid to be included in the fatty acid section.

40. The Committee then studied Appendix 1 to CX/FO 80/5. The delegations of the Netherlands and United Kingdom suggested that the 2nd paragraph on labelling requiring to show the erucic acid content should be removed. This was agreed by the Committee.

STATUS OF THE STANDARD

41. The Committee agreed that the revised text of the Recommended International Standard for Rapeseed Oil, as amended, be advanced to Step 3 of the Procedure. In particular, governments would be asked for information on the fatty acid ranges and other essential composition values. The Government would also be asked whether there was a need for a declaration of the percentage of erucic acid. The revised text is contained in Appendix VIII to this report.

COMMERCIAL PROCESSING OF FATS AND OILS AND PROCESSING AIDS

42. The Committee had before it working papers CX/FO 80/6, CX/FO 80/7 and Conference Room Document No. 6. The Committee had agreed earlier that these two items on the provisional agenda CX/FO 80/1 should be taken together.

43. At the request of the Chairman, the delegation of the United States explained that they had prepared Conference Room Document No. 6 to establish the reasons for the use of processing aids and to demonstrate that they were an integral part of the processing of fats and oils and were not intended as food additives. It was essential that both a code for processing of fats and oils and the list of processing aids should not be mandatory since otherwise technological development would be inhibited. It was suggested that this Conference Room Document could form the basis of a section in the introduction to the proposed compendium (see paras 67-70).

44. The delegation of the Federal Republic of Germany explained that it did not wish for any mandatory standards related to processing to be developed but would accept a non-mandatory code. The delegation of the Netherlands supported this view and expressed the concern that any code developed would be of little practical use. The Chairman suggested that development of a non-mandatory code might demonstrate that the Committee was taking a responsible attitude to the processing of fats and oils. At the same time, he was aware that data concerning the residual levels of processing aids was sometimes lacking and not always precise but the data available indicated very low levels and any toxicological problems were likely to be de minimus. The WHO Secretariat stated that JECFA would not be in a position to examine quickly the potential problems of any residual levels of all processing aids but could examine individual substances if the need arose.

45. The delegation of Belgium stated that the list of processing aids prepared by this Committee at its 10th session had already been examined by the Codex Committee on

Food Additives although it had been elaborated only as a working paper. The Committee was also reminded that the Commission had agreed with the view of both the Codex Committee on Food Additives and the Codex Committee on Food Labelling that processing aids should not be declared on the label in the list of ingredients (ALINORM 79/38 para. 158). The Chairman, expressed the view which was supported by the FAO Secretariat, that the Committee on Fats and Oils had always considered processing aids not to be food additives.

46. The Committee then proceeded to study the list of processing aids at Appendix 1 to CX/FO 80/7. It was agreed, at the suggestion of the WHO Secretariat, that the finalized list should indicate those aids for which a JECFA specification existed. The list would also contain information on the typical residual levels found in commercial practice although it was acknowledged that analysis of these residual levels was often difficult.

47. Several processing aids (e.g. polyglycerol esters) were capable of being used both as food additives and as processing aids which were subsequently removed by further processing from the fat or oil. However the Committee agreed that any substance which was used as a processing aid should be included in the list irrespective of whether it could also be used as a food additive. The Committee agreed that when a substance remained in the fat or oil at levels capable of performing a technological function, then it should be considered as a food additive.

48. The Chairman informed the delegation of Italy as a result of a query about trichloroethylene that it was not included in the list of solvents since JECFA had not endorsed its use. The Chairman advised the delegation of the Netherlands, as a result of a query, that diatomaceous earths were distinct from absorbant clays and both should be included in the list. The observer from FEDIOL confirmed that ion exchange resins were used to remove free fatty acid from fats and oils.

49. There was a detailed discussion on the typical residual levels of nickel in oils and it was agreed that levels up to 1.0 ppm could occur but more usually were between 0.2 and 0.5 ppm. The delegation of Italy confirmed that oxalic acid was used in the degumming stage in refining olive-residue oil but was removed in the subsequent processing. The delegation of Belgium noted that the typical residual levels shown in the list for dimethylpolysiloxane were high enough to perform a technological function in the refined oil and as such it would require it to be listed as a food additive. The delegation of the United States requested that the antioxidants shown in Conference Room Document No. 6 be added to the list of processing aids.

50. The WHO representative explained the problem JECFA had faced in evaluating several of the solvents contained in the list of processing aids. Most of the toxicological data related to occupational exposure and although inhalation studies were available, these were of little use for establishing ADIs for the ingestion of these solvents. There were no long term oral studies for solvents with food-grade specifications. However, JECFA had developed tentative specifications for most of the solvents. The delegations of the Federal Republic of Germany, Italy and France expressed reservations concerning the use of 2-nitropropane since in that country it was banned on grounds of carcinogenicity. The Committee noted that the solvent had been considered at the 23rd session of JECFA. A temporary specification had been prepared although no ADI had been established. The delegation of the United States pointed out that in the final product 2-nitropropane was not detectable when analysed by a method sensitive to 0.02 mg/kg.

51. The delegation of the Netherlands noted that no residue levels were given for the substances used as crystal modifiers. Further it stated that to the best of their knowledge these substances were not removed hence to be considered as food additives. However, the delegation of the United States confirmed that they were also used as aids during processing but were also largely removed during the residual levels given in Conference Room Document 6 were about one tenth of their functional level as a food additive.

52. The Committee agreed that the list of processing aids should appear as an Appendix to the report (see Appendix IX). The Committee agreed that further information on the amended list in Appendix IX would be requested from governments; the list was an open list and was advisory. It represented the first attempt by the Committee to gather information on this subject. The list would also contain for each processing aid, summary of data received from Governments on typical residual levels currently found in commercial practice, the ADI established by JECFA, reference to any specification developed by JECFA and any additional information on its function.

53. The Committee also agreed that, the residual levels given in Conference Room Document No. 6 were to be included in the list of processing aids. The list would also indicate the country of origin of the data with an explanation that the different residual levels may reflect the problems in analysing for low levels of processing aids or variations in commercial processing conditions or both factors.

IDENTITY CHARACTERISTICS BASED ON STEROL RANGES

54. The Committee had before it Working Paper CX/FO 80/8 and Conference Room Document No. 2. The Chairman in introducing this subject said that it was still very early days to be thinking about drawing up sterol ranges for all oils. There would be further developments in analytical methodology (e.g. HPLC or capillary column GLC).

55. The delegation of Spain, referring to paragraphs 4(b)(ii)(c) and (d) of CX/FO 80/8 described studies on olive oil which had shown that actual levels and relative levels of campesterol and stigmaterol were subject to variation depending on regional and growing conditions. This showed that sterol ranges should be treated with caution. Portugal supported the Spanish view. In contrast Italy had found that stigmaterol in olive oil was always less than campesterol.

56. The Committee was in principle in favour of the immediate introduction of mandatory standards relating to sterol ranges provided proper technology was utilized and the GLC method as approved by IUPAC was a reliable procedure for the sterol determination, but agreed that due to the lack of sufficient data as far as sterol ranges were concerned it was impossible to proceed any further until more information was available. It was left that this subject would be considered at a future meeting and governments were requested to keep the Committee informed of any future developments.

REVIEW OF METHODS OF ANALYSIS IN STANDARDS AND DRAFT STANDARDS

57. The Committee had before it Working Paper CX/FO 80/9 which had been examined in detail by the Working Group set up by the Committee (see para. 3).

58. Dr. Williams, the observer for IUPAC, presented the report of the Working Group which is at Appendix X to this Report. The Working Group had reviewed the methods of analysis and had recommended the endorsement of the methods listed in their Report. A majority of the methods recommended were updated versions of earlier methods with

editorial amendments and no substantial changes to the basic method. The remaining methods had not been amended and the Working Group recommended that they be retained. The Working Group also recommended that ISO methods, where available, should be endorsed as alternatives to the IUPAC methods and that the Codex Committee on Methods of Analysis and Sampling should adopt atomic absorption spectrographic methods for the estimation of trace elements as these were preferred to the existing colourimetric methods.

59. The Working Group also experienced difficulty in allocating the methods into the groups (types I-IV) defined by the Codex Methods of Analysis Committee. Several of the methods (e.g. method for unsaponifiable matter) could be considered to fall into more than one of the groups, (i.e. groups I or II). The Working Group also felt that the groups of methods as defined in Appendix V of ALINORM 79/23 did not reflect current industrial needs for routine and reference methods and suggested that this Committee might ask the Codex Methods of Analysis Committee for further advice.

60. The Committee agreed that the Report of the Working Group should form an Appendix to this Report and that the Codex Methods of Analysis Committee should be asked for their advice on the classification of methods of analysis into groups (types I-IV). It was also agreed that it was desirable to proceed rapidly with the editorial amendments of the existing list of methods of analysis and that the Executive Committee would be informed accordingly. Governments would be asked for their comments on the list of revised methods, as contained in Appendix X to this report.

