codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE: Viale delle Terme di Caracalla 00100 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

ALINORM 03/17

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION
Twenty-sixth Session
Rome, Italy, 30 June -7 July 2003

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

London, United Kingdom
3 – 7 February 2003

Note: This document incorporates Codex Circular Letter 2003/7-FO

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CX 5/15.2 **CL 2003/7-FO**

March 2003

TO: - Codex Contact Points
- Interested International Organizations

FROM: -Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, 00100 Rome, Italy

SUBJECT: **Distribution of the Report of the 18th Session of the Codex Committee on Fats and Oils (ALINORM 03/17)**

A. MATTERS FOR ADOPTION BY THE 26th SESSION OF THE CODEX ALIMENTARIUS COMMISSION

Draft Standard and Code at Step 8 of the Procedure

Draft Revised Standard for Olive Oils and Olive Pomace Oils (para. 31, Appendix II)

Proposed Draft Standard and Code at Step 5/8 of the Procedure

Proposed Draft Amendments to the Standard for Named Vegetable Oils (para. 65, 67, 69 Appendix III)

- Inclusion of Palm Superolein to the Standard
- Inclusion of Mid-Oleic Sunflower Oil to the Standard
- Inclusion of the data on Palm Olein and Palm Stearin in Tables 3 and 4

Governments wishing to propose amendments or comments on the above documents should do so in writing in conformity with the Guide to the Consideration of Standards at Step 8 (see Procedural Manual of the Codex Alimentarius Commission) to the Secretary, Joint FAO/WHO Food Standards Programme, FAO, via delle Terme di Caracalla, 00100 Rome, Italy **before 1 May 2003.**

B. REQUEST FOR COMMENTS AND INFORMATION

Draft Standard for Fat Spreads and Blended Spreads (para.61 , Appendix IV)

Government and international organizations are invited to provide comments on the Draft Standard for Fat Spreads and Blended Spreads, bearing in mind that the electronic Working Group chaired by the United States, open to all members will consider Section 4 (Food Additives) and is expected to finalise its work by March 2004.

Therefore, Governments and international organizations wishing to submit comments should do so in writing in the following way.

- Comments on Section 4; Food Additives

to Dr.. Paul Kuznesof, Office of Food Additives Safety (HFS-205), Food and Drug Administration, 5100 Paint Branch Parkway, College Park, MD 20740 (Paul.Kuznesof@cfsan.fda.gov) with a copy to the Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy (Fax + 39 06 570 54593: E-mail: codex@fao.org) **before 31 May 2003.**

- Comments on the other Sections

To: The Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy (Fax + 39 06 570 54593: E-mail: codex@fao.org), with a copy to Miss Mary Clarke, Food Labelling and Standards Division, Food Standards Agency, Aviation House, 125 Kingsway, London, WC2B 6NH United Kingdom(Fax:+44 20 7276 8193, E-mail: mary.clarke@foodstandards.gsi.gov.uk) **before 31 December 2003.**

SUMMARY AND CONCLUSIONS

The summary and conclusions of the 18th Session of the Codex Committee on Fats and Oils are as follows:

Matters for consideration by the Commission:

The Committee:

- agreed to advance to Step 8 the Draft Revised Standard for Olive Oils and Olive Pomace Oils (para. 31, Appendix II)

- agreed to advance to Steps 5/8 the Proposed Draft Amendments to the Standard for Named Vegetable Oils (paras. 65, 67, 69 Appendix III)
  - Inclusion of Palm Superolein to the Standard
  - Inclusion of Mid-Oleic Sunflower Oil to the Standard
  - Inclusion of the data on Palm Olein and Palm Stearin in Tables 3 and 4

– proposed to initiate the following new work:

- Amendment to the Standard for Named Vegetable Oils; amendment of Sesameseed Oil and inclusion of Rice Bran Oil (paras.71, 92)

- Amendment to the Recommended International Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk; amendments to the Table 1 (para 88)

Other Matters of Interest to the Commission

The Committee:

- agreed to return to Step 6 the Draft Standard for Fat Spreads and Blended Spreads as consensus could not be reached and insufficient time for discussions on food additives. (para.61 , Appendix IV)

- agreed to request through the Commission to ask JECFA to establish criteria for inclusion of substances in the List of Acceptable Previous Cargoes and to evaluate substances that were proposed in the Proposed Draft List of Acceptable Previous Cargoes while retaining the Draft List of Acceptable Previous Cargoes at Step 7 and the Proposed Draft List of Acceptable Previous Cargoes at Step 4 (paras 78,79,80, 81,82)

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INTRODUCTION

1) The 18th Session of the Codex Committee on Fats and Oils (CCFO) was held in London from 3-7 February 2003 at the kind invitation of the Government of the United Kingdom. The Session was chaired by Mrs Rosemary Hignett, Head of Food Labelling and Standards Division, Food Standards Agency. It was attended by 96 participants from 31 Member countries and 6 international organisations. The List of Participants is attached to this report as Appendix I.

OPENING OF THE SESSION

2) The Session was opened by Mrs Rosemary Hignett who welcomed participants to the 18th Session of the Committee on behalf of the Government of the United Kingdom and wished them every success in their deliberations.

ADOPTION OF THE AGENDA[1] (AGENDA ITEM 1)

3) The Committee adopted the Provisional Agenda as proposed in CX/FO 03/1. The Committee noted the proposal by India to initiate the development of a new standard on rice bran oil and agreed to consider this issue under Agenda Item 8. It also decided to establish the following two working groups.

- Working Group for Methods of Analysis and Sampling chaired by Dr. Roger Wood (United Kingdom) to consider section 8 of Draft Standard for Olive Oils and Draft Standard for Fat Spreads and Blended Spreads, as well as to respond to the issues and questions raised by the 24th session of Codex Committee on Methods of Analysis and Sampling
- Working Group on Food Additives chaired by Dr. Paul Kuznesof (United States) to consider section 4, food additive provisions in the Draft Standard for Fat Spreads and Blended Spreads

MATTERS ARISING FROM THE CODEX ALIMENTARIUS COMMISSION AND OTHER CODEX COMMITTEES (AGENDA ITEM 2)[2]

4) The Committee noted that the 24th Session of the Codex Alimentarius Commission (CAC) had adopted two draft proposals at Step 8 (amendment to the Standard on Named Vegetable Oil and List of Banned Immediate Previous Cargoes) and returned one draft proposal to step 6 (Draft List of Acceptable Previous Cargoes). It also noted the decision of the 49th Session of the Executive Committee (CCEXEC) on the approval of new work. The Committee was further informed of the matters of interest arising from the Codex Committee on Milk and Milk Products (CCMMP), the Codex Committee on Food Labelling (CCFL) and Codex Committee on Methods of Analysis and Sampling (CCMAS). The Committee recognised that the 24th Session of CCMAS requested clarification from the Committee on the method of determination of milk fat and decided to leave this task to the working group.

5) As proposed by the Delegation of Malaysia, the Committee also noted other matters of interest as follows.

- The 24th CAC noted a number of written comments proposing amendments to the Acceptable Previous Cargoes had been submitted.
- The 50th Session of CCEXEC adopted and forwarded to the CCFL for consideration the texts that explained the rationale of the request by the Regional Coordinator of Asia to delete Section 3.2.2, 3.2.2.1, 3.2.2.2., 3.2.2.3 in the Proposed Draft Amendment to the Guideline on Nutritional Labelling
- The 13th Session of Coordinating Committee for Asia decided to recommend to the Committee that a footnote be added to Table 1 stating that for warmer climates, the loading and discharge temperature for palm kernel oil is Min 30°C Max 39°C or ambient temperature to address the concern by Indonesia

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1 CX /FO 03/1

2 CX/FO 03/2, CX/FO 03/2 Add.1, CX/MAS 02/13

DRAFT REVISED STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS (AGENDA ITEM 3)[3]

6) The Committee recalled that there had not been so much progress in the development of the standard in recent sessions and the 17th Session had returned the Draft Standard to Step 6.

7) The Observer from IOOC announced that IOOC had presented a common position with the EC as CX/FO 03/3 Add.5. The Committee considered the Draft Standard section by section from the Preamble bearing in mind the compromise text submitted by IOOC.

PREAMBLE

8) The Committee agreed to the proposal by IOOC to amend the preamble to shift two parameters (the analytical parameters concerning peroxide value and absorbency in ultra-violet K270) from the Appendix to the main body of the Standard.

SECTION 2. DESCRIPTION

9) The Committee agreed to change "Olive Oil" in Section 2.2 into "Olive Oils" and made the necessary editorial changes accordingly. The Committee also agreed to add "or other physical treatments" in Section 2.3.

SECTION 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

10) The Committee agreed to adopt the modifications proposed by IOOC on description of the sections from 3.1 to 3.7 on the following points:

- changes in the level of free fatty acid in Section 3.1, 3.5, 3.7
- addition or modification to the last sentence in all sections from 3.1 to 3.7 in the description "whose other characteristics correspond to those laid down in this category"
- change in the footnote number from 6 to 1 and addition of a new footnote 2 to Section 3.5 and 3.7, "The country of retail sale may require a more specific designation"

11) The Committee recalled it had an intensive discussion on Section 3.9, fatty acid composition of olive oils in the last Session. The Committee also noted that the new IOOC proposal on this section was to change the level of linolenic acid from 0.9 % to 1.0% and this had already been agreed with the EC. The Delegation of Australia, while expressing its will to advance the standard forward, proposed that the level should be 1.5 % as olive oils produced in Australia had higher level of linolenic acid and 0.9% in the Draft Standard did not take into account the various climate conditions of many producing countries including Australia. The Delegation also stressed that the lower level in this section would adversely affect the domestic industry.

12) The Observer from the European Community expressed the view that the level of linolenic acid was a very important indicator to control the authenticity of olive oils and therefore this should be applied strictly to maintain the authenticity of the olive oils already on the market and to protect consumers from fraud. The Observer also stated that achieving consensus on 1.0% entailed difficult tasks as producing countries had to overcome the wide variety in each country and therefore a further increase in the level to 1.5% would cause difficulty. Therefore the Observer opposed the proposal by Australia.

13) The Delegation of New Zealand, supporting the comment by Australia, pointed out that the level of linolenic acid was a good indicator of possible fraud but there were other appropriate methods to detect fraud. The Delegation also stressed the need to collect global data on fatty acid composition as a basis for the values in the Standard.

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[3] CL 2001/4-FO, CL 2002/49-FO, CX/FO 03/3 (comments of Brazil, Poland,), CX/FO 03/3-Add.1 (comments of Australia, France, EC), CX/FO 03/3-Add.2 (New Zealand), CX/FO 03/3-Add.3 (comments of Argentina, Morocco), CX/FO 03/3-Add.4(comments of Morocco, EC), CX/FO 03/3-Add.5(comments of IOOC), CRD 5(Indonesia), CRD 10(Working Group on methods of Analysis)

14) The Observer from the IOOC explained to the Committee that the present proposed level 1.0% was a result of the world wide review of the situations of producers by collecting data from olive oils produced in various countries including Australia and New Zealand. The Delegation of Morocco stated that this issue had been raised by Morocco in the previous session and the compromise level proposed by IOOC was a great step forward which should be recognised. The Delegation of Tunisia explained that it also had domestic olive oils whose linolenic acid level exceeded 1.0 % and stressed the importance of excluding extreme values. The Delegation of Italy informed the Committee that it received many requests from domestic industry to change the levels of fatty acids other than linolenic acid and raised its concern over the new proposal to change a compromise that was reached as a result of extensive discussions.