COMPATIBILITY BETWEEN PROPOSED FATTY ACID RANGES AND IODINE VALUES

61. The Committee had before it Working Paper CX/FO 80/10. The Chairman summing up said that at its 10th Session this Committee when discussing detailed amendments to the draft standards had recognised that there could be possible difficulties in respect of the compatibility between the revised GLC fatty acid ranges and iodine values in Codex Standards. However, it was clear from the information received by the Secretariat which was based on an extensive comparison of values that the fatty acid ranges given in Appendix XI to ALINORM 79/17 were compatible with the ranges for iodine values, refractive index and saponification value given in the recommended international standard for edible fats and oils. The Committee agreed that no further action was necessary, and expressed their appreciation for the contribution made by Drs. Tallent, Williams and Wolff.

RECOMMENDED INTERNATIONAL STANDARD FOR OLIVE OIL: TOCOPHEROLS AND FATTY ACIDS AT POSITION 2

62. The Committee considered Working Paper CX/FO 80/11. The IOOC had reported that the complete results from a collaborative study on the two methods of analysis for tocopherols being tested were not available at the present time. The Committee agreed to the Chairman's proposal that the Committee should await these results before recommending any change in methods of analysis for tocopherols in the Recommended International Standard for Olive Oil.

63. The observer from IOOC had nothing to add to the information contained in CX/FO 80/11 and confirmed that the limits for fatty acids in position 2 had been provisionally accepted by the IOOC. The delegation of Spain, supported by the delegation of Portugal, said that these limits were based on extensive data provided by their countries using established analytical method. The data referred to above had so

far been published in Portugal only and not yet in Spain. The delegation of Italy also confirmed the validity of these levels. The delegation of Greece explained that they did not agree with the proposed limits but accepted that this Committee was not in a position to comment and suggested that the problem should be first resolved by the IOOC. The Chairman proposed that since the Committee had not seen any of the data on which the limits were based, it was unable to comment on their validity. Therefore, the Committee would have to wait until the IOOC had given full approval to these limits before they could be considered for incorporation into the Codex Standard for Olive Oil. The Committee agreed with this proposal.

DETERMINATION OF ERYTHRODIOL CONTENT OF EDIBLE GRAPESEED OIL

64. The Committee had before it Working Paper CX/FO 80/12. The Chairman said that the Recommended International Standard for Grapeseed Oil contained a limit for erythrodiol content of not less than 2% m/m of the total sterol content, but a method of analysis was yet to be developed. However, the matter had been drawn to the attention of IUPAC who had set up a Working Party to finalize and test an existing method of analysis.

65. The delegate of Spain (Chairman of the IUPAC Working Party) informed the Committee on the progress of this investigation. He reported that the research work was nearly finished and it was the aim to have a draft method of analysis prepared for a meeting of the Group in Paris at the beginning of September. It would then be necessary to organize a collaborative study for next year. At the next session of this Committee it should be possible to examine the results of the work.

66. The Chairman said that the Committee appreciated the work which was being carried out by IUPAC and looked forward to examining the results in due course.

OTHER BUSINESS

COMPENDIUM OF CODEX STANDARDS FOR EDIBLE FATS AND OILS

67. The Secretariat had produced a Working Paper, Conference Room Document No. 3 (to be considered under this item) which dealt with the above compendium. The background to this document was that the FAO Secretariat had told the Committee at the 10th session that it was intended to publish all the Fats and Oils Standards in one book as this might be a solution to accommodate the GLC ranges. Furthermore it was suggested and endorsed at that meeting that this would facilitate the inclusion of a section giving the Committee's decisions and principles relative to the actual standards. The Secretariat was given the task of extracting the Committee's decisions on other matters to go in the Principles section (ALINORM 79/17, para. 53). The Chairman in introducing this item said that the Secretariat had produced a possible format for the compendium and the views of the Committee would be appreciated.

68. The representative of FAO felt that the concept of the compendium for standards needed some explanation. A booklet of Standards had already been produced for Codex Standards for Foods for Infants and Children and was being prepared for Codex Standards for Fruit Juices; and the one for fats and oils might follow a similar format. This would be an introduction followed by texts of Standards and methods of analysis. GLC ranges could also form part of the booklet and there would be a provision in each standard referring the reader to the GLC section. The booklet would possibly be of the loose leaf variety and there would be space to add supplements, revisions or additions to the compendium. Any amendments would be issued after their approval by the Commission and could be easily added to the compendium.

69. The delegation of Switzerland was pleased to note that all the standards would be in one book; but it would be important to ensure (hat it contained all the amendments agreed by the Commission. Belgium wanted to have point 6 of Conference Room Document No. 3 (Processing) put in square brackets. In addition the Appendix could include a section dealing with the nutritional value of fats and oils (e.g. reference to FAO/WHO Nutrition Paper No. 3).

70. The Committee agreed that the draft format for the compendium as contained in Appendix XI, should be circulated to governments for comment.

CLARITY OF OILS

71. The delegation of Yugoslavia informed the Committee that there was a need for a method of analysis for the clarity or translucence of sunflower seed oil. The observer from IUPAC told the Committee that the International Association of Seed Crushers had developed a method which would be published shortly.

SCOPE OF THE STANDARDS

72. The Committee considered Conference Room Document No.5 which had been prepared by the delegation of the United States. The delegation explained that a majority of oils in world trade required further processing but the identity characteristics in the existing individual Codex Standards were generally applicable to these crude oils. However it would be necessary to amend the Scope Section of the Standards since the present wording restricted them to edible oil which did not require further processing.

73. The Chairman suggested that the proposed amendment was a logical extension of the work of the Committee in applying the standards to the raw materials. The delegation of France, supported by the delegation of Spain, pointed out that certain identity characteristics would vary with the purity of the crude oil and that only the GLC ranges for fatty acids would not be affected. There then followed a detailed discussion on the merits of extending the standards.

74. The delegation of the Netherlands did not support any change to the Scope Section but proposed that if the standard had to be changed, the addition of a new section concerning Raw Materials to the Codex Standards for individual oils should be considered. The delegation of Ireland also did not support any change to the Scope Section. The delegation of the United States proposed that the Scope Section could be amended to read "This standard applies to edible ... oil but, except for the GLC ranges for fatty acid composition, does not apply to ... oil which must be subjected to further processing in order to render it suitable for human consumption".

75. The Chairman stated that the changes being discussed were fundamental to the standards and in principle seemed to be generally supported. However, the Committee was clearly divided on how these changes should be incorporated into the Codex Standards. The Committee agreed that governments should be asked to comment on the amendment and in particular on the proposals contained in the preceding paragraph.

FUTURE WORK AND DATE AND PLACE OF THE NEXT SESSION

76. The Chairman said that the Committee would need to meet again to consider the outstanding issues. These were as follows:-

1. Other Fat Spreads.
2. [Vegetable Ghee] and [Mixed Animal and Vegetable Ghee].

3. Amendment to Codex Standard for Rapeseed Oil (CAC/RS 24-1969).
4. (a) Revision of Methods of Analysis
(b) Elaboration of new methods (including erythrodiol, cloudiness in sunflower oil).
5. Fats and Oils Compendium.
6. Review of Scope of Standards.
7. Sterol Ranges.
8. Processing Aids.
9. Date Marking and labelling of Non-retail Containers.

77. The Committee, noting that the Chairman was retiring soon, expressed its sincere thanks to him for his excellent Chairmanship and wished him and Mrs. Hubbard many happy years of retirement.

78. The next meeting of the Codex Committee on Fats and Oils would be between the 14th and 15th sessions of the Codex and probably in 1982. Governments will be informed of the date in due course.

ALINORM 81/17
APPENDIX I

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PROPOSED AMENDMENT TO RECOMMENDED INTERNATIONAL STANDARD FOR OLIVE OIL, VIRGIN AND REFINED AND FOR REFINED OLIVE-RESIDUE OIL (CAC/RS 33-1970) (at Step 3 of the Codex Procedure)¹

¹ See also para, 6 of the report.

3.1.2.12 Beta-sitosterol

Virgin Olive Oil		Not less than 93% of total sterols
Refined Olive Oil		
Refined Olive-Residue Oil		

8.20 Determination of beta-sitosterol

According to IUPAC (1979) method (IUPAC Standard Methods for the Analysis of Oils, Fats and Derivatives, 6th Edition (1979), 2.403). Only SE30 packing material should be employed.

APPENDIX III

DRAFT STANDARD FOR MINARINE
(at Step 8 of the Codex Procedure)

1. SCOPE

This standard applies to any prepackaged product for direct consumption which complies with the provisions of this standard.

2. DESCRIPTION

2.1 Product Definition

Minarine is a food in the form of a spreadable emulsion, which is mainly of the type water/oil, produced principally from Water and edible fats and oils which are not solely derived from milk, and in which the fat content is not less than 39% m/m and not more than 41% m/m.

2.2 Other Definitions

2.2.1 Edible fats and oils means foodstuffs composed of glycerides of fatty acids. They are of vegetable, animal or marine origin. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in fat or oil. Fats of animal origin must be obtained from animals in good health, and if originating from slaughtered animals such animals should have been in good health at the time of slaughter and the fats fit for human consumption as determined by a Competent authority recognized in national legislation (see Section 6).

2.2.2 Prepackaged means packaged or made up in advance, ready for retail sale in a container.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Materials

3.1.1 Water and/or milk and/or milk products.

3.1.2 Edible fats and/or oils, or mixtures of these, whether or not they have been subjected to a process of modification.

3.2 Fat Content not less than 39% m/m and not more than 41% m/m.

3.3 Water Content not less than 50% m/m, as determined by loss of mass on drying. (See Section 9.3).

3.4 Optional Ingredients

The following substances may be added:

- 3.4.1 Vitamins; Vitamin A and its esters
Vitamin D
Vitamin E and its esters
Other Vitamins

Maximum and minimum levels for Vitamins A, D and E and other Vitamins should be laid down by national legislation in accordance with the needs of each individual country including, where appropriate, the prohibition of the use of particular vitamins.

3.4.2 Egg yolk.

3.4.3 Sodium chloride.

3.4.4 Sugars ¹

¹ Sugars means any carbohydrate sweetening matter.

3.4.5 Suitable edible proteins.

3.4.6 Gelatine.

3.4.7 Natural starches.

4. FOOD ADDITIVES

4.1 Colours

	<u>Maximum level</u>
4.1.1 Beta-carotene	25 mg/kg
4.1.2 Annatto extracts	20 mg/kg (calculated as total bixin or norbixin)
4.1.3 Turmeric or curcumin*	5 mg/kg (calculated as total curcumin)

4.2 Flavours*

4.2.1 Natural flavours and flavouring substances and nature-identical flavouring substances as defined for the purpose of the Codex Alimentarius (see Codex Guide to the Safe Use of Food Additives, (CAC/FAL 5-1979))

Artificial flavouring substances as defined for the purpose of the Codex Alimentarius and included in List A (see Codex Guide to the Safe Use of Food Additives, (CAC/FAL 5-1979))

Limited by GMP

* Temporarily endorsed.

4.3 Emulsifiers

4.3.1	Lecithins	Limited by GMP
4.3.2	Mono-and diglycerides of fatty acids	Limited by GMP
4.3.3	Polyglycerol esters of fatty acids	10 g/kg individually or in combination
4.3.4	Polyglycerol esters of interesterified ricinoleic acid	
4.3.5	Esters of fatty acids with polyalcohols other than glycerol: Sorbitan monopalmitate Sorbitan monostearate Sorbitan tristearate	
	Polyoxyethylene (20) sorbitan monolaurate	
	Polyoxyethylene (20) sorbitan monopalmitate	
	Polyoxyethylene (20) sorbitan monostearate	
	Polyoxyethylene (20) sorbitan tristearate Polyoxyethylene (20) sorbitan monooleate	

4.4 Thickening Agents

4.4.1	Pectin, amidated pectin*	10 g/kg individually or in combination
4.4.2	Agar-agar	
4.4.3	Carrageenan	
4.4.4	Guar gum	
4.4.5	Locust bean gum*	
4.4.6	Tragacanth gum ¹	
4.4.7	Xanthan gum	
4.4.8	Methyl cellulose	
4.4.9	Carboxymethyl cellulose and its sodium salts	
4.4.10	Sodium, potassium, calcium and ammonium alginates	
4.4.11	Propylene glycol alginate	

¹ Endorsement postponed.

* Temporarily endorsed.

4.5 Preservatives

4.5.1	Sorbic acids and its sodium, potassium and calcium salts	2000 mg/kg
4.5.2	Benzoic acid and its sodium and potassium salts	1000 mg/kg

If used in combination, the combined use shall not exceed 2000 mg/kg of which the benzoic acid portion shall not exceed 1000 mg/kg.

4.6	<u>Antioxidants</u>	
4.6.1	Propyl, octyl, and dodecyl gallates*	100 mg/kg of the fat content individually or in combination
4.6.2	Butylated hydroxytoluene (BHT)*	
4.6.3	Butylated hydroxyanisole (BHA)*	
4.6.4	Ascorbyl palmitate/stearate	500 mg/kg of the fat content
4.6.5	L-ascorbic acid	300 mg/kg of the fat content
4.6.6	Natural and synthetic tocopherols	Limited by GMP

4.7 Antioxidant Synergist

Calcium disodium salt of EDTA	100 mg/kg
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4.8 pH correcting Agents

4.8.1	Lactic Acid	and their calcium, potassium and sodium salts	Limited by GMP
4.8.2	Citric acid		
4.8.3	Sodium hydrogen carbonate		
4.8.4	Sodium carbonate		
4.8.5	Sodium hydroxide		
4.8.6	Sodium monophosphates (orthophosphates)		

5. CONTAMINANTS

5.1	Iron (Fe)	1.5 mg/kg
5.2	Copper (Cu)	0. mg/kg
5.3	Lead (Pb)*	0.1 mg/kg
5.4	Arsenic (As)	0.1 mg/kg

* Temporarily endorsed.

6. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the Codex Alimentarius Commission (Ref. No, GAC/RGP 1-1969) and the Recommended International Code of Hygienic Practice for Processed Meat Products (Ref, No. CAC/RCP 13-1976).

7. PACKAGING

Minarine when sold by retail, shall be prepackaged and may be sold in a pack of any shape.

8. LABELLING

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

8.1 Name of the Food

8.1.1 The product shall be designated "minarine" except that alternative designations to minarine may be used in accordance with the law and customs of the country in which the product is sold and in a manner so as not to mislead the consumer. All products designated minarine or a national alternative shall conform to this standard.

8.1.2 The name of the product shall be closely followed by a declaration of the fat content.

8.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2(c) of the General Standard for the Labelling of Prepackaged Foods.

8.3 Net Contents

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

8.4 Name and Address

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

8.5 Country of Origin

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

8.6 Exemptions

The information specified under 8.2, 8.3, 8.4 and 8.5 need only be given on the outer cartons containing minarine packed in units less than 50 g.

8.7 Labelling Prohibitions

8.7.1 No reference shall be made to the presence in minarine of milk and/or dairy products except in a complete list of ingredients.

8.7.2 No reference shall be made other than in a complete list of ingredients to the presence of any vitamin in minarine unless the name and quantity of the vitamin is stated on the label.

8.8 Lot Identification

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

8.9 Date Marking and Storage Instructions

8.9.1 The date of minimum durability of the product shall be declared in clear.

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

8.10 Instructions for Use

Any restrictions on the use of the product shall be clearly indicated.

9. METHODS OF ANALYSIS (Subject to further consideration)

9.1 Estimation of Milk Fat Content - CAC/RM 15-1969

9.2 Determination of Fat Content - CAC/RM 16-1969

9.3 Determination of Loss of Mass on Drying - CAC/RM 17-1969.

9.4 Determination of Vitamin A Content - According to AOAC, 1965, 39.001-39.007
Chemical Methods, Vitamin A in Margarine.

Results are expressed as microgrammes retinol (Vitamin A alcohol) per kg.

9.5 Determination of Vitamin D Content - According to AOAC, 1965, 39.116-39.129.

Vitamin D

Results are expressed as IU Vitamin D per kg.

9.6 Determination of Vitamin E - CAC/RM 18-1969 .

9.7 Determination of Sodium Chloride Content - CAC/RM 19-1969

9.8 Determination of Iron*-CAC/RM 14-1969

9.9 Determination of Copper* - According to AOAC, 1965, 24.023-24.028, IUPAC Carbamate Method.

Results are expressed as mg copper/kg.

9.10 Determination of Lead* -According to AOAC, 1965, 24.053 (and 24.008, 24.009,24.043j, 24.046, 24.047 and 24.048), dithizone determination procedure.

9.11 Determination of Arsenic-According to AOAC, 1965, 24.011-24.014, 24.016-24.017, 24.006-24.008, silver diethyldithiocarbamate method.

Results are expressed as mg arsenic/kg.

9.12 Determination of Additives -

(To be developed)

10. METHODS OF SAMPLING

(To be developed).

* Might be replaced by Atomic Absorption Spectrophotometry in the future.

Summary of Comments on Food Additives (Section 4) of Draft Standard for
Minarine (See para. 19 of the Report)

Para	Additive	Country	Comment
4.1.1	Beta-carotene	Denmark	Max usage level 10 mg/kg
	"	FRG	Increase max level to 40 mg/kg
4.1.2	Annatto, extracts	Denmark	Max level 10 mg/kg
4.1.3	Turmeric	Denmark	Max level 10 mg/kg
4.1.3	Turmeric	Germany	Delete from list
4.2.1	Flavours	Germany	The use of artificial flavours should not be permitted (defined in CAC/FAL 5-1979)
4.3.3	Polyglycerol esters of fatty acids	Denmark	Max level 2 g/kg
		FRG	Delete from list
4.3.4	Polyglycerol esters of Interesterified ricinoleic acid	Denmark	" " "
		FRG	" " "
4.3.5		Japan	" " "
		Denmark	Max level 2 g/kg
4.3.6	Mono and diglycerides esters of acetic, lactic, tartaric mono acetyl tartaric diacetyl tartaric acids	Germany	Add to the list
4.4.4	Guar gum	Denmark	Special dispensation for specific uses
4.4.3	Carrageenan	Denmark	
4.4.5	Locust bean gum		Delete all these Thickening Agents from the list
4.4.11	Propylene glycol alginate		
4.4.10	Alginates	Japan	Delete from list
4.5.1	Sorbic acid	Japan	" " "
		Denmark	Max level 1200 mg/kg
4.5.2	Benzoic acid	Denmark	Delete from list
		FRG	" " "
		Japan	" " "
4.6.1	Gallates	Denmark	Delete from list
		FRG	" " "
		Japan	" " "
4.6.2	BHT	Denmark	Delete from list
		Germany	" " "
4.6.3	BHA	Denmark	" " "
		Germany	Delete from list
4.6.4	Ascorbyl palmitate	Denmark	Delete from list
		Japan	" " "
4.6.5	L-Ascorbic acid	Denmark	" " "
4.6.6	Tocopherol	Denmark	Max level 1 g/kg
4.7	EDTA salts	FRG	Delete from list

4.8.7	Acetic acid and its sodium salt	Japan New Zealand Japan	" " " " " " Add to list. Max level 500 mg/kg
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DRAFT STANDARD FOR /FAT SPREADS/SPREADABLE TABLE FATS/
(at Step 5 of the Codex Procedure)

1. SCOPE

This standard applies to any prepackaged product for direct consumption which complies with the provisions of this standard, and which is intended to be used as an alternative table fat to margarine or butter but excludes "minarine" (39-41%), as defined in the Draft Standard for minarine (ALINORM 81/17, Appendix III).