15) As there was no consensus on this issue, the Delegation of Australia proposed a footnote "Maximum level of greater than 1.0% is permitted if the olive oil is authenticated by other means, for example, the analysis of Sterols". The Delegation of Canada, expressing its support for the level of 1 % in view of its stance as importing country, also expressed its support for the footnote proposed by Australia and requested to include an upper limit of 1.5% as expressed by "not in excess of 1.5" after "1.0%" of the proposed footnote.

16) The Delegations of Malaysia and the United States supported the amended footnote. However, other delegations and the Observer from the European Community expressed their opposition to the footnote as linolenic acid was an important indicator of authenticity and "other means" without any specification should not be highlighted as an effective alternative method for this purpose. The Observer also stated that there was not sufficient time and no available data to consider the change in the level to 1.5% in this session; however it would be possible to seek a solution in the next Session.

17) The Observer from IOOC also expressed its opposition to the footnote. However, the Observer agreed that IOOC would conduct a thorough study on the production situations of olive oils in many geographical regions including Australia and New Zealand and announced that IOOC would report the results of this study in the next Session.

18) The Committee realised that it could not reach consensus on this footnote. The Committee finally adopted 1.0% as many delegates supported to advancing the standard to Step 8 and welcomed the proposal of IOOC to conduct a global survey of olive oil production. The Committee agreed to consider this question at its next session on the basis of the information to be provided by IOOC.

19) The Committee adopted other proposals made by the written comments of IOOC to Sections 3.10, 3.11, 3.12,3.13.

SECTION 4. FOOD ADDITIVES AND SECTION 5. CONTAMINANTS

20) The Committee agreed the proposals of IOOC to make editorial modification to Section 4.2 and Section 5.3

SECTION 6. HYGIENE

21) The Committee agreed to retain the text as it was as there was no proposal to amend it.

SECTION 7. FOOD LABELLING

22) The Committee agreed to delete the whole section 7.2 "Free acidity" and to renumber the previous section 7.3 to 7.2.

SECTION 8. METHODS OF ANALYSIS AND SAMPLING

23) The conclusions of the Working group on methods of analysis and sampling were presented by its Chair, Dr Roger Wood (United Kingdom). The report presented in CRD 10 covered general issues, including the questions arising from the Codex Committee on Methods of Analysis and Sampling (CCMAS) and proposals for specific methods to be included in the draft standards under consideration (see also para.60).

24) As regards general issues, the Committee agreed with the conclusions of the Working Group concerning the document CX/MAS 02/13 on "The use of Analytical Results: Sampling, Relationship between the

Analytical Results, the Measurement Uncertainty, Recovery Factors and the Provisions in Codex standards". The Committee agreed that the concepts described in the paper should be addressed in order to ensure a uniform approach to the development and application of Codex standards. It therefore recommended that instructions with respect to analytical compliance be developed for all Commodity Committees by the Codex Alimentarius Commission or another appropriate horizontal Codex Committee.

25) The Committee agreed to amend the methods of analysis in Section 8 and Section 4 of the Appendix, as proposed in CRD 10. The Committee made some modifications to include "(Iron, Copper)" under "Trace Metals" and to add method "AOCS Ch3-91 (97)" for the determination of "Fatty acids in the 2-position of triglycerides".

26) The IUPAC methods included in the earlier version of the Draft Standard were deleted when alternative methods existed as they were outdated and in many cases had not been collaboratively tested. The Committee retained the current IUPAC methods when there was no alternative and recommended that ISO and AOCS consider reviewing these methods in conjunction with IUPAC with a view to their updating.

27) The Committee noted the proposal of the Working Group to delete the reference to the year in ISO methods. The Delegation of the United Kingdom pointed out that in application of ISO/IEC 17025:1999, analysts were required to use the latest version of methods of analysis and drew the attention of the Committee to the problems resulting from reference to methods that were no longer available. The Observer from ISO indicated that when ISO methods were updated, the earlier version was no longer available as a publication. However, the Delegation of New Zealand, supported by other , pointed out that the year of publication was an important element in the identification of the method and that it was considered in the endorsement process.

28) The Committee recognised that it was not possible at this stage to amend the current reference system in the standards for fats and oils and that this issue should be addressed from a general perspective. The Committee therefore asked the Committee on Methods of Analysis and Sampling to consider the problems related to method references in order to provide advice to Codex Committees and to ensure consistency throughout Codex in the identification of methods. The Committee agreed to follow the current identification system for the methods under consideration and to re-introduce the year in the ISO methods.

29) The Committee expressed its thanks to Dr Wood and to the Working Group for their constructive work on complex issues and the comprehensive update of the section on methods of analysis.

APPENDIX

30) The Committee adopted the proposals made by IOOC in the written comments to the Sections 1.5.1, 1.5.3, 2.1, 3.2, 3.3, 3.4, 3.5, 3.6 in the Appendix.

STATUS OF THE DRAFT REVISED STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS

31) The Committee agreed to advance the Draft Revised Standard to Step 8 for adoption at the 26th Codex Alimentarius Commission(see Appendix II).

DRAFT STANDARD FOR FAT SPREADS AND BLENDED SPREADS (AGENDA ITEM 4)[4]

32) The Committee recalled that its last session had forwarded the Proposed Draft Standard for Fat Spreads and Blended Spreads to Step 5 and that it had been adopted at Step 5 by the 50th Session of the Executive Committee. The Committee considered the text section by section and made the following amendments and comments.

[4] CL 2002/21-FO, CX/FO 03/4 (comments of Argentina, Canada, Cuba, Japan, Mexico, New Zealand, Poland, South Africa, United States, ACC, IDF, IFMA), CX/FO 03/4-Add.1 (comments of Brazil, France), CX/FO 03/4-Add.2 (comments of EC), CRD 2 (comments of Philippines), CRD 7 (comments of Indonesia), CRD 8 (comments of Poland).

SECTION 2. DESCRIPTION

Section 2.1 Fat Spreads and Blended Spreads

33) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, expressed its objection to the current text and proposed that the products covered by the standard should be "remain solid at 20° C", as this was an essential characteristic of fat spreads. The Delegation of Spain pointed out that the inclusion of liquid products in the standard was in contradiction with the title and the term "fat spreads". Other delegations supported the current text as an acceptable compromise resulting from extensive discussions at the last session and the Committee agreed to retain the current description.

Section 2.2 Edible Fats and Oils

34) The Delegation of the United States expressed the view that the current description referring to "triglycerides" only was too restrictive and that it should be replaced with "glycerides" in order to allow for technical innovation, as fat spreads might contain mono- or diglycerides. Other delegations expressed their concern about the inclusion of substances that should be described as additives rather than ingredients and supported the current limitation to triglycerides. The Committee could not come to a conclusion on this question and agreed to retain the term "triglycerides" in square brackets for further consideration.

SECTION 3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

Section 3.1.2 Blended Spreads

35) In section 3.1.2.1, the Committee agreed to clarify that the percentage of milk fat was calculated in relation to total fat, as proposed by the Delegation of Canada, and discussed whether the current level of 3% should be retained. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, proposed a range of 10 to 80% milk fat in order to establish a clear distinction between fat spreads and blended spreads. Other delegations supported the current minimum level of 3% as this would be consistent with the description of "fat spreads" and would ensure that the standard covered all types of spreads. It was also recalled that the second sentence of section 3.1.2.1 allowed the country of retail sale to specify a higher percentage of milk fat. The Committee therefore agreed to retain the current percentage.

36) In section 3.1.2.2, the Delegation of Japan proposed to retain only two types of blended spreads, in order to provide a clear choice for consumers and also to maintain consistency with 3.1.1.2: Blended Margarine with a fat content of 80% or above; and Blended Fat Spreads with a fat content below 80%, the actual fat content to be mentioned on the label. The Delegation pointed out that the reference to margarine was essential in order to provide clear information to the consumer, as the term "blend" was not very explicit by itself. Other delegations and the Observer from IFMA supported this simplification but proposed to retain "blends" as the first type.

37) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, expressed the view that the four current types should be retained and that "three- quarters fat blend" should contain 60-62% fat instead of 59-61% fat.

38) After an exchange of views, the Committee agreed to retain two types of blended spreads: (a) Blends (= 80% fat); and (b) Blended Fat Spreads (< 80% fat).

39) The Delegation of Canada proposed to re-introduce the section on permitted ingredients that existed in the current Standard for Margarine, especially in order to allow the addition of vitamins to margarine or fat spreads. The Committee recalled that the section had been deleted at the last session as it did not appear necessary, but recognized that this might create some confusion as the possibility of adding other ingredients was not mentioned. After an exchange of views, the Committee agreed to include a new section 3.2 Permitted Ingredients with the list of ingredients proposed in the written comments of Canada with a number of amendments.

40) The Delegation of Brazil pointed out that the list should not be exhaustive and should allow the addition of other ingredients, such as calcium, and the Committee agreed to add a sentence to this effect at the end of the section.

SECTION 4. FOOD ADDITIVES

41) The report of the Working Group on Food Additives was presented by its Chair, Dr Paul Kuznesof (United States). The Committee considered the proposals of the Working Group (CRD 11) in order to take into account the current work in the Codex Committee on Food Additives and Contaminants (CCFAC) on the General Standard for Food Additives (GSFA) and to amend the section accordingly. The Chair of the Working Group noted that the Working Group did not have sufficient time to complete its discussion on all the additives in the current standard.

42) The Committee agreed with the following general recommendations:

- The food additive section of the standard should refer to the GSFA
- Only those additives that have been assigned a full ADI by JECFA and an INS number should be considered for inclusion in the standard
- The food additive section should contain the names of the functional classes as they appear in the INS system

43) Some delegations including the Delegations of France and Switzerland stressed the importance of the input of commodity committees in the elaboration of additive provisions, especially as regards technological justification, and noted that there was a possibility to propose specific deviations from the GSFA with appropriate justification.

44) The Delegation of Brazil, supported by other delegations, pointed out that several additives that were currently allowed in Codex standards or under consideration had a temporary ADI. The Delegation of the United States indicated that the CCFAC had agreed that all additives with a temporary ADI should be deleted from the GSFA. They would be reinstated in the Standard, as appropriate, when JECFA had established full ADIs.