2. DESCRIPTION

2.1 Product Definition

[/"Fat Spread/Spreadable Table Fat"/] is a food in the form of a spreadable emulsion, which is mainly of the type water/oil, produced principally from water and edible fats and oils which are not solely derived from milk, and in which the fat content is not less than [35% m/m and not more than 70% m/m].

2.2 Other Definitions

2.2.1 Edible fats and oils means foodstuffs composed of glycerides of fatty acids. They are of vegetable, animal or marine origin. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in fat or oil. Fats of animal origin must be obtained from animals in good health, and if originating from slaughtered animals such animals should have been in good health at the time of slaughter and the fats fit for human consumption as determined by a competent authority recognised in national legislation (see Section 6).

2.2.2 Prepackaged means packaged or made up in advance, ready for retail sale in a container.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Materials

3.1.1 Water and/or milk and/or milk products.

3.1.2 Edible fats and/or oils, or mixtures of these, whether or not they have been subjected to a process of modification.

3.2 Fat content not less than [35% m/m and not more than 70% m/m] and the total fat and water content should be not less than 85%.

3.3 Optional Ingredients

The following substances may be added:

- 3.3.1 Vitamins; Vitamin A and its esters
Vitamin D
Vitamin E and its esters
Other Vitamins

Maximum and minimum levels for Vitamins A, D and E and other Vitamins should be laid down by national legislation in accordance with the needs of each individual country including, where appropriate, the prohibition of the use of particular vitamins.

3.3.2 Egg yolk.

3.3.3 Sodium chloride.

3.3.4 Sugars ¹

¹ Sugars means any carbohydrate sweetening matter.

3.3.5 Suitable edible proteins.

3.3.6 Gelatine.

3.3.7 Natural starches.

4. FOOD ADDITIVES

4.1 Colours

Maximum level

4.1.1 Beta-carotene

25 mg/kg

4.1.2 Annatto extracts

20 mg/kg (calculated as total bixin or norbixin)

4.1.3 Turmeric or curcumin*

5 mg/kg (calculated as total curcumin)

4.2 Flavours*

* Temporarily endorsed.

4.2.1 Natural flavours and flavouring substances and nature-identical flavouring substances as defined for the purpose of the Codex Alimentarius (see Codex Guide to the Safe Use of Food Additives, (CAC/FAL 5-1979)).

Limited by GMP

Artificial flavouring substances as defined for the purpose of the Codex Alimentarius and included in List A (see Codex Guide to the Safe Use of Food Additives, (CAC/FAL 5-1979)).

4.3 Emulsifiers

4.3.1 Lecithins

Limited by GMP

4.3.2 Mono- and diglycerides of fatty acids

Limited by GMP

4.3.3 Polyglycerol esters of fatty acids

4.3.4 Polyglycerol esters of interesterified ricinoleic acid

4.3.5 Esters of fatty acids with polyalcohols other than glycerol:

Sorbitan monopalmitate

Sorbitan monostearate

Sorbitan tristearate

Polyoxyethylene (20) sorbitan monolaurate

Polyoxyethylene (20) sorbitan monopalmitate

Polyoxyethylene (20) sorbitan monostearate

Polyoxyethylene (20) sorbitan tristearate

Polyoxyethylene (20) sorbitan monooleate

10 g/kg individually or in combination

4.4	<u>Thickening Agents</u>	
4.4.1	Pectin, amidated pectin *	10 g/kg individually or in combination
4.4.2	Agar-agar	
4.4.3	Carrageenan	
4.4.4	Guar gum	
4.4.5	Locust bean gum *	
4.4.6	Tragacanth gum ¹	
4.4.7	Xanthan gum	
4.4.8	Methyl cellulose	
4.4.9	Carboxymethyl cellulose and its sodium salts	
4.4.10	Sodium, potassium, calcium and ammonium alginates	
4.4.11	Propylene glycol alginate	
4.5	<u>Preservatives</u>	
4.5.1	Sorbic acids and its sodium, potassium and calcium salts	2000 mg/kg
4.5.2	Benzoic acid and its sodium and potassium salts	1000 mg/kg
4.5.3	If used in combination, the combined use shall not exceed 2000 mg/kg of which the benzoic acid portion shall not exceed 1000 mg/kg	
¹	Endorsement postponed.	
*	Temporarily endorsed.	
4.6	<u>Antioxidants</u>	
4.6.1	Propyl, octyl, and dodecyl gallates*	100 mg/kg of the fat content individually or in combination
4.6.2	Butylated hydroxytoluene (BHT)*	
4.6.3	Butylated hydroxyanisole (BHA)*	
4.6.4	Ascorbyl palmitate/stearate	500 mg/kg of the fat content
4.6.5	L-ascorbic acid	300 mg/kg of the fat content
4.6.6	Natural and synthetic tocopherols	Limited by GMP
4.7	<u>Antioxidant Synergist</u>	
	Calcium disodium salt of EDTA	100 mg/kg
4.8	<u>pH Correcting Agents</u>	
4.8.1	Lactic acid	and their calcium, potassium and sodium salts
4.8.2	Citric acid	
4.8.3	Sodium hydrogen carbonate	Limited by GMP
4.8.4	Sodium carbonate	
4.8.5	Sodium hydroxide	Limited by GMP

4.8.6	Sodium monophosphates (orthophosphates)	
5.	<u>CONTAMINANTS</u>	
5.1	Iron (Fe)	1.5 mg/kg
5.2	Copper (Cu)	0.1 mg/kg
5.3	Lead (Pb)*	0.1 mg/kg
5.4	Arsenic (As)	0.1 mg/kg

* Temporarily endorsed.

6. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 1-1969) and the Recommended International Code of Hygienic Practice for Processed Meat Products (Ref. No. CAC/RCP 13-1976).

7. PACKAGING

Fat Spreads/Spreadable Table Fats when sold by retail, shall be pre-packaged and may be sold in a pack of any shape.

8. LABELLING

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

8.1 Name of the Food

The product shall be designated ["Fat Spreads/Spreadable Table Fats"] and all products designated ["Fat Spreads/Spreadable Table Fats"] shall conform to this standard.

8.1.1 The name of the product shall be closely followed by a declaration of the fat content.

8.2 List of Ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with sub-section 3.2(c) of the General Standard for the Labelling of Prepackaged Foods.

8.3 Net Contents

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

8.4 Name and Address

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

8.5 Country of Origin

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

8.6 Exemptions

The information specified under 8.2, 8.3, 8.4 and 8.5 need only be given on outer cartons containing [“Fat Spreads/Spreadable Table Fats”] packed in units less than 50 g.

8.7 Labelling Prohibitions

8.7.1 No reference shall be made to the presence of milk and/or dairy products except in a complete list of ingredients unless more than 50% of the fat content is butter fat.

8.7.2 No reference shall be made other than in a complete list of ingredients to the presence of any vitamin in [“Fat Spreads/Spreadable Table Fats”] unless the name and quantity of the vitamin is stated on the label.

8.7.3 The term "Low Fat" may not be used when the fat content is above 45% m/m.

8.8 Lot Identification

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

8.9 Date Marking and Storage Instructions

8.9.1 The date of minimum durability of the product shall be declared in clear.

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

8.10 Instructions for Use

Any restrictions on the use of the product shall be clearly indicated.

9. METHODS OF ANALYSIS (Subject to further consideration)

As in Appendix I.

10. METHODS OF SAMPLING

(To be developed).

ALINORM 81/17

APPENDIX VI

PROPOSED DRAFT STANDARD FOR [VEGETABLE GHEE]

(At Step 3 of the procedure)

1. SCOPE

This standard applies to any product described as [VEGETABLE GHEE] (synonym: vanaspati).

2. DESCRIPTION

2.1 Product Definitions

2.1.1 [Vegetable ghee] is a semi-solid product which consists of an edible vegetable fat or a [blend] of edible vegetable oils and fats.

2.2 Other Definitions

2.2.1 Edible vegetable fats and oils means foodstuffs composed mainly of glycerides of fatty acids. They may contain small amounts of other lipids such as phosphatides and of

unsaponifiable constituents and of free fatty acids naturally present in fat or oil. They are obtained only from vegetable sources and include fats and oils that have been subjected to processes of modification including hydrogenation.