45) The Committee agreed that the following statement should be inserted to replace the listing of individual additives:

<u>For those additives listed in Table 3 of the GSFA</u>:

- *Any (functional effect) listed in Table 3 of the Codex GSFA. Table 3 (functional effect) with restrictions are included in the Table below (to be listed).*

<u>For those additives listed in Tables 1 and 2 of the GSFA</u>:

- *Any (functional effect) intended for use with the provisions in the Food Categories: 2.0, 2.2, 2.2.1.2 and 2.2.2 of Table 2 of the Codex GSFA, subject to any deviations noted below (to be listed).*

46) The Committee also agreed to delete the provisions referring to "GMP" for additives with a numerical ADI and to request proposals for numerical levels for subsequent endorsement by the CCFAC.

47) The Committee considered the revised list of additives proposed by the Working Group for inclusion in the standard in the light of its general recommendations (Annex A to CRD 11). The Committee began its discussion by considering the amendments proposed in section 4.1 colours. Some delegations and the Observer from IFMA expressed the view that the additives with temporary ADIs should be retained in square brackets for further discussion but should not be deleted as proposed in the revised section. The Committee did not come to a conclusion on this question.

48) The Delegation of Italy, supported by other delegations, pointed out that the new approach proposed in CRD 11 raised general issues that could not adequately be addressed at this stage and that member countries needed more time to consider these proposals, especially as substantial changes had been made to maximum levels. After an exchange of views on some of the additives in the list, the Committee recognized that it would not be possible to come to a consensus on the amendments proposed at the current session and discussed how to proceed further to facilitate progress.

49) The Committee agreed that the list proposed in Annex A to CRD 11 would be included in square brackets in the Draft Standard circulated for comments at Step 6, as an alternative to the current section as

proposed by France and supported by a number of delegations. The comments received would be considered by an electronic Working Group chaired by the United States. The Working Group would be open to all interested member countries. It was expected that the Working Group would consider the comments received and prepare a revised version of the additives section for circulation approximately in March 2004. The Committee expressed its appreciation to Dr Kuznesof and to the Working Group for their considerable work in order to revise the additives section.

50) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, expressed the view that benzoates should not be allowed in fat spreads as sorbic acid and its salts were sufficient for their preservation; the use of phosphoric acid and its salts should be limited by a maximum level instead of GMP due to their numerical ADI; and clarification should be provided on various "miscellaneous" additives, as indicated in the written comments of the EC.

51) As regards the use of benzoates, the Delegation of the United States recalled that a maximum level of 1000mg for benzoates in the relevant food categories had already been adopted by the Commission and included in the final GSFA and such levels had been agreed as safe. The US Delegation also noted that the Preamble to the GSFA stated that all additives must be used according to GMP at the minimum level necessary to achieve the intended technical effect and, further, that typical use levels for additives were generally less than the maximum levels agreed for the GSFA.

SECTION 7. LABELLING

52) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, proposed to declare fat hydrogenation and inter-esterification on the label, if required by the country of retail sale. Some delegations pointed out that the declaration of hydrogenation of oil was already addressed in the General Standard for the Labelling of Prepackaged Foods (section 4.2.3.1 Class Names) and proposed to address the declaration of inter-esterification in the framework of that Standard as a general requirement, as it should not be limited to fat spreads. The Committee agreed that the proposal to declare the inter-esterification of oils on the label should be put forward by interested countries in the Committee on Food Labelling as a general issue.

53) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, proposed to allow the term "reduced fat" for products with a fat content of more than 41% but no more than 62%; and the terms "low fat" or "light" for products with a fat content of 41% or less. The Observer from IFMA, referring to its written comments (CX/FO 03/4), supported this proposal as such information would be useful for consumers to make an informed choice.

54) The Secretariat recalled that the Committee on Food Labelling and the Committee on Nutrition and Foods for Special Dietary Uses had agreed that the Guidelines for Use of Nutrition Claims would apply to all foods without any exception. This applied especially to the claim for "low fat" since this question had been raised in the Committees, during the elaboration of the Guidelines and in the endorsement of labelling provisions from commodity committees. However, comparative claims for a "reduced" or "light" fat content were allowed by the Guidelines and could be used for all foods including fat spreads, on the basis of a reduction of 25% as compared to a similar food. The Committee noted that this question had been addressed at the level of horizontal committees.

55) The Delegation of Canada proposed to amend section 3.1.2.2 as follows: a) (name of the fat) Blend; and b) Blended (name of the fat) Spread, as this would clarify the nature of products as section 7.1 of the labelling provisions refers to sections 3.1.1.2 and 3.1.2.2. The Delegation also proposed that "the identified fats may be generic or specific, e.g. dairy and vegetable fat (generic), or milk fat and sunflower oil (specific)". This proposal was supported by some delegations as it provided a clear description of the product and improved consumer information.

56) Other delegations and the Observer from IFMA expressed the view that the additional information was not quite clear and would create confusion, especially as regards "identified fats". Some delegations also objected to an amendment to section 3.1 as it was related to the composition and not to labelling.

57) As a compromise, the Delegation of Brazil proposed to retain section 3.1.2.2 unchanged and to indicate in the labelling section (7.1) that "for section 3.1.2.2, the name of the products may incorporate the name of

the fats and oils in a generic or specific manner". The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, objected to this proposal. The Committee could not reach a conclusion and agreed to put this new sentence in square brackets for further consideration.

58) The Committee noted the proposal of the Delegation of Greece, speaking on behalf of the Member States of the European Union present at the session, to restrict the use of the term "margarine" to products with 80-90% fat; "three-quarter fat margarine" to products with 60-62% fat; and "half fat margarine" to products with 39-41% fat. However, the current text was retained.

59) In section 7.3, the Committee agreed with the proposal of the Delegation of the Netherlands to replace the reference to an "average fat content" with "fat content" as this was the usual term used in other Codex standards for the declaration of fat.

SECTION 8. METHODS OF ANALYSIS AND SAMPLING

60) The Committee considered the question from the Codex Committee on Methods of Analysis and Sampling concerning the determination of milk fat. As proposed by the Working Group on Methods of Analysis and Sampling (CRD 10), the Committee noted that butyric acid was an indicator but that the concentration was subject to variation. It therefore recommended, in the absence of a single agreed factor, to convert the butyric acid concentration into milk fat concentration, and to report the range in which the milk fat concentration of a sample would lie. It was also agreed that the method would read Milk Fat Content (butyric acid) for clarification purposes. The Committee agreed to retain the methods of analysis for salt content and for vitamins at this stage, as these ingredients were mentioned in the standard. However, it noted that there were no specific levels for these substances and that this question might require further consideration.

STATUS OF THE DRAFT STANDARD FOR FAT SPREADS AND BLENDED SPREADS

61) The Committee recognized that although progress had been achieved on several sections of the text, some issues remained to be addressed. The Committee therefore agreed to return the Draft Standard to Step 6 for further comments and consideration at the next session (see Appendix IV). It was agreed that the Circular Letter would request comments especially on those sections that were still in square brackets or required further discussion.

PROPOSED DRAFT AMENDMENTS TO THE STANDARD FOR NAMED VEGETABLE OILS (PALM SUPEROLEIN, MID-OLEIC SUNFLOWER OIL AND ADDITION OF NEW DATA TO TABLE 3 AND 4) (AGENDA ITEM 5)[5]

GENERAL ISSUE

62) The Committee exchanged opinions on how to address the nomenclature issue that could arise in association with traditional oils whose fatty acid composition had been modified. The Delegation of Canada pointed out that the Committee would have to constantly create a new definition for each modified oil as potentially a large number of new oils could be developed with modified fatty acid contents. The Delegation suggested establishing consistent criteria for composition and labelling of modified oils which would not require the Committee to meet each time a proposal for a modified oil was made. This view was supported by many delegations. The Delegation of Spain suggested that this issue was not a matter of denomination but related to nutritional information that could be dealt with by labelling. The Committee agreed to initiate the development of such criteria and decided that Canada would host an electronic Working Group by inviting all interested members of the Committee to exchange their views so that Canada could prepare a discussion paper for consideration by the Committee at its next Session.

63) Following some discussions on the justification for amendments to the Standard, the Committee recalled that criteria had been established for the addition of a new oil to the Standard at its 16th Session (ALINORM 99/17, para.34)

[5] CL 2002/21-FO, CL 2002/47-FO, CX/ 03/5 (Argentina, Brazil, Canada, Cuba, France, Germany, Mexico, Spain), CX/ 03/5-Add.1(Brazil, Malaysia), CRD6(Indonesia), CRD7(Indonesia)

PALM SUPEROLEIN

64) The Delegation of Malaysia introduced the data on palm superolein in CL 2002/21-FO that Malaysia requested to include in the Standard. The Delegation of Germany, supported by the Delegation of France, raised a question as to the major differences in terms of chemical characteristics between palm superolein, palm kernel oil and palm olein. The Delegation of Malaysia replied that the palm superolein could be distinguished from those oils in the level of iodine value, slip point, fatty acid composition especially in C16:0 and C18:1 and apparent density. The Delegation added that a significant volume of palm superolein had been internationally traded and differences in data on chemical characteristics of those oils derived from palm had a tendency to be narrower than vegetable oils derived from oil seeds.

65) The Committee agreed to include palm superolein in the Standard for Named Vegetable Oils as was proposed by Malaysia and to advance the Proposed Draft Amendment to include palm superolein for adoption by the 26th Session of Codex Alimentarius Commission at Step 5/8 (see Appendix III).

MID-OLEIC SUNFLOWER OIL

66) The Delegation of the United States introduced to the Committee the proposal to add mid-oleic sunflower oil including data for addition to the Standard. Several delegations raised questions on the submitted data pointing out that the range of oleic acid was wide while the ranges of sterols were rather narrow. The Delegation of Germany reiterated its concern on the work by the Committee to develop a standard with chemical characteristics that were difficult to distinguish from those of oils already in the standard.

67) However, the Committee finally agreed to add mid-oleic sunflower oil in the Standard for Named Vegetable Oils as was proposed by the United States with modifications in Section 3.1(C14:0 from 0.4-0.8 to ND-1.0 and C18:3 from ND-0.1 to ND-0.5) and Section 3 (Relative Density from 0.914 to 0.914-0.916). The Committee decided to advance the Proposed Draft Amendment to include mid-oleic sunflower oil for adoption by the 26th Session of Codex Alimentarius Commission at Step 5/8 (see Appendix III).

INCLUSION OF NEW DATA IN TABLE 3 AND TABLE 4 OF THE STANDARD FOR NAMED VEGETABLE OILS

68) The Committee noted the data submitted by Malaysia on desmethylsterols, tocopherols and tocotrienols for palm olein, palm stearin in response to the CL 2002/22-FO. The Delegation of Spain raised a question that palm olein, palm stearin were produced by way of fractionation and therefore the "crude oil" in the title of the Table 3 and 4 was not appropriate. The Delegation of Indonesia informed the Committee that there were some types of palm olein and palm stearin that could be categorised as crude oil. The Delegation of Malaysia also replied that the data submitted by Malaysia were taken from palm olein and palm stearin of crude types. The Committee, therefore, agreed to add a footnote "Fractionated product from palm oil" to "palm olein", "palm stearin" in the Table 3 and 4 for clarification.