2.2.2 Pre-packaged means packed or made up in advance, ready for retail sale in a container.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Materials

3.1.1 Edible fats and/or oils of vegetable origin or mixtures of these whether or not they have been subjected to a process of modification. [The laws and customs of the country in which the product is sold may require the presence or absence of specific vegetable oils or fats.]

3.2 Fat Content

3.2.1 Not less than [99.5 per cent m/m].

3.3 Quality Characteristics

3.3.1 Colour: Creamy white to yellow.

3.3.2 Odour and Taste: Characteristic and free from foreign odour and tastes.

3.3.3 Texture: Grainy with oil droplets in suspension.

3.3.4 Acid Value: Not more than [0.6 mg KOH/g].

3.3.5 Peroxide Value: Not more than 10 milliequivalents of peroxide oxygen/kg.

3.3.6 [Slip Point: Between 36-41°C].

3.4 Identity Characteristics

[To be developed].

3.5 Additions

The following substances may be added to [Vegetable Ghee].

3.5.1 Vitamins: Vitamin A and its esters
Vitamin D
Vitamin E and its esters
Other Vitamins

Maximum and minimum levels for Vitamins A, D and E and other Vitamins should be laid down by national legislation in accordance with the needs of each individual country including, where appropriate, the prohibition of the use of particular Vitamins.

4. FOOD ADDITIVES

4.1 Colours

The following colours are permitted for the purpose of restoring natural colour lost in processing or for the purpose of standardizing colour, as long as the added colour does not deceive or mislead the consumer by concealing damage or inferiority or by making the product appear to be of greater than actual value:

	<u>Maximum Level</u>
4.1.1 Beta-carotene	Not limited
4.1.2 Annatto*	Not limited
4.1.3 Curcumin*	Not limited
4.1.4 Canthaxanthine	Not limited
4.1.5 Beta-apo-8'-carotenal	Not limited
4.1.6 Methyl and ethyl esters of beta-apo-8'-carotenoic acid	Not limited

4.2 Flavours

Natural flavours and their identical synthetic equivalents, except those which are known to represent a toxic hazard, and other synthetic flavours approved by the Codex Alimentarius Commission are permitted for the purpose of restoring natural flavour lost in processing or for the purpose of standardizing flavour, as long as the added flavour does not deceive or mislead the consumer by concealing damage or inferiority or by making the product appear to be of greater than actual value*.

4.3 Antioxidants

	<u>Maximum Level</u>
4.3.1 Propyl, octyl, and dodecyl gallates*	100 mg/kg individually or in combination
4.3.2 Butylated hydroxytoluene (BHT)* Butylated hydroxyanisole (BHA)* Tertiary butyl hydroquinone (TBHQ) [4-Hydroxymethyl-2,6-diterbutylphenol]	200 mg/kg individually or in combination
4.3.3 Any combination of gallates with BHA or BHT, and/or TBHQ*	200 mg/kg, but gallates not to exceed 100 mg/kg
4.3.4 Natural and synthetic tocopherols	Not limited
4.3.5 Ascorbyl palmitate	500 mg/kg individually or in combination
4.3.6 Ascorbyl stearate	
4.3.7 Dilauryl thiodipropionate	200 mg/kg

4.4 Antioxidant synergists

4.4.1 Citric acid and its sodium salt	Not limited
4.4.2 Isopropyl citrate mixture	100 mg/kg individually or in combination
4.4.3 Phosphoric acid	

4.5 Anti-foaming agent

Dimethyl polysiloxane (dimethyl silicone)
singly or in combination with silicon dioxide

10 mg/kg

4.6 Crystallization inhibitor

Oxystearin

1 250 mg/kg

* Temporarily endorsed.

5. CONTAMINANTS

	<u>Maximum Level</u>
5.1 Matter volatile at 105°C	0.2% m/m
5.2 Insoluble impurities	0.05% m/m
5.3 Soap content	0.005% m/m

5.4	Iron (Fe)	1.5 mg/kg
5.5	Copper (Cu)	0.1 mg/kg
5.6	Lead (Pb)*	0.1 mg/kg
5.7	Arsenic (As)	0.1 mg/kg

* Temporarily endorsed.

6. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 1-1969).

7. PACKAGING

[Vegetable ghee] when sold by retail shall be pre-packaged in a rigid container and may be sold in a pack of any shape.

8. LABELLING

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

8.1 Name of the Food

The products shall be designated [Vegetable ghee] (synonym: vanaspati) except that alternative designations may be used in accordance with the laws and customs of the country in which the product is sold and in a manner so as to not mislead the consumer. All products so designated shall conform to this standard.

8.2 List of Ingredients

8.2.1 A complete list of ingredients shall be declared in descending order of proportion by weight.

8.2.2 A specific name shall be used for ingredients except that class titles may be used in accordance with sub-section 3.2(c)(i) and (ii) of the Codex General Standard for the Labelling of Pre-packaged Foods.

8.3 Net Contents

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

8.4 Name and Address

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

8.5 Country of Origin

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

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

8.6 Lot Identification

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

8.7 Date Marking and Storage Instructions

8.7.1 The date of minimum durability of the product shall be declared in clear.

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

8.8 Bulk Packs

(To be elaborated).

8.9 Labelling Prohibitions

8.9.1 No reference shall be made to the presence of milk fat or butter in [vegetable ghee] except in a complete list of ingredients.

8.9.2 No reference shall be made, other than in a complete list of ingredients, to the presence of any vitamin in [vegetable ghee] unless the name and the quantity of the vitamin is stated on the label.

9. METHODS OF ANALYSIS AND SAMPLING

[To be developed when the format of the draft has been established].

ALINORM 81/17
APPENDIX VII

PROPOSED DRAFT STANDARD FOR /MIXED ANIMAL AND VEGETABLE GHEE/

(At Step 3 of the Procedure)

1. SCOPE

This standard applies to any products described as [MIXED ANIMAL AND VEGETABLE GHEE]

2. DESCRIPTION

2.1 Product Definitions

2.1.1 [Mixed animal and vegetable ghee] is a semi-solid product which consists of a mixture of vegetable oils and fats with edible animal fats.

2.2 Other Definitions

2.2.1 Edible fats and oils means foodstuffs composed of glycerides of fatty acids. They are of vegetable, animal or marine animal origin. They may contain small amounts of other lipids such as phosphatides, of unsaponifiable constituents and of free fatty acids naturally present in fat or oil. Fats of animal origin must be obtained from animals in good health, and if originating from slaughtered animals such animals should have been in good health at the time of slaughter and the fats fit for human consumption as determined by a competent authority recognised in national legislation (see Section 6). The edible fats and oils may have been subjected to processes of modification including hydrogenation.

2.2.2 Pre-packaged means packed or made up in advance, ready for retail sale in a container.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Raw Materials

3.1.1 Compound Animal and Vegetable Fats

Edible fats and/or oils of vegetable and animal origin, whether or not they have been subjected to a process of modification. Those of animal origin may include Ghee prepared from milk of bovine origin and/or Butteroil, Anhydrous Butteroil, Anhydrous Milk Fat complying with Standard_ No. A2 in the Code of Principles Concerning Milk and Milk Products (CAC/M1-1973). [The laws and customs of the country in which the product is sold may require the presence or absence of specific oils or fats].

3.2 Fat Content

3.2.1 Total Fat Content: Not less than [99.5 per cent m/m].

3.2.2 Fat derived from milk: If present, shall be not less than 10 per cent m/m.

3.3 Quality Characteristics

3.3.1 Colour: Creamy white to yellow.

3.3.2 Odour and Taste: Characteristic and free from foreign odour and tastes.

3.3.3 Texture: Grainy with oil droplets in suspension.

3.3.4 Acid Value: Not more than 0.8 mg KOH/g.

3.3.5 Peroxide Value: Not more than 10 milliequivalents of peroxide oxygen/kg.

3.3.6 [Slip Point: Between 36-41°C].

3.4 Identity Characteristics

[To be developed].

3.5 Additions

The following substances may be added to [Mixed Animal and Vegetable Ghee].

- 3.5.1 Vitamins: Vitamin A and its esters
Vitamin D
Vitamin E and its esters
Other Vitamins

Maximum and minimum levels for Vitamins A, D and E and other Vitamins should be laid down by national legislation in accordance with the needs of each individual country including, where appropriate, the prohibition of the use of particular Vitamins.

4. FOOD ADDITIVES

4.1 Colours

The following colours are permitted for the purpose of restoring natural colour lost in processing or for the purpose of standardizing colour, as long as the added colour does not deceive or mislead the consumer by concealing damage or inferiority or by making the product appear to be of greater than actual value:

	<u>Maximum Level</u>
4.1.1 Beta-carotene	Not limited
4.1.2 Annatto*	Not limited
4.1.3 Curcumin*	Not limited
4.1.4 Canthaxanthine	Not limited
4.1.5 Beta-apo-8'-carotenal	Not limited
4.1.6 Methyl and ethyl esters of beta-apo-8'-carotenoic acid	Not limited

4.2 Flavours

Natural flavours and their identical synthetic equivalents, except those which are known to represent a toxic hazard, and other synthetic flavours approved by the Codex Alimentarius Commission are permitted for the purpose of restoring natural flavour lost in processing or for the purpose of standardizing flavour, as long as the added flavour does not deceive or mislead the consumer by concealing damage or inferiority or by making the product appear to be of greater than actual value*.

4.3 Antioxidants

	<u>Maximum Level</u>
4.3.1 Propyl, octyl, and dodecyl gallates	100 mg/kg individually or in combination
4.3.2 Butylated hydroxytoluene (BHT)* Butylated hydroxyanisole (BHA)* Tertiary butyl hydroquinone (TBHQ) [4-Hydroxymethyl-2,6-diterbutylphenol]	200 mg/kg individually or in combination
4.3.3 Any combination of gallates with BHA or BHT, and/or TBHQ*	200 mg/kg, but gallates not to exceed 100 mg/kg
4.3.4 Natural and synthetic tocopherols	Not limited
4.3.5 Ascorbyl palmitate	500 mg/kg individually or in combination
4.3.6 Ascorbyl stearate	
4.3.7 Dilauryl thiodipropionate	200 mg/kg

4.4 Antioxidant synergists

4.4.1 Citric acid and its sodium salt	Not limited
4.4.2 Isopropyl citrate mixture	100 mg/kg individually 5 or in combination
4.4.3 Phosphoric acid	

4.5 Anti-foaming agent

Dimethyl polysiloxane (dimethyl silicone) singly or in combination with silicon dioxide	10 mg/kg
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4.6 Crystallization inhibitor

Oxystearin	1 250 mg/kg
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5. CONTAMINANTS

5.1 Matter volatile at 105°C	0.2% m/m
5.2 Insoluble impurities	0.05% m/m
5.3 Soap content	0.005% m/m
5.4 Iron (Fe)	1.5 mg/kg
5.5 Copper (Cu)	0.1 mg/kg

5.6	Lead (Pb)*	0.1 mg/kg
5.7	Arsenic (As)	0.1 mg/kg

* Temporarily endorsed.

6. HYGIENE

It is recommended that the product covered by the provisions of this standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the Codex Alimentarius Commission (Ref. No. CAC/RCP 1-1969) and the Recommended International Code of Hygienic Practice for Processed Meat Products (CAC/RCP 19-1976).

7. PACKAGING

[Mixed Animal and Vegetable Ghee] when sold by retail shall be prepackaged in a rigid container and may be sold in a pack of any shape.

8. LABELLING

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

8.1 Name of the Food

The products shall be designated [Mixed Animal and Vegetable Ghee] except that alternative designations may be used in accordance with the laws and customs of the country in which the product is sold and in a manner so as to not mislead the consumer. All products so designated shall conform to this standard.

8.2 List of Ingredients

8.2.1 A complete list of ingredients shall be declared in descending order of proportion by weight together with a declaration of the minimum percentage by weight of animal fat in the product. The percentage of fat derived from milk may also be declared.

8.2.2 A specific name shall be used for ingredients except that class titles may be used in accordance with sub-section 3.2(c)(i) and (ii) of the Codex General Standard for the Labelling of Prepackaged Foods.

8.3 Net Contents

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

8.4 Name and Address

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

8.5 Country of Origin

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

8.5.2 When the product undergoes processing in a second country Which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling.

8.6 Lot Identification

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

8.7 Date Marking and Storage Instructions

8.7.1 The date of minimum durability of the product shall be declared in clear.

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

8.8 Bulk Packs

(To be elaborated).

8.9 Labelling Prohibitions

8.9.1 No references shall be made to the presence of milk fat or butter in [Mixed Animal and Vegetable Ghee] except in a complete list of ingredients.

8.9.2 No reference shall be made, other than in a complete list of ingredients, to the presence of any vitamin in [Mixed Animal and Vegetable Ghee] unless the name and the quantity of the vitamin is stated on the label.

9. METHODS OF ANALYSIS AND SAMPLING

[To be developed when the format of the draft has been established].

ALINORM 81/17

APPENDIX VIII

PROPOSED AMENDMENTS TO THE RECOMMENDED INTERNATIONAL STANDARD FOR EDIBLE RAPESEED OIL (CAC/RS 24-1969)

(At Step 3 of the Procedure)

1. SCOPE

*This standard applies to Edible Rapeseed Oil but does not apply to edible low erucic acid rapeseed oil as defined in CAC/RS 123-1979 nor to rapeseed oil which must be subjected to further processing in order to render it suitable for human consumption,

Additional text underlined.

2. DESCRIPTION

As in CAC/RS 24-1969.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Identity Characteristics

3.1.1	Relative Density (20°C/water at 20°C)	0.910 -0.920
3.1.2	Refractive Index (nD 40°C)	1.465 -1.469
3.1.3	Saponification Value (mg KOH/g oil)	168 - 1
3.1.4	Iodine Value (Wijs)	94 - 120
3.1.5	Crismer Value	71 - 85
3.1.6	Unsaponifiable Matter	not more than 20 g/kg
3.1.7	Brassicasterol	not less than 5% of total sterols
3.1.8	Erucic Acid	more than 5% (m/m) of the component fatty acids

3.1.9 GLC Ranges of Fatty Acid Composition (%)

C 14	0.5
C 14:0	0-2.5
C 16:0	1.5-6.4
C 16:1	0-3.3
C 18:0	0.5-3.1
C 18:1	3-45
C 18:2	11-29
C 18:3	5-16
C 20:0	3.3
C 20:1	3-15
C 20:2	[0.2-2.4]
C 22:0	2.1
C 22:1	5-60
C 22:2	0.1-3.4
C 24:0	2
C 24:1	3.4

3.2 Quality Characteristics

As in CAC/RS 24-1969.

4. FOOD ADDITIVES

As in Recommended International Standard for Edible Low Erucic Acid Rapeseed Oil (ALINORM 79/17, Appendix III).

5. CONTAMINANTS As in CAC/RS 24-1969

6. HYGIENE As in CAC/RS 24-1969

7. LABELLING

As in CAC/RS 24-1969, together with Sections on "Lot Identification", "Date Marking" and "Bulk Packs" as in the Recommended International Standard for Edible Low Erucic Acid Rapeseed Oil (ALINORM 79/17, Appendix III).

8. METHODS OF ANALYSIS AND SAMPLING

As in the Recommended International Standard for Edible Low Erucic Acid Rapeseed Oil (ALINORM 79/17, Appendix III).

PROCESSING AIDS USED IN REFINING AND PROCESSING EDIBLE FATS AND OILS

[Secretariat Note:

This Appendix was prepared by the Secretariat, after the Session using guidelines suggested by the Committee. The Secretariat had to make a number of arbitrary decisions concerning the classification of processing aids into Categories I to III. For example, substances with residual levels <1 ppm were allocated to Category I except for catalysts. Governments will be asked for comments.]

INTRODUCTION

1. The Committee on Fats and Oils discussed processing aids at its Eleventh Session (see paras 42-53 of the Report) and agreed that a list of processing aids should appear as an Appendix to the report.
2. The list would contain the following information for each processing aid:
 - (a) The main technological use and any additional information.
 - (b) Any information received from Governments on typical residue levels currently found in commercial practice.
 - (c) The toxicological evaluation by JECFA. Not all substances have been considered although several are pending evaluation.
 - (d) The reference to any specification developed by JECFA.
 - (e) The classification of the processing aids into the following categories:
 - Category I - No detectable residual levels.
 - Category II - Residual levels not considered to require toxicological evaluation.
 - Category III - Residual levels that may require toxicological evaluation.
3. The Committee noted the following points regarding the list:
 - (a) It represented the first attempt by the Committee to gather information on this subject.
 - (b) It was an open list and was purely advisory.
 - (c) Substances which were capable of being used both as food additives and as processing aids were included in the list. However, when used as processing aids, the substances were largely removed from the fat or oil by subsequent processing and the residual levels served no technological function.
 - (d) The wide range of residual levels given for the processing aids might reflect both the analytical problems in measuring the low residual amounts and the technology of the process in which the aid was used.
4. The Committee also noted that the Commission concurred with the view of the Committee on Food Labelling that processing aids need not be declared on the label in the list of ingredients.

PROPOSED LIST OF PROCESSING AIDS FOR EDIBLE FATS AND OILS

Notes

<u>Column Heading</u>	<u>Comments</u>
1. Additional information	Contains additional information on the use and nature of the processing aid.
2. Residual Level	The typical residual levels of the processing aid as notified by 3 Government are given. See "Introduction" for further explanation.
3. Origin of Data	
4. ADI	
	The toxicological status as determined by JECFA is given. Where possible, the Acceptable Daily Intake in mg/kg body weight (ADI) as given in the "Guide to the Safe Use of Food Additives" 2nd Series (CAC/FAL 5-1,979) is listed. Other abbreviations used are: NS-ADI "not specified" by JECFA NS (GMP)-ADI not specified, and to be used in accordance with GMP. The formation of toxic interaction products should be avoided and minimum residual levels should be achieved. NC-Not specifically cleared by JECFA NE-Not considered by JECFA but evaluation pending. T-Temporary.
5. Spec.	The reference to the specification or tentative specification developed by JECFA is given. The references are as follows:- 1. Specifications for the identity and purity of some extraction solvents and certain other substances; WHO/Food Add/70.40 FAO Nutrition Meetings Report Series No. 48B. 2. Specifications for identity and purity of Food Colours, Flavouring Agents and Other Food Additives. FAO Food and Nutrition Paper 12. 3. Specifications resulting from the twenty-first Report of the Joint FAO/WHO Expert Committee on Food Additives; FAO Nutrition Meetings Rep. Series No. 57. 4. Specifications for the identity and purity of Certain Food Additives: FAO Food and Nutrition Series 7B: WHO Food Additive Series No. 11. 5. Specifications for the identity and purity-thickening agents, anticaking agents, antimicrobials, antioxidants, emulsifiers; FAO Food and Nutrition Paper No. 4. 6. Specifications for the identity and purity of Food Additives, Vol. I Antimicrobial Preservatives and Antioxidants; FAO, Rome 1962. 7. Specifications for the identity and purity of Certain Food Additives; FAO Nutrition Meetings Report Series No. 55B; WHO Food Additive Series No. 9. 8. Food Additive Specifications established by JECFA and issued by the Secretariat of the Codex Alimentarius Commission to Codex Contact Points in 1967. 9. Specifications for identity and purity-food colours, enzyme preparations and other food additives; FAO Food and Nutrition

Paper No. 7.