69) The Committee decided to advance the Proposed Draft Amendment to include data on desmethylsterols, tocopherols and tocotrienols for palm olein, palm stearin in Tables 3 and 4 for adoption by the 26th Session of the Codex Alimentarius Commission at Step 5/8 (see Appendix III).

METHODS OF ANALYSIS AND SAMPLING

70) The Committee agreed with the proposals of the Working Group to update some of the methods of analysis in the Standard for Named Vegetable Oils (see also paras. 23-29) and noted that they would be forwarded to CCMAS for endorsement prior to their inclusion in the final standard.

SESAMESEED OIL

71) The Delegation of Germany proposed a modification to the fatty acid composition of sesameseed oil in the Standard for Named Vegetable Oils. The Committee decided to propose the Commission approve this as new work and to circulate the Proposed Draft Amendment at Step 3.

ISO STANDARD

72) The Observer from ISO pointed out that some inconsistency could be seen in the botanical names of the original oil seeds between Standard ISO 5507:2002 (Oilseeds,Vegetable Fats and Oils - Nomenclature) and the Codex Standard for Named Vegetable Oils. The Committee asked the Observer from ISO to submit a

paper to analyse possible implications arising from such inconsistency to the Codex Standard for consideration in the next Committee.

RECOMMENDED INTERNATIONAL CODE OF PRACTICE FOR THE STORAGE AND TRANSPORT OF EDIBLE FATS AND OILS IN BULK (DRAFT LIST OF ACCEPTABLE PREVIOUS CARGOES, PROPOSED DRAFT LIST OF ACCEPTABLE PREVIOUS CARGOES) (AGENDA ITEM 6)[6]

73) The Committee recalled that its last session had advanced to Steps 5/8 the Proposed Draft List of Banned Immediate Previous Cargoes, that had subsequently been adopted by the Commission. The Committee had also advanced the Proposed Draft List of Acceptable Previous Cargoes to Steps 5/8. However the Commission had adopted it only at Step 5 as some delegations considered that the list had not been developed on the basis of clearly defined criteria and as a number of amendments to the list had been proposed in written comments.

74) The Delegation of the United States expressed the view that it had not been possible so far to develop criteria for evaluation of the compounds on the lists and that it did not appear feasible to achieve this in the framework of Codex or FAO/WHO. The Delegation therefore proposed to discontinue the elaboration of the list of acceptable cargoes and to revoke the adopted List of Banned Immediate Previous Cargoes, and to refer in section 2.1.3 Contamination to the lists developed by the National Institute of Oilseed Products (NIOP) and the Federation of Oils, Seeds and Fats Association (FOSFA). The Delegation noted that these trade organizations have developed trading rules that include previous cargo lists and guidelines to ensure the safety of fats and oils transported in bulk.

75) The Observer from the European Community objected to this proposal as the lists of acceptable cargoes developed by the industry reflected trade practices but not necessarily a complete scientific evaluation. The Observer pointed out that all the substances on the list currently at Step 6 had been the object of a risk assessment, while several substances in the list at Step 3 were currently being evaluated by the EC Scientific Committee for Food. It was essential that these substances be submitted to a independent and transparent risk assessment in order to ensure food safety and in the framework of Codex, it would be appropriate to ask for an evaluation by JEFCA. This position was supported by many delegations including the Member States of the European Union present at the meeting and a number of others.

76) The Delegation of Canada proposed to discontinue the development of the lists in view of the difficulties encountered in the process and noted that in practice, it might be difficult for JECFA to evaluate these substances in view of its current workload. The Delegation therefore suggested to develop criteria that could be used by governments or the industry to develop specific lists, on the basis of the considerations mentioned in the current Draft List, with additional consideration of allergenicity.

77) Some delegations expressed the view that if it was not possible to develop lists of acceptable cargoes in the framework of the Committee, it was preferable to delete any reference to the lists. The Delegation of Malaysia stressed the need to retain the current List of Banned Immediate Previous Cargoes, and proposed that the substances in the list of acceptable cargoes at Step 3 should be included in the list at Step 6 as there was no scientific justification for their exclusion. There was no further discussion by the Committee on the Banned Cargoes. The Committee recognized that there was no consensus at this stage on the further development of the lists. After some further discussion on the steps to be taken to address this issue, the Committee agreed on the following compromise position.

78) The Committee agreed to propose to the Commission that it invite JECFA to develop evaluation criteria for acceptable previous cargoes. The Committee further suggested that the following considerations be taken into account in the development of criteria:

- Toxicological properties, including genotoxic and carcinogenic potential
- Efficacy of cleaning procedures between cargoes

[6] CL 2002/22-FO, CL 2001/4-FO, CL 2002/49-FO, CX/FO 03/6 (comments of Brazil, Mexico, United States, EC), CX/FO 03/6-Add.1 (comments of Malaysia), CX/FO 03/7 (comments of Brazil, FOSFA), CX/FO 03/7-Add.1 (comments of Malaysia), CRD 3 (comments of the Philippines).

- Dilution factor in relation to the potential amount of residue of the previous cargo and any impurity which the previous cargo might have contained, and the volume of oil or fat transported
- Solubility of possible contaminating residues
- Subsequent refining/processing of the oil or fat
- Availability of analytical methods for the detection of trace amounts of residues or for verifying the absence of contamination
- Reactivity of oils/fats with contaminating residues, where appropriate
- Allergenicity

79) The Committee agreed to propose that the Commission invite JECFA, on the basis of the above-mentioned criteria, to evaluate the substances on the Draft list of Acceptable Previous Cargoes currently at Step 3.

80) The Committee considered that the substances on the Draft list of Acceptable Previous Cargoes currently at Step 6 should not be advanced further until such time as the substances at Step 3 had been evaluated. Depending on the results of the evaluation, these substances will, where appropriate, be advanced to Step 5.

81) All interested parties, including FOSFA and NIOP, should submit all the data and information they possess on the substances at Step 3 to JECFA for the purpose of evaluation. The Committee invited all competent scientific bodies, the US FDA and the EU EFSA in particular, to cooperate with JECFA, and to submit all available data to JECFA, so as to facilitate and expedite the evaluation process.

82) The Observer from European Community reiterated that the EC Scientific Committee for Food had already evaluated many substances on the list and would make their evaluation available to JECFA.

STATUS OF THE DRAFT LIST OF ACCEPTABLE PREVIOUS CARGOES AND THE PROPOSED DRAFT LIST OF ACCEPTABLE PREVIOUS CARGOES IN THE *RECOMMENDED INTERNATIONAL CODE OF PRACTICE FOR THE STORAGE AND TRANSPORT OF EDIBLE FATS AND OILS IN BULK*

83) The Committee agreed that the Draft List should be retained at Step 7 and the Proposed Draft List at Step 4 for further consideration at the next session in the light of the decision of the Commission concerning the above issues and proposals.

CONSIDERATION OF AMENDMENT TO THE RECOMMENDED INTERNATIONAL CODE OF PRACTICE FOR THE STORAGE AND TRANSPORT OF EDIBLE FATS AND OILS IN BULK (AGENDA ITEM 7)[7]

84) The last session of the Committee had agreed that the Delegation of Indonesia would prepare a document to justify an amendment to the temperatures for loading and discharge of fats and oils in Table 1 of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk*.

85) The Delegation of Indonesia recalled that the current temperatures for the loading and discharge of palm kernel oil were 40 to 45°C. In warm climate countries, loading and discharge were carried out at ambient temperature without heating (about 30°C). The temperatures currently included in the Table would require heating, that was not necessary in a warm climate and might adversely affect the quality of the oil as well as the environment. The Delegation therefore proposed to retain the current Table 1 but to introduce a footnote that would allow for loading and discharge from 30°C to 39°C or ambient temperature. The Delegation also recalled that this proposal had been supported by the 13th Session of the Coordinating Committee for Asia.

86) There was general support for this proposal with no objections. The Delegation of the Philippines proposed deleting the reference to specific temperatures and pointed out that the footnote should also apply to coconut oil, as the conditions for loading were similar.

[7] CX/FO 03/8 (proposal from Indonesia), CRD 4 (comments of the Philippines), CRD 9 (extract from the report of the Coordinating Committee for Asia, ALINORM 03/15).

87) The Committee agreed that the following footnote should be added to Table 1, while retaining the current values in the Table:

> "for warmer climates, the loading and discharge temperature for coconut oil and palm kernel oil is Min 30°C, Max 39°C or ambient temperature"

88) As there was general consensus on this proposal, the Committee agreed to circulate the Proposed Draft Amendment to Table 1 of the *Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk* at Step 3 of the Accelerated Procedure, subject to the approval of the Commission as new work (see Appendix V).

OTHER BUSINESS, FUTURE WORK AND DATE AND PLACE OF NEXT SESSION (AGENDA ITEM 8)[8]

RICE BRAN OIL

89) The Committee noted the proposal from India to develop a new standard for rice bran oil. The Delegation of India, referring to CRD 1, introduced to the Committee various major chemical values of rice bran oil and explained that a substantial amount of rice bran oil was produced, used and traded in Asian countries.

90) Many delegations supported this proposal. However, these delegations also pointed out the necessity to review submitted data and to complete some missing data such as data for fatty acids and sterols. The Committee noted that some data associated with health claims in CRD 1 were not relevant to the standard, as there was no appropriate provisions to incorporate such elements in the Standard.

91) The Delegation of France expressed its reservation on the information provided by India, and referred to the criteria to be developed for the inclusion of new oils with modified composition in the Standard. The Committee, however, recalled that these were criteria for the inclusion of modified types of oils which were already included in the standard and noted that rice bran oil had never been included in the standard. As a result of discussion, the Committee noted that rice bran oil satisfied the criteria developed by the Committee in 1999 (ALINORM 99/17 para 34). In this context, the Delegation of France expressed its intention to draft a discussion paper in order to review the criteria for consideration by the Committee at its next session. The Delegation of Germany also pointed out that the oils proposed for inclusion in the Standard should be marketed for direct consumption for consumers. The Committee suggested that this issue might be addressed in the discussion paper to be drafted by France.

92) The Committee agreed to develop provisions for rice bran oil to include in the Standard for Named Vegetable Oils, subject to the approval of the Commission. The Committee invited India to submit a draft proposed amendment to the Standard for circulation at Step 3, with assistance by other interested countries.

DATE AND PLACE OF THE NEXT SESSION

93) The Committee was informed that the next session was provisionally scheduled to be held in London, United Kingdom, in early 2005 and that the final decision would be made in consultation between the host government and Codex Secretariats, subject to the approval of the Commission.