10. Draft Standard for Food Grade Salt at Appendix III, ALINORM 79/12.

11. Toxicological Evaluation of Certain Food Additives; FAO Food and Nutrition Series No. 1A; WHO Food Additive Series No. 10.

12. Specifications for the identity and purity of some Food Colours Emulsifiers, Stabilizers, Anti-Caking Agents and Certain Other Food Additives; WHO/Food Add/70.37; FAO Nutrition Meetings Report Series No. 46B.

13. Codex Specification: ALINORM 76/41;

A. PROCESSING SOLVENTS

	Additional Information	Residual Level (mg/kg)	Origin of data	ADI	Spec.	Category
Propane		<1	USA	NE	-	I
Butane		<1	USA	NE	-	I
Hexane		<5.0 detectable <1.0	Netherlands, Norway, UK USA	NS (GMP)	-	II
Heptane		<1	USA	NS (GMP)	-	I
Isopropanol		<5.0 Not detectable <1	Netherlands, UK, USA	NS(T) (GMP)	-	II
Pentane		<1	USA	NE	-	I
Methanol		<1	USA	NS (GMP)	-	I
Ethanol		<1	USA	NS	1	I
Acetone		<5.0 Not detectable <1	Netherlands, UK, USA	NS (GMP)	1	II
2-Nitropropane		<0.02	USA	NE	2(T)	I/III
Water		<500 <1000	Norway, USA	FOOD	-	-
Light petroleum (syn. petroleum ether, extraction naphtha)		Not detectable	Poland	NE	2	I
Dichloromethane		<10	USA	0-0.5 (T)	2	II

B. CLARIFYING AGENTS AND FILTRATION AIDS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Inert filtering agents		Traces <5	Norway, USA	-	-	II
Adsorbant Clays (bleaching, natural or activated earths)		Traces No visible residues <5	Norway, UK USA	NE	-	II
Adsorbant carbons	From vegetable sources only	Traces No visible residues <5	Norway UK USA	NS	3	II
Ion exchange resins		<1	USA	-	-	I

Cellulose	From wood sources only	<5	USA	NS	-	II
Diatomaceous earths		No visible residues	UK	NE	-	I

C. CRYSTAL MODIFIERS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Sodium lauryl sulphate		<1	USA	NE	-	I
Oxystearine		<125	USA	0-25	4	II
Polyglycerol esters		<100	USA	0-25	5	II
Lecithin		<250	USA	NS	5	II

D. CATALYSTS

(i) Hydrogenation

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Nickel		<1 <0.002 <0.4 <0.2 <0.5	Netherlands Norway Poland UK USA	NE	-	II
Copper		<0.1	USA	NE	-	II
Chromium		<3.0 <0.1	UK USA	NE	-	II
Manganese		<0.1	USA	NE	-	II
Molybdenum		<0.1	USA	NE	-	II
Platinum		<0.1	USA	NE	-	II
Palladium		<0.1	USA	NE	-	II
Silver		<0.1	USA	NE	-	II
Alloys of two or more of listed metals				NE	-	II
Various metal oxides		<0.1	USA	NE	-	II

(ii) Inter or Trans-Esterification

	Additional Information	Residual Level [mg/kg]	Origin of Data	ADI	Spec.	Category
Sodium metal		<50* <1	UK USA	NE	-	II
Sodium amide		<1	USA	NE	-	II
Sodium methylate		<1	USA	NE	-	II
Sodium ethylate		<1	USA	NE	-	II
Potassium ethylate		<1	USA	NE	-	II
Potassium metal		<50* <1	UK USA	NE	-	II
Potassium methylate		<1	USA	NE		II
Sodium-potassium alloy		-		NE	-	II

* Expressed as sodium oleate.

(iii) Extraction

Enzymes		-				II
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/Secretariat Note;

A list of enzymes which have been evaluated is given in CAC/FAL 5-1979. A further list of enzymes is given in Appendix VI to ALINORM 79/12-A].

E. GASES

	Additional Information	Residual Level [mg/kg]	Origin of Data	ADI	Spec.	Category
Nitrogen		Not detectable <350	Norway USA.	NE	4	II
Carbon Dioxide		<1	USA	NS	4	I
Hydrogen		<1.0 max Not detectable <1	Netherlands Norway USA	-	-	I

F. ACIDS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Citric		<10 <50 Not detectable	Netherlands Norway USA UK	NS (GMP)	6	II
Tartaric		<1	USA	0-30 for L(+)	5	I
Phosphoric		Not detectable	Norway, UK USA	0-70 (as P)	5	I
Hydrochloric		<1	USA	NS	4	I
Sulphuric		<1	USA	NE	-	I
Oxalic		<1	USA, Italy	-	-	I
Acetic		<1	USA	NS	7	I
Acetic anhydride		-	-	-	-	I

G. BASES

	Additional Information	Residual Level [mg/kg]	Origin of Data	ADI	Spec.	Category
Sodium hydroxide		Not detectable 50 max* 25 max <1	Netherlands UK Norway USA	NS	7	II
Potassium hydroxide		<1	USA	NS	7	I
Ammonium hydroxide		<1	USA	NS	8	I
Calcium hydroxide		<1	USA	NS	7	I
Magnesium hydroxide		<1	USA	NS	7	I
Sodium carbonate		50 max* <1	UK USA	NS	8	II
Sodium bicarbonate		<1	USA	NS	8	I

* Calculated as salt of oleic acid.

H. SALTS

	Additional Information	Residual Level [mg/kg]	Origin of Data	ADI	Spec.	Category
Calcium carbonate		<1	USA	NS	8	I
Magnesium carbonate		<1	USA	NS	8	I
Potassium carbonate		<1	USA	NS	8	I
Calcium chloride		<1	USA	NC	-	I
Magnesium chloride		<1	USA	NC	2(T)	I
Potassium chloride		<1	USA	NC	2	I
Sodium chloride		<1	USA	Food	10	I
Calcium citrate		<1	USA	NS	-	I
Magnesium citrate		<1	USA	NS	-	I
Potassium citrate		<1	USA	NS	2	I
Sodium citrate		<5	USA	NS	2	II
Calcium phosphates	including:	<1	USA	*		I
Magnesium phosphates	* pyro-phosphates	<1	USA		5	I
Potassium phosphates	* poly-phosphates	<1	USA		11(T)	I
Sodium phosphates	* ortho-phosphates	<5	USA		5	II
Calcium sulphate		<1	USA	NS	12	I
Magnesium sulphate		<1	USA	-	-	I
Potassium sulphate		<1	USA	NE	-	I
Sodium sulphate		<1	USA	-	-	I
Calcium tartrate		<1	USA	0-30		I
Magnesium tartrate		<1	USA	L(+) acid	5 for l(+)	I
Potassium tartrate		<1	USA	NE-DL	acids	I
Sodium tartrate		<1	USA	acid		I
Sodium silicates		<1	USA		-	I

* Pyrophosphates and polyphosphates NE
Orthophosphates 0-70 (as P).

I. ANTIFOAMING AGENTS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Dimethyl polysiloxane singly or in combination with, silicon dioxide		20	USA	0-0.5	2(T)	II

J. DETERGENTS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Sodium xylene sulphonate		1.0	UK	-	-	II

L. OTHERS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Casein	Used to break emulsions	-	-	-	-	I

K. ANTIOXIDANTS

	Additional Information	Residual Level (mg/kg)	Origin of Data	ADI	Spec.	Category
Butylated hydroxyanisole		20	USA	0-0.5 [*] (T)	5(T) 13	II
Butylated hydroxytoluene		20	USA	0-0.5 [*] (T)	5(T) 13	II
Tertiary butyl hydroquinone		20	USA	0-0.5 [*] (T)	5 13	II
Propyl gallate		20	USA	0-0.2(T)	5 13	II

* Singly or the sum of the three compounds.