[8] CRD 1 (India)

SUMMARY STATUS OF WORK

Subject Matter	**Step**	**Action by**	**Document Reference in ALINORM 03/17**
Draft Revised Standard for Olive Oils and Olive Pomace Oils	8	Governments 26th CAC	para. 31 Appendix II
Proposed Draft Amendments to the Standard for Named Vegetable Oils (inclusion of Palm Superolein, Mid-Oleic Sunflower Oil to the standard and data on Palm Olein and Palm Stearin to the Table 3 and 4)	5/8	Governments 26th CAC	paras. 65, 67 and 69 Appendix III
Draft Standard for Fat Spreads and Blended Spreads	6	Governments 19 th CCFO	para. 61 Appendix IV
Draft Lists of Acceptable Previous Cargoes	7	Governments 19th CCFO	para. 83
Proposed Draft List of Acceptable Previous Cargoes	4	Governments 19th CCFO	para. 83
Proposed Draft Amendments to the Standard for Named Vegetable Oils: - amendment to Sesameseed Oil - Rice bran oil	1/2/3	26th CAC Governments 19th CCFO	 para. 71 para 92
Proposed Draft Amendments to the Recommended International Code of Practice for the Storage and Transport of Edible Fats and Oils in Bulk – amendments to the Table 1	1/2/3 (Accelerated Procedure)	26th CAC Governments 19th CCFO	para 88 (Appendix V)

APPENDIX I

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APPENDIX II

DRAFT REVISED STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS

(At Step 8 of the Procedure)

The Appendix to this standard contains provisions which are intended for voluntary application by commercial partners and not for application by governments.

1. SCOPE

This standard applies to olive oils and olive-pomace oils described in Section 2 presented in a state for human consumption.

2. DESCRIPTION

2.1 ***Olive oil*** is the oil obtained solely from the fruit of the olive tree (*Olea europaea* L.), to the exclusion of oils obtained using solvents or re-esterification processes and of any mixture with oils of other kinds.

2.2 ***Virgin olive oils*** are the oils obtained from the fruit of the olive tree solely by mechanical or other physical means under conditions, particularly thermal conditions, that do not lead to alterations in the oil, and which have not undergone any treatment other than washing, decanting, centrifuging and filtration.

2.3 ***Olive-pomace oil*** is the oil obtained by treating olive pomace with solvents or other physical treatments, to the exclusion of oils obtained by re-esterification processes and of any mixture with oils of other kinds.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 ***Extra virgin olive oil*** virgin olive oil with a free acidity, expressed as oleic acid, of not more than 0.8 grams per 100 grams and whose other characteristics correspond to those laid down for this category.

3.2 ***Virgin olive oil:*** virgin olive oil with a free acidity, expressed as oleic acid, of not more than 2.0 grams per 100 grams and whose other characteristics correspond to those laid down for this category.

3.3 ***Ordinary virgin olive oil*** virgin olive oil with a free acidity, expressed as oleic acid, of not more than 3.3 grams per 100 grams and whose other characteristics correspond to those laid down for this category. [1]

3.4 ***Refined olive oil:*** olive oil obtained from virgin olive oils by refining methods which do not lead to alterations in the initial glyceridic structure. It has a free acidity, expressed as oleic acid, of not more than 0.3 grams per 100 grams and its other characteristics correspond to those laid down for this category.[1]

3.5 ***Olive oil:*** oil consisting of a blend of refined olive oil and virgin olive oils suitable for human consumption. It has a free acidity, expressed as oleic acid, of not more than 1 gram per 100 grams and its other characteristics correspond to those laid down for this category [2].

3.6 ***Refined olive-pomace oil:*** oil obtained from crude olive-pomace oil by refining methods which do not lead to alterations in the initial glyceridic structure. It has a free acidity, expressed as oleic acid, of not more than 0.3 grams per 100 grams and its other characteristics correspond to those laid down for this category [1].

3.7 ***Olive-pomace oil:*** oil consisting of a blend of refined olive-pomace oil and virgin olive oils. It has a free acidity, expressed as oleic acid, of not more than 1 gram per 100 grams and its other characteristics correspond to those laid down for this category [2].

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[1] This product may only be sold direct to the consumer if permitted in the country of retail sale.

[2] The country of retail sale may require a more specific designation.

3.8 Organoleptic characteristics (odour and taste) of virgin olive oils

	Median of the defect	Median of the fruity attribute
Extra virgin olive oil	Me = 0	Me > 0
Virgin olive oil	0 < Me ≤ 2.5	Me > 0
Ordinary virgin olive oil	2.5 < Me ≤ 6.0 *	

* or when the median of the defect is less than or equal to 2.5 and the median of the fruity attribute is equal to 0.

3.9 Fatty acid composition as determined by gas chromatography (% total fatty acids)

	Virgin olive oils	Olive oil Refined olive oil	Olive-pomace oil Refined olive-pomace oil
Fatty acid			
C14:0	0.0 - 0.05	0.0 - 0.05	0.0 - 0.05
C16:0	7.5 – 20.0	7.5 - 20.0	7.5 - 20.0
C16:1	0.3 - 3.5	0.3 - 3.5	0.3 - 3.5
C17:0	0.0 - 0.3	0.0 - 0.3	0.0 - 0.3
C17:1	0.0 - 0.3	0.0 - 0.3	0.0 - 0.3
C18:0	0.5 - 5.0	0.5 - 5.0	0.5 - 5.0
C18:1	55.0 - 83.0	55.0 - 83.0	55.0 - 83.0
C18:2	3.5 – 21.0	3.5 - 21.0	3.5 - 21.0
C18:3	0.0 - 1.0	0.0 - 1.0	0.0 - 1.0
C20:0	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6
C20:1	0.0 - 0.4	0.0 - 0.4	0.0 - 0.4
C22:0	0.0 - 0.2	0.0 - 0.2	0.0 - 0.3
C24:0	0.0 - 0.2	0.0 - 0.2	0.0 - 0.2
Trans fatty acids			
C18:1 T	0.0 - 0.05	0.0 - 0.20	0.0 - 0.40
C18:2 T + C18:3 T	0.0 - 0.05	0.0 - 0.30	0.0 - 0.35

3.10 Sterol and triterpene dialcohol composition

3.10.1 <u>Desmethylsterol composition (% total sterols)</u>

Cholesterol	≤ 0.5
Brassicasterol	≤ 0.2 for olive-pomace oils ≤ 0.1 for other grades
Campesterol	≤ 4.0
Stigmasterol	< campesterol
Delta-7-stigmastenol	≤ 0.5
Beta-sitosterol + delta-5-avenasterol + delta-5-23-stigmastadienol + clerosterol + sitostanol + delta-5-24-stigmastadienol	≥ 93.0

3.10.2. <u>Minimum value for total sterols</u>

Virgin olive oils Refined olive oil Olive oil	1,000 mg/kg
Refined olive-pomace oil	1,800 mg/kg
Olive-pomace oil	1,600 mg/kg

3.10.3. <u>Maximum erythrodiol and uvaol content (% total sterols)</u>

Virgin olive oils	)	
Refined olive oil	)	≤ 4.5
Olive oil	)	

3.11 Wax content

	Level
Virgin olive oils	= 250 mg/kg
Refined olive oil	= 350 mg/kg
Olive oil	= 350 mg/kg
Refined olive-pomace oil	> 350 mg/kg
Olive-pomace oil	> 350 mg/kg

3.12 Maximum difference between the actual and theoretical ECN 42 triglyceride content

Virgin olive oils	0.2
Refined olive oil	0.3
Olive oil	0.3
Olive-pomace oils	0.5

3.13 Maximum stigmastadiene content

Virgin olive oils	0.15 mg/kg

3.14 Peroxide value

	Maximum level
Virgin olive oils	20 milliequivalents of active oxygen/kg oil
Refined olive oil	5 milliequivalents of active oxygen/kg oil
Olive oil	15 milliequivalents of active oxygen/kg oil
Refined olive-pomace oil	5 milliequivalents of active oxygen/kg oil
Olive-pomace oil	15 milliequivalents of active oxygen/kg oil

3.15 Absorbency in ultra-violet K270

	<u>Absorbency in ultra-violet at 270 nm</u>	<u>Delta K</u>
Extra virgin olive oil	≤ 0.22	≤ 0.01
Virgin olive oil	≤ 0.25	≤ 0.01
Ordinary virgin olive oil	≤ 0.30 (*)	≤ 0.01
Refined olive oil	≤ 1.10	≤ 0.16
Olive oil	≤ 0.90	≤ 0.15
Refined olive-pomace oil	≤ 2.00	≤ 0.20
Olive-pomace oil	≤ 1.70	≤ 0.18

* After passage of the sample through activated alumina, absorbency at 270 nm. shall be equal to or less than 0.11.

4. FOOD ADDITIVES

4.1 Virgin olive oils

No additives are permitted in these products.

4.2 Refined olive oil, olive oil, refined olive-pomace oil and olive-pomace oil

The addition of alpha-tocopherol to the above products is permitted to restore natural tocopherol lost in the refining process. The concentration of alpha-tocopherol in the final product shall not exceed 200 mg/kg.

5. CONTAMINANTS

5.1 Heavy metals

The products covered by the provisions of this standard shall comply with maximum limits being established by the Codex Alimentarius Commission but in the meantime the following limits will apply:

	Maximum permissible concentration
Lead (Pb)	0.1 mg/kg
Arsenic (As)	0.1 mg/kg

5.2 Pesticide residues

The products covered by the provisions of this standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for these commodities.

5.3 Halogenated solvents

Maximum content of each halogenated solvent	0.1 mg/kg
Maximum content of the sum of all halogenated solvents	0.2 mg/kg

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. LABELLING

The products shall be labelled in accordance with the Codex General Standard for Labelling of Prepackaged Foods (CODEX STAN 1 – 1985, Rev. 1-1991).

7.1 Name of the food

The name of the product shall be consistent with the descriptions as shown in Section 3 of this standard. In no case shall the designation ‘olive oil’ be used to refer to olive-pomace oils.

7.2 Labelling of Non-Retail Containers

Information on the above labelling requirements shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address of the manufacturer or packer shall appear on the container.

However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING

8.1 Determination of the organoleptic characteristics

According to COI/T.20/Doc. no. 15.

8.2 Determination of free acidity

According to ISO 660 or AOCS Cd 3d-63(99).

8.3 Determination of the fatty acid composition

According to COI/T.20/Doc. no. 24 and ISO 5508 or AOCS Ch 2-91(02) or AOCS Ce 1f-96 (02).

8.4 Determination of *trans* fatty acids content

According to COI/T.20/Doc no. 17 or ISO 15304:2001 or AOCS Ce 1f-96 (02).

8.5 Determination of wax content

According to COI/T.20/Doc. no. 18 or AOCS Ch 8-02 (02).

8.6 Calculation of the difference between the actual and theoretical ECN 42 triglyceride content

According to COI/T.20/Doc. no. 20 or AOCS Ce 5b-89 (97).

8.7 Determination of sterol composition and content

According to COI/T.20/Doc. no. 10 or ISO 12228:1999 or AOCS Ch 6-91 (97).

8.8 Determination of erythrodiol content

According to IUPAC 2.431.

8.9 Determination of stigmastadienes

According to COl/T.20/Doc. no. 11 or ISO 15788-1:1999 or AOCS Cd 26-96 (02).

8.10 Determination of the peroxide value

According to ISO 3960:2001 or AOCS Cd 8b-90 (02).

8.11 Determination of the absorbency in ultra-violet

According to COI/T.20/Doc. no. 19 or ISO 3656:2001 or AOCS Ch 5-91 (01).

8.12 Determination of alpha-tocopherol

According to ISO 9936:1997.

8.13 Determination of arsenic

According to AOAC 952.13 or AOAC 942.17 or AOAC 985.16.

8.14 Determination of lead

According to AOAC 994.02 or ISO 12193:1994 or AOCS Ca 18c-91(97).

8.15 Detection of traces of halogenated solvents

According to COI/T.20/Doc. no. 8.

8.16 Sampling

According to ISO 661:1989 and ISO 5555:2001.

APPENDIX

OTHER QUALITY AND COMPOSITION FACTORS

1. QUALITY CHARACTERISTICS

1.1 Moisture and volatile matter:

	Maximum level
Virgin olive oils	0.2 %
Refined olive oil	0.1 %
Olive oil	0.1 %
Refined olive-pomace oil	0.1 %
Olive-pomace oil	0.1 %

1.2 Insoluble impurities:

Virgin olive oils	0.1 %
Refined olive oil	0.05 %
Olive oil	0.05 %
Refined olive-pomace oil	0.05 %
Olive-pomace oil	0.05 %

1.3 Trace metals:

Iron (Fe)	3 mg/kg
Copper (Cu)	0.1 mg/kg

1.4 Organoleptic characteristics:

1.4.1 Virgin olive oils:

See Section 3 of Standard.

1.4.2 Others:

	Odour	Taste	Colour
Refined olive oil	acceptable	acceptable	light yellow
Olive oil	good	good	light, yellow to green
Refined olive-pomace oil	acceptable	acceptable	light, yellow to brownish yellow
Olive-pomace oil	acceptable	acceptable	light, yellow to green

1.4.3 Appearance at 20°C for 24 hours:

Refined olive oil, olive oil, refined olive-pomace oil, olive-pomace oil:	Limpid

2. COMPOSITION CHARACTERISTICS

2.1 Saturated fatty acids at the 2-position in the triglyceride (sum of palmitic & stearic acids):

	Maximum level
Virgin olive oils	1.5 %
Refined olive oil	1.8 %
Olive oil	1.8 %
Refined olive-pomace oil	2.2 %
Olive-pomace oil	2.2 %

3. CHEMICAL AND PHYSICAL CHARACTERISTICS

3.1 Relative density (20°C/water at 20°C): 0.910-0.916

3.2 Refractive index (n_D^{20}):

Virgin olive oils, Refined olive oil, Olive oil	1.4677-1.4705
Olive-pomace oils	1.4680-1.4707

3.3 Saponification value (mg KOH/g oil):

Virgin olive oils, Refined olive oil, Olive oil	184-196
Olive-pomace oils	182-193

3.4 Iodine value (Wijs):

Virgin olive oils, Refined olive oil, Olive oil	75-94
Olive-pomace oils	75-92

3.5 Unsaponifiable matter:

	Maximum level
Virgin olive oils, Refined olive oil, Olive oil	15 g/kg
Olive-pomace oils	30 g/kg

3.6 Absorbency in ultra-violet K232

	Absorbency in ultra-violet at 232 nm
Extra virgin olive oil	≤ 2.50[3]
Virgin olive oil	≤ 2.60[3]

4. METHODS OF ANALYSIS AND SAMPLING

4.1 Determination of moisture and volatile matter

According to ISO 662:1998.

[3] The country of retail sale may require compliance with these limits when the oil is made available to the end consumer.

4.2 Determination of the insoluble impurities in light petroleum

According to ISO 663:2000.

4.3 Determination of trace metals (iron, copper)

According to ISO 8294:1994 or AOAC 990.05.

4.4 Determination of saponification value

According to ISO 3657:2002 or AOCS Cd 3-25 (02).

4.5 Determination of unsaponifiable matter

According to ISO 3596:2000 or ISO 18609:2000 or AOCS Ca 6b-53 (01).

4.6 Determination of the fatty acids in the 2-position of the triglycerides

According to ISO 6800:1997 or AOCS Ch 3-91 (97).

4.7 Determination of relative density

According to IUPAC 2.101, with the appropriate conversion factor.

4.8 Determination of refractive index

According to ISO 6320:2000 or AOCS Cc 7-25 (02).

4.9 Determination of iodine value

According to ISO 3961:1996 or AOAC 993.20 or AOCS Cd 1d-92 (97).

4.10 Determination of the organoleptic characteristics

According to COl/T.20/Doc. no. 15.

4.11 Determination of the absorbency in ultra-violet

According to COI/T.20/Doc. no. 19 or ISO 3656:2001 or AOCS Ch 5-91 (01).

4.12 Sampling

According to ISO 661:1989 and ISO 5555:2001.

APPENDIX III

PROPOSED DRAFT AMENDMENTS TO THE CODEX STANDARD

FOR NAMED VEGETABLE OILS
(At Steps 5/8 of the Procedure)

The Appendix to this Standard is intended for voluntary application by commercial partners and not for application by governments.

1. SCOPE

This Standard applies to the vegetable oils described in Section 2.1 presented in a state for human consumption.

2. DESCRIPTION

2.1 Product definitions

(Note: synonyms are in brackets immediately following the name of the oil)

2.1.1 **Arachis oil** (peanut oil; groundnut oil) is derived from groundnuts (seeds of *Arachis hypogaea* L.).

2.1.2 **Babassu oil** is derived from the kernel of the fruit of several varieties of the palm *Orbignya spp*.

2.1.3 **Coconut oil** is derived from the kernel of the coconut (*Cocos nucifera* L.).

2.1.4 **Cottonseed oil** is derived from the seeds of various cultivated species of *Gossypium spp*.

2.1.5 **Grapeseed oil** is derived from the seeds of the grape (*Vitis vinifera* L.).

2.1.6 **Maize oil** (corn oil) is derived from maize germ (the embryos of *Zea mays* L.).

2.1.7 **Mustardseed oil** is derived from the seeds of white mustard (*Sinapis alba* L. or *Brassica hirta Moench*), brown and yellow mustard (*Brassica juncea* (L.) Czernajew and Cossen) and of black mustard (*Brassica nigra* (L.) Koch).

2.1.8 **Palm kernel oil** is derived from the kernel of the fruit of the oil palm (*Elaeis guineensis*).

2.1.9 **Palm oil** is derived from the fleshy mesocarp of the fruit of the oil palm (*Elaeis guineensis*).

2.1.10 **Palm olein** is the liquid fraction derived from the fractionation of palm oil (described above).

2.1.11 **Palm stearin** is the high-melting fraction derived from the fractionation of palm oil (described above).

2.1.12 **Palm superolein** is a liquid fraction derived from palm oil (described above) produced through a specially controlled crystallization process to achieve an iodine value of 60 or higher.

2.1.13 **Rapeseed oil** (turnip rape oil; colza oil; ravison oil; sarson oil: toria oil) is produced from seeds of *Brassica napus* L., *Brassica campestris* L., *Brassica juncea* L. and *Brassica tournefortii* Gouan species.

2.1.14 **Rapeseed oil - low erucic acid** (low erucic acid turnip rape oil; low erucic acid colza oil; canola oil) is produced from low erucic acid oil-bearing seeds of varieties derived from the *Brassica napus* L., *Brassica campestris* L. and *Brassica juncea* L., species.

2.1.15 **Safflowerseed oil** (safflower oil; carthamus oil; kurdee oil) is derived from safflower seeds (seeds of *Carthamus tinctorious* L.).

2.1.16 **Safflowerseed oil - high oleic acid** (high oleic acid safflower oil; high oleic acid carthamus oil; high oleic acid kurdee oil) is produced from high oleic acid oil-bearing seeds of varieties derived from *Carthamus tinctorious* L.

2.1.17 **Sesameseed oil** (sesame oil; gingelly oil; benne oil; ben oil; till oil; tillie oil) is derived from sesame seeds (seeds of *Sesamum indicum* L.).

2.1.18 **Soya bean oil** (soybean oil) is derived from soya beans (seeds of *Glycine max* (L.) Merr.).

2.1.19 **Sunflowerseed oil** (sunflower oil) is derived from sunflower seeds (seeds of *Helianthus annuus* L.).

2.1.20 **Sunflowerseed oil - high oleic acid** (high oleic acid sunflower oil) is produced from high oleic acid oil-bearing seeds of varieties derived from sunflower seeds (seeds of *Helianthus annuus* L.).

2.1.21 **Sunflowerseed oil - mid oleic acid (mid-oleic acid sunflower oil)** is produced from mid-oleic acid oil-bearing sunflower seeds (seeds of *Helianthus annuus* L.).

2.2 Other definitions

2.2.1 ***Edible vegetable oils*** are foodstuffs which are composed primarily of glycerides of fatty acids being obtained only from vegetable sources. They may contain small amounts of other lipids such as phosphatides, of unsaponifiable constituents and of free fatty acids naturally present in the fat or oil.

2.2.2 ***Virgin oils*** are obtained, without altering the nature of the oil, by mechanical procedures, e.g. expelling or pressing, and the application of heat only. They may have been purified by washing with water, settling, filtering and centrifuging only.

2.2.3 ***Cold pressed oils*** are obtained, without altering the oil, by mechanical procedures only, e.g. expelling or pressing, without the application of heat. They may have been purified by washing with water, settling, filtering and centrifuging only.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 GLC ranges of fatty acid composition (expressed as percentages)

Samples falling within the appropriate ranges specified in Table 1 are in compliance with this Standard. Supplementary criteria, for example national geographical and/or climatic variations, may be considered, as necessary, to confirm that a sample is in compliance with the Standard.

3.1.1 Low-erucic acid rapeseed oil must not contain more than 2% erucic acid (as % of total fatty acids).

3.1.2 High oleic acid safflower oil must contain not less than 70% oleic acid (as a % of total fatty acids).

3.1.3 High oleic acid sunflower oil must contain not less than 75% oleic acid (as % of total fatty acids).

3.3 Slip point

Palm olein	not more than 24°C
Palm stearin	not less than 44°C
Palm superolein	not more than 19.5°C

4. FOOD ADDITIVES

4.1 No food additives are permitted in virgin or cold pressed oils.

4.2 Flavours

Natural flavours and their identical synthetic equivalents, and other synthetic flavours, except those which are known to represent a toxic hazard**.**

4.3 Antioxidants

			Maximum Level
304	Ascorbyl palmitate	)	500 mg/kg
305	Ascorbyl stearate	)	individually or in combination
306	Mixed tocopherols concentrate		GMP
307	Alpha-tocopherol		GMP
308	Synthetic gamma-tocopherol		GMP
309	Synthetic delta-tocopherol		GMP
310	Propyl gallate		100 mg/kg
319	Tertiary butyl hydroquinone (TBHQ)		120 mg/kg
320	Butylated hydroxyanisole (BHA)		175 mg/kg
321	Butylated hydroxytoluene (BHT)		75 mg/kg
	Any combination of gallates, BHA and BHT and/or TBHQ		200 mg/kg but limits above not to be exceeded
389	Dilauryl thiodipropionate		200 mg/kg

4.4 Antioxidant synergists

330	Citric acid		GMP
331	Sodium citrates		GMP
384	Isopropyl citrates	)	100 mg/kg individually or in combination
	Monoglyceride citrate	)	

4.5 Anti-foaming agents (oils for deepfrying)

900a	Polydimethylsiloxane	10 mg/kg

5. CONTAMINANTS

5.1 Heavy metals

The products covered by the provisions of this Standard shall comply with maximum limits being established by the Codex Alimentarius Commission but in the meantime the following limits will apply:

	Maximum permissible concentration
Lead (Pb)	0.1 mg/kg
Arsenic (As)	0.1 mg/kg

5.2 Pesticide residues

The products covered by the provisions of this Standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for these commodities.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. LABELLING

7.1 Name of the food

The product shall be labelled in accordance with the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991; Codex Alimentarius, Volume 1A). The name of the oil shall conform to the descriptions given in Section 2 of this Standard.

Where more than one name is given for a product in Section 2.1, the labelling of that product must include one of those names acceptable in the country of use.

7.2 Labelling of non-retail containers

Information on the above labelling requirements shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address of the manufacturer or packer shall appear on the container.

However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING

8.1 Determination of GLC ranges of fatty acid composition

According to ISO 5508: 1990 and 5509: 2000; or AOCS Ce 2-66 (97), Ce 1e-91 (01) or Ce 1f-96 (02).

8.2 Determination of slip point

According to ISO 6321: 1991 and Amendment 1: 1998 for all oils; or AOCS Cc 3b-92 (02); or Cc 3-25 (97) for palm oils only.

8.3 Determination of arsenic

According to AOAC 952.13; AOAC 942.17; or AOAC 985.16.

8.4 Determination of lead

According to; AOAC 994.02; or ISO 12193: 1994; or AOCS Ca 18c-91 (97).

Table 1: Fatty acid composition of vegetable oils as determined by gas liquid chromatography from authentic samples [1] (expressed as percentage of total fatty acids) (see Section 3.1 of the Standard)

Fatty acid	Arachis oil	Babassu oil	Coconut oil	Cottonseed oil	Grapeseed oil	Maize oil	Mustardseed oil	Palm oil	Palm kernel oil	Palm olein[2]	Palm stearin[2]
C6:0	ND	ND	ND-0.7	ND	ND	ND	ND	ND	ND-0.8	ND	ND
C8:0	ND	2.6-7.3	4.6-10.0	ND	ND	ND	ND	ND	2.4-6.2	ND	ND
C10:0	ND	1.2-7.6	5.0-8.0	ND	ND	ND	ND	ND	2.6-5.0	ND	ND
C12:0	ND-0.1	40.0-55.0	45.1 53.2	ND-0.2	ND	ND-0.3	ND	ND-0.5	45.0-55.0	0.1-0.5	0.1-0.5
C14:0	ND-0.1	11.0-27.0	16.8-21.0	0.6-1.0	ND-0.3	ND-0.3	ND-1.0	0.5-2.0	14.0-18.0	0.5-1.5	1.0-2.0
C16:0	8.0-14.0	5.2-11.0	7.5-10.2	21.4-26.4	5.5-11.0	8.6-16.5	0.5-4.5	39.3-47.5	6.5-10.0	38.0-43.5	48.0-74.0
C16:1	ND-0.2	ND	ND	ND-1.2	ND-1.2	ND-0.5	ND-0.5	ND-0.6	ND-0.2	ND-0.6	ND-0.2
C17:0	ND-0.1	ND	ND	ND-0.1	ND-0.2	ND-0.1	ND	ND-0.2	ND	ND-0.2	ND-0.2
C17:1	ND-0.1	ND	ND	ND-0.1	ND-0.1	ND-0.1	ND	ND	ND	ND-0.1	ND-0.1
C18:0	1.0-4.5	1.8-7.4	2.0-4.0	2.1-3.3	3.0-6.5	ND-3.3	0.5-2.0	3.5- 6.0	1.0-3.0	3.5-.5.0	3.9-6.0
C18:1	35.0-69	9.0-20.0	5.0-10.0	14.7-21.7	12.0-28.0	20.0-42.2	8.0-23.0	36.0-44.0	12.0-19.0	39.8-46.0	15.5-36.0
C18:2	12.0-43.0	1.4-6.6	1.0-2.5	46.7-58.2	58.0-78.0	34.0-65.6	10.0-24.0	9.0-12.0	1.0-3.5	10.0-13.5	3.0-10.0
C18:3	ND-0.3	ND	ND-0.2	ND-0.4	ND-1.0	ND-2.0	6.0-18.0	ND-0.5	ND-0.2	ND-0.6	ND-0.5
C20:0	1.0-2.0	ND	ND-0.2	0.2-0.5	ND-1.0	0.3-1.0	ND-1.5	ND-1.0	ND-0.2	ND-0.6	ND-1.0
C20:1	0.7-1.7	ND	ND-0.2	ND-0.1	ND-0.3	0.2-0.6	5.0-13.0	ND-0.4	ND-0.2	ND-0.4	ND-0.4
C20:2	ND	ND	ND	ND-0.1	ND	ND-0.1	ND-1.0	ND	ND	ND	ND
C22:0	1.5-4.5	ND	ND	ND-0.6	ND-0.5	ND-0.5	0.2-2.5	ND-0.2	ND-0.2	ND-0.2	ND-0.2
C22:1	ND-0.3	ND	ND	ND-0.3	ND-0.3	ND-0.3	22.0-50.0	ND	ND	ND	ND
C22:2	ND	ND	ND	ND-0.1	ND	ND	ND-1.0	ND	ND	ND	ND
C24:0	0.5-2.5	ND	ND	ND-0.1	ND-0.4	ND-0.5	ND-0.5	ND	ND	ND	ND
C24:1	ND-0.3	ND	ND	ND	ND	ND	0.5-2.5	ND	ND	ND	ND

ND - non detectable, defined as 0.05%

[1] Data taken from species as listed in Section 2.

[2] Fractionated product from palm oil.

Table 1: Fatty acid composition of vegetable oils as determined by gas liquid chromatography from authentic samples [1] (expressed as percentage of total fatty acids) (see Section 3.1 of the Standard) (continued)

Fatty acid	Palm superolein[2]	Rapeseed oil	Rapeseed oil (low erucic acid)	Safflowerseed oil	Safflowerseed oil (high oleic acid)	Sesameseed oil	Soyabean oil	Sunflowerseed oil	Sunflowerseed oil (high oleic acid)	Sunflowerseed oil (mid- oleic acid)
C6:0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C8:0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C10:0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
C12:0	0.1-0.5	ND	ND	ND	ND-0.2	ND	ND-0.1	ND-0.1	ND	ND
C14:0	0.5-1.5	ND-0.2	ND-0.2	ND-0.2	ND-0.2	ND-0.1	ND-0.2	ND-0.2	ND-0.1	ND-1
C16:0	30.0-39.0	1.5-6.0	2.5-7.0	5.3-8.0	3.6-6.0	7.9-12.0	8.0-13.5	5.0-7.6	2.6-5.0	4.0-5.5
C16:1	ND-0.5	ND-3.0	ND-0.6	ND-0.2	ND-0.2	0.1- 0.2	ND-0.2	ND-0.3	ND-0.1	ND-0.05
C17:0	ND-0.1	ND-0.1	ND-0.3	ND-0.1	ND-0.1	ND-0.2	ND-0.1	ND-0.2	ND-0.1	ND-0.05
C17:1	ND	ND-0.1	ND-0.3	ND-0.1	ND-0.1	ND-0.1	ND-0.1	ND-0.1	ND-0.1	ND-0.06
C18:0	2.8-4.5	0.5-3.1	0.8-3.0	1.9-2.9	1.5-2.4	4.8-6.7	2.0-5.4	2.7-6.5	2.9-6.2	2.1-5.0
C18:1	43.0-49.5	8.0-60.0	51.0-70.0	8.4-21.3	70.0-83.7	35.9-43.0	17-30	14.0-39.4	75-90.7	43.1-71.8
C18:2	10.5-15.0	11.0-23.0	15.0-30.0	67.8-83.2	9.0-19.9	39.1-47.9	48.0 -59.0	48.3-74.0	2.1-17	18.7-45.3
C18:3	0.2-1.0	5.0-13.0	5.0-14.0	ND-0.1	ND-1.2	0.3-0.5	4.5-11.0	ND-0.3	ND-0.3	ND-0.5
C20:0	ND-0.4	ND-3.0	0.2-1.2	0.2- 0.4	0.3-0.6	0.3-0.7	0.1-0.6	0.1-0.5	0.2-0.5	0.2-0.4
C20:1	ND-0.2	3.0-15.0	0.1-4.3	0.1- 0.3	0.1-0.5	ND-0.3	ND-0.5	ND-0.3	0.1-0.5	0.2-0.3
C20:2	ND	ND-1.0	ND-0.1	ND	ND	ND	ND-0.1	ND	ND	ND
C22:0	ND-0.2	ND-2.0	ND-0.6	ND-1.0	ND-0.4	NN-1.1	ND-0.7	0.3-1.5	0.5-1.6	0.6-1.1
C22:1	ND	> 2.0-60.0	ND-2.0	ND-1.8	ND-0.3	ND	ND-0.3	ND-0.3	ND-0.3	ND
C22:2	ND	ND-2.0	ND-0.1	ND	ND	ND	ND	ND-0.3	ND	ND-0.09
C24: 0	ND	ND-2.0	ND-0.3	ND-0.2	ND-0.3	ND-0.3	ND-0.5	ND-0.5	ND-0.5	0.3-0.4
C24:1	ND	ND-3.0	ND-0.4	ND-0.2	ND-0.3	ND	ND	ND	ND	ND

ND - non detectable, defined as ≤ 0.05%

[1] Data taken from species as listed in Section 2.
[2] Fractionated product from palm oil.

APPENDIX

OTHER QUALITY AND COMPOSITION FACTORS

This text is intended for voluntary application by commercial partners and not for application by governments.

1. QUALITY CHARACTERISTICS

1.1 The **colour, odour and taste** of each product shall be characteristic of the designated product. It shall be free from foreign and rancid odour and taste.

		Maximum level
1.2	**Matter volatile at 105°C**	0.2 % m/m
1.3	**Insoluble impurities**	0.05 % m/m
1.4	**Soap content**	0.005 % m/m
1.5	**Iron (Fe):**	
	Refined oils	1.5 mg/kg
	Virgin oils	5.0 mg/kg
1.6	**Copper (Cu)**	
	Refined oils	0.1 mg/kg
	Virgin oils	0.4 mg/kg
1.7	**Acid value**	
	Refined oils	0.6 mg KOH/g Oil
	Cold pressed and virgin oils	4.0 mg KOH/g Oil
	Virgin palm oils	10.0 mg KOH/g Oil
1.8	**Peroxide value:**	
	Refined oils	up to 10 milliequivalents of active oxygen/kg oil
	Cold pressed and virgin oils	up to 15 milliequivalents of active oxygen/kg oil

2. COMPOSITION CHARACTERISTICS

2.1 The **arachidic and higher fatty acid content** of arachis oil should not exceed 48g/kg.

2.2 The **Reichert values** for coconut, palm kernel and babassu oils should be in the ranges 6-8.5, 4-7 and 4.5-6.5, respectively.

2.3 The **Polenske values** for coconut, palm kernel and babassu oils should be in the ranges 13-18, 8-12 and 8-10, respectively.

2.4 The **Halphen test** for cottonseed oil should be positive.

2.5 The **erythrodiol content** of grapeseed oil should be more than 2% of the total sterols.

2.6 The **total carotenoids** (as beta-carotene) for unbleached palm oil, unbleached palm olein and unbleached palm stearin should be in the range 500-2000, 550-2500 and 300-1500 mg/kg, respectively.

2.7 The **Crismer value** for low erucic acid rapeseed oil should be in the range 67-70.

2.8 The **concentration of brassicasterol** in low erucic acid rapeseed oil should be greater than 5% of total sterols.

2.9 The **Baudouin test** should be positive for sesameseed oil.

3. CHEMICAL AND PHYSICAL CHARACTERISTICS

Chemical and Physical Characteristics are given in Table 2.

4. IDENTITY CHARACTERISTICS

4.1 **Levels of desmethylsterols** in vegetable oils as a percentage of total sterols are given in Table 3.

4.2 **Levels of tocopherols and tocotrienols** in vegetable oils are given in Table 4.

5. METHODS OF ANALYSIS AND SAMPLING

5.1 Determination of moisture and volatile matter at 105°C

According to ISO 662: 1998.

5.2 Determination of insoluble impurities

According to ISO 663: 1998.

5.3 Determination of soap content

According to BS 684 Section 2.5; or AOCS Cc 17-95 (97).

5.4 Determination of copper and iron

According to ISO 8294: 1994; or AOAC 990.05; or AOCS Ca 18b-91 (97)

5.5 Determination of relative density

According to IUPAC 2.101, with the appropriate conversion factor.

5.6 Determination of apparent density

According to ISO 6883: 2000, with the appropriate conversion factor; or AOCS Cc 10c-95 (02)

5.7 Determination of refractive index

According to ISO 6320: 2000; or AOCS Cc 7-25 (02)

5.8 Determination of saponification value (SV)

According to ISO 3657: 2002; or AOCS Cd 3-25 (02)

5.9 Determination of iodine value (IV)

Wijs - ISO 3961: 1996; or AOAC 993.20; or AOCS Cd 1d-1992 (97); or by calculation – AOCS Cd 1b-87 (97)

The method to be used for specific named vegetable oils is stipulated in the Standard

5.10 Determination of unsaponifiable matter

According to ISO 3596: 2000; or ISO 18609: 2000; or AOCS Ca 6b-53 (01)

5.11 Determination of peroxide value (PV)

According to AOCS Cd 8b-90 (02); or ISO 3961: 2001

5.12 Determination of total carotenoids

According to BS 684 Section 2.20.

5.13 Determination of acidity

According to ISO 660: 1996; or AOCS Cd 3d-63 (99)

5.14 Determination of sterol content

According to ISO 12228: 1999; or AOCS Ch 6-91 (97)

5.15 Determination of tocopherol content

According to ISO 9936: 1997; or AOCS Ce 8-89 (97)

5.16 Halphen test

According to AOCS Cb 1-25 (97).

5.17 Crismer value

According to AOCS Cb 4-35 (97) and AOCS Ca 5a-40 (97).

5.18 Baudouin test (modified Villavecchia test or sesameseed oil test)

According to AOCS Cb 2-40 (97).

5.19 Reichert value and Polenske value

According to AOCS Cd 5-40 (97)

Table 2: Chemical and physical characteristics of crude vegetable oils (see Appendix of the Standard)

	Arachis oil	Babassu oil	Coconut oil	Cottonseed oil	Grapeseed oil	Maize oil	Mustardseed oil	Palm oil	Palm kernel	Palm olein[2]
Relative density (x°C/water at 20°C)	0.912-0.920 x=20°C	0.914-0.917 x=25°C	0.908-0.921 x=40°C	0.918-0.926 x=20°C	0.920-0.926 x=20°C	0.917-0.925 x=20°C	0.910-0.921 x=20°C	0.891-0.899 x=50°C	0.899-0.914 x=40°C	0.899-0.920 x=40°C
Apparent density (g/ml)								0.889-0.895 (50°C)		0896-0.898 at 40°C
Refractive index (ND 40°C)	1.460-1.465	1.448-1.451	1.448-1.450	1.458-1.466	1.467-1.477	1.465-1.468	1.461-1.469	1.454- 1.456 at 50°C	1.448-1.452	1.458-1.460
Saponification value (mg KOH/g oil)	187-196	245-256	248-265	189-198	188-194	187-195	168-184	190-209	230-254	194-202
Iodine value	86-107	10-18	6.3-10.6	100-123	128-150	103-135	92-125	50.0-55.0	14.1-21.0	≥ 56
Unsaponifiable matter (g/kg)	≤ 10	≤ 12	≤ 15	≤ 15	≤ 20	≤ 28	≤ 15	≤ 12	≤ 10	≤ 13
Stable carbon isotope ratio *						-13.71 to -16.36				

* See the following publications:

Woodbury SP, Evershed RP and Rossell JB (1998). Purity assessments of major vegetable oils based on gamma 13C values of individual fatty acids. *JAOCS*, **75** (3), 371-379.

Woodbury SP, Evershed RP and Rossell JB (1998). Gamma 13C analysis of vegetable oil, fatty acid components, determined by gas chromatography-combustion-isotope ratio mass spectrometry, after saponification or regiospecific hydrolysis. *Journal of Chromatography* A, **805**, 249-257.

Woodbury SP, Evershed RP, Rossell JB, Griffith R and Farnell P (1995). Detection of vegetable oil adulteration using gas chromatography combustion / isotope ratio mass spectrometry. *Analytical Chemistry* **67** (15), 2685-2690.

Ministry of Agriculture, Fisheries and Food (1996). Authenticity of single seed vegetable oils. Working Party on Food Authenticity, MAFF, UK.

[2] Fractionated product from palm oil.

Table 2: Chemical and physical characteristics of crude vegetable oils (see Appendix of the Standard) (continued)

	Palm stearin[2]	Palm superolein[2]	Rapeseed oil	Rapeseed oil (low erucic acid)	Safflowerseed oil	Safflowerseed oil (high oleic acid)	Sesameseed oil	Soyabean oil	Sunflowerseed oil	Sunflowerseed oil (high oleic acid)	Sunflowerseed oil (mid-oleic acid)
Relative density (x° C/water at 20°C)	0.881-0.891 x=60°C	0.900-0.925 x=40°C	0.910-0.920 x=20°C	0.914-0.920 x=20°C	0.922-0.927 x=20°C	0.913-0.919 x=20°C; 0.910-0.916 x=25°C	0.915- 0.924 x=20°C	0.919-0.925 x=20°C	0.918-0.923 x=20°C	0.909-0.915 x=25°C	0.914-0.916 x=20°C
Apparent density (g/ml)	0.881-0.885 at 60°C	0.897-0.920				0.912-0.914 at 20°C					
Refractive index (ND 40°C)	1.447-1.452 at 60°C	1.463-1.465	1.465-1.469	1.465-1.467	1.467-1.470	1.460-1.464 at 40°C; 1.466-1.470 at 25°C	1.465-1.469	1.466-1.470	1.461- 1.468	1.467- 1.471 at 25°C	1.461- 1.471 at 25°C
Saponification value (mg KOH/g oil)	193-205	180-205	168-181	182-193	186-198	186-194	186-195	189-195	188-194	182-194	190-191
Iodine value	≤ 48	≥ 60	94-120	105-126	136-148	80-100	104-120	124-139	118-141	78-90	94-122
Unsaponifiable matter (g/kg)	≤ 9	≤ 13	≤ 20	≤ 20	≤ 15	≤ 10	≤ 20	≤ 15	≤ 15	≤ 15	≤15

[2] Fractionated product from palm oil.

Table 3: Levels of desmethylsterols in crude vegetable oils from authentic samples[1] as percentage of total sterols (see Appendix 1 of the Standard)

	Arachis oil	Babassu oil	Coconut oil	Cottonseed oil	Grapeseed oil	Maize oil	Palm oil	Palm olein[2]	Palm kernel oil	Palm stearin[2]
Cholesterol	ND-3.8	1.2-1.7	ND-3.0	0.7-2.3	ND-0.5	0.2-0.6	2.6-6.7	2.6-7.0	0.6-3.7	2.5-5.0
Brassicasterol	ND-0.2	ND-0.3	ND-0.3	0.1- 0.3	ND-0.2	ND-0.2	ND	ND	ND-0.8	ND
Campesterol	12.0-19.8	17.7-18.7	6.0-11.2	6.4-14.5	7.5-14.0	16.0-24.1	18.7-27.5	12.5-39.0	8.4-12.7	15.0-26.0
Stigmasterol	5.4-13.2	8.7-9.2	11.4-15.6	2.1-6.8	7.5-12.0	4.3-8.0	8.5-13.9	7.0-18.9	12.0-16.6	9.0-15.0
Beta-sitosterol	47.4-69.0	48.2-53.9	32.6-50.7	76.0-87.1	64.0-70.0	54.8-66.6	50.2-62.1	45.0-71.0	62.6-73.1	50.0-60.0
Delta-5-avenasterol	5.0-18.8	16.9-20.4	20.0-40.7	1.8-7.3	1.0-3.5	1.5-8.2	ND-2.8	ND-3.0	1.4-9.0	ND-3.0
Delta-7-stigmastenol	ND-5.1	ND	ND-3.0	ND-1.4	0.5-3.5	0.2-4.2	0.2-2.4	ND-3.0	ND-2.1	ND-3.0
Delta-7-avenasterol	ND-5.5	0.4-1.0	ND-3.0	0.8-3.3	0.5-1.5	0.3-2.7	ND-5.1	ND-6.0	ND-1.4	ND-3.0
Others	ND-1.4	ND	ND-3.6	ND-1.5	ND-5.1	ND-2.4	ND	ND-10.4	ND-2.7	ND-5.0
Total sterols (mg/kg)	900-2900	500-800	400-1200	2700-6400	2000-70*00	7000-22100	300-700	270-800	700-1400	250-500

	Palm superolein[2]	Rapeseed oil (low erucic