REPORT OF THE WORKING GROUP ON
METHODS OF ANALYSIS

The following members constituted the Working Group on Methods of Analysis:

1. Mr. W.D. Pocklington (U.K.)
2. Mr. C.T. Ashton (ISO)
3. Dr. K.A. Williams (IUPAC/ISO)
4. Prof. J.P. Wolff (France)
5. Dr. D. Gegiou (Greece)
6. Dr. R.J. Sims (U.S.A.)
7. Mr. M. Pike (FOSFA)
8. Dr. J. Gracian Tous (Spain)
9. Dr. B.G. Mouse (Netherlands)
10. Dr. N. Rao Maturu (FAO)

Mr. Pocklington and Dr. Rao Maturu acted as Chairman and Rapporteur respectively. The Working Group has been asked to (i) review the Working document CX/FO 80/9 prepared by the Secretariat; (ii) determine the suitability of the methods suggested; (iii) suggest new methods in cases where the methods suggested have been found unsuitable; (iv) determine whether the amendments proposed are editorial or substantial; and (v) define the type of methods of analysis as given in Appendix II of ALINORM 79/23.

The Working Group while reviewing the document CX/FO 80/9:

1. Suggest inclusion of ISO method, whenever appropriate.
2. Recommend use of Absorption Spectrograph methods for estimation of trace elements. (These methods are preferred to colorimetric methods).
3. Suggest inclusion of method for determination of Nickel.
4. Feel it is not practicable to categorize the methods of analysis in many cases in to the 4 groups suggested by the Committee on Methods of Analysis. Many reference methods are empirical methods. Name of the methods recommended by the Oils and Fats Committee fall under Category IV.

The revised Table 1 is attached.

TABLE I
REVIEW OF METHODS OF ANALYSIS IN STANDARDS

No. Method Title	Reference in Standard	Standards in which cited	Method Proposed
1. Relative Density	CAC/RM 9-1969	20-31, 34 & new veg. oils	CAC/RM 9-1969
2. Relative Density	IUPAC 4th Ed. (1954) page 37	33	
3. Refractive Index	IUPAC 5th Ed. (1966) IIB2	20-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.102
4. Saponification Value	IUPAC 5th Ed. (1966) IID2	20-31, 33, 34 & new veg. oils	IUPAC 6th Ed.(1979) 2.202 Sections 1-4.6 and ISO-3657
5. Iodine value (Wijs Method)	IUPAC 5th Ed. (1966) IID 7.1, 7.3	20-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.205 & ISO-3961
6. Unsaponifiable Matter (Diethyl Ether)	IUPAC 5th Ed. (1966) IID 5.1, 5.3	20-31, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.401, 1-5
7. Unsaponifiable Matter (Light Petroleum)	IUPAC 5th Ed. (1966) IID 5.1, 5.2	33	IUPAC 5th Ed. (1966) II D 5.1, 5.2
8. Acid Value	IUPAC 5th Ed. (1966) II D, 1.2	19-31, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.201, 1-4
9. Free Acidity	IUPAC 5th Ed. (1969) IID.1.1.	33	IUPAC 6th Ed. (1979) 2.201, 1-4.6
10. Peroxide Value	IUPAC 5th Ed. (1966) IID.13	19-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.501 & ISO-3967
11. Matter Volatile at 105°C	IUPAC 5th Ed. (1966) IIC 1.1	19-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.601 & ISO R-662 (under review)
12. Insoluble Impurities	IUPAC 5th Ed. (1966) IIC2	19-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.604 & ISO 663 (under review)
13. Soap Test (Quantitative)	CAC/RM 13-1969	19-31, 34 & new veg. oils	Present Method
14. Soap Test (Qualitative)	CAC/RM 27-1970	33	Present Method
15. Iron Content	CAC/RM 14-1969	19-32, 34 & new veg. oils	Present Method
16. Copper Content	AOAC (1965) 24.023-028	19-32, 34 & new veg. oils	AOAC (1980)25.038-25043
17. Lead Content	AOAC (1965) 24.053 (24.008 .009, 043j; 046-.048)	19-32, 34 & new veg. oils	AOAC (1980) 25.095-25.100
18. Arsenic Content	AOAC (1965) 24.011-014, 016-017, 006-008	19-32, 34 & new veg. oils	AOAC (1980) 25.006-008, 012-013

19.	Prep. of fatty acid methyl esters	IUPAC 5th Ed. 4th Supp. (1976) IID19	20-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.301 & ISO 5509
20.	Analysis by GLC of fatty acid methyl esters	IUPAC 5th Ed. 4th Supp.(1976) IID25	20-31, 33, 34 & new veg. oils	IUPAC 6th Ed. (1979) 2.302 & ISO 5508
21.	Peanut Oil Test (Evers)	CAC/RM 11-1969	21	Present Method
22.	Peanut Oil Test (Renard)	AOAC 0 26.077	21	AOAC (1975) 28.100
23.	Halphen Test ¹	AOCS Cb 1-25	22	Present Method
24.	Cottonseed ¹ Oil Test	CAC/RM 23-1970	33	Present Method
25.	Crismer Value	AOCS Cb 4-35	24 & LEAR Standard	Present Method
26.	Seasame Oil ² Test (Baudoin)	CAC/RM 12-1969	26	Present Method
27.	Seasame Oil ² Test (Villa-vecchia)	AOCS Cb 2-40	26	Present Method
28.	Seasame Oil ² Test A and B	CAC/RM 25-1970	33	Present Method
29.	Titre	IUPAC 5th Ed. (1966) IIB3.1, 3.2, IIA2	28-31	IUPAC 6th Ed. (1979) 2.121

¹ In the future, may be issued as one single test.

² In the future, may be issued as one single test with preference to method CAC/RM 25-1970.

30.	Milk Fat Content ¹	CAC/RM 15-1969	32	Present Method
31.	Fat Content ²	CAC/RM 16-1969	32	Present Method
32.	Water Content	CAC/RM 17-1969	32	Present Method
33.	Vitamin A Content	AQAC (1965) 39.116-129	32	AOAC (1975) 43.001-007
34.	Vitamin D Content	AOAC (1965) 39.116-129	32	AOAC (1975) 43.166-179
35.	Vitamin E Content	CAC/RM 18-1969	32, 33	Present Method
36.	Sodium chloride content	CAC/RM 19-1969	32	Appendix IV ALINORM 79/23
37.	Bellier Index	CAC/RM 20-1969	33	Present Method
38.	Semi-siccative oil test	CAC/RM 21-1970	33	Present Method
39.	Olive residue test	CAC/RM 22-1970	33	Present Method
40.	Teaseed Oil Test	CAC/RM 24-1970	33	Present Method
41.	Specific Extinction	CAC/RM 26-1970	33	Present Method, IUPAC 2.505 and ISO 3656
42.	Fatty acids in position 2.	IUPAC 5th Ed. 4th Supp. (1976) IID27	33	IUPAC 6th Ed. (1979) 2.210
43.	Sterols	IUPAC 5th Ed. 4th Supp. (1976) IIC8	33 and LEAR Standard	IUPAC 6th Ed. (1979) 2.403

44. Allyl isothiocyanate content	CAC/RM 10-1969	34	Present Method
45. Determination of additives	To be developed	All standards	-
46. Reichert value	IUPAC 5th Ed. (1966) IID9	Coconut, palm kernel & babassu oils	IUPAC 6th Ed. (1979) 2.204 1-7, 8.1, 9, 10
47. Polenske value	IUPAC 5th Ed. (1966) IID9	Coconut, palm kernel & babassu oil	IUPAC 6th Ed. (1979) 2.204 1-7, 8.2, 9, 10
48. Erythrodiol Content	To be developed	Grapeseed oil	-

¹ Application of GLC method is being developed.

² IUPAC method is about to be published. WG recommends that this should be considered with a view to adoption in place of CAC/RM 16-1969.

COMPENDIUM OF CODEX STANDARDS FOR FATS AND OILS PROPOSED

FORMAT

(See paras 67-70)

A. INTRODUCTION

1. Description of Codex Alimentarius Commission.
2. Objectives of Codex programme - Development of Standards, Codes of Practice JECFA etc.
3. Membership of Codex Committees.
4. Responsibilities of subsidiary bodies.
5. Development of Standards - work priorities including economic
 - format
 - procedure for elaboration
 - consultation with, other Codex Committees.
6. Acceptance of standards (countries as Appendix).
7. Amendments and Procedure for Amendments.
[N.B: Section based largely on extract from Procedural Manual].

B. CODEX COMMITTEE ON FATS AND OILS

1. Terms of Reference.
2. Recommended International Standards developed - General Standards
 - Specific Standards
3. Specific Points relating to Standards
 - (a) Status of Standards (implications national and international).
 - (b) Scope of Standards - only products suitable for human consumption.
 - (c) Description - name, synonyms, botanical species etc.
 - (d) Essential Composition and Quality factors - sources of data, variation with source, plant variety, season etc.
 - (e) Food Additives - technical justification, usage levels specified toxicological evaluation, "carry-over".
 - (f) Contaminants - levels, special significance of copper and iron.
 - (g) Hygiene.
 - (h) Labelling - including retail and non-retail packs.
 - (i) Methods of Analysis - largely based on methods developed by international organizations e.g. IUPAC.
4. Amendments of Standards - need for amendments, include new varieties, review of development of methods of analysis, change in status of food additives, new composition and quality criteria.
5. Enforcement of Standards - Identification of fats and oils, GLC fatty acid ranges, USA graphical method, use of non-mandatory criteria.
6. Nutritional Value of Fats and Oils.

7. [Processing].
8. Specific Decisions of the Committee.

Appendix 1 - Information on Acceptances of Codex Standards for fats and oils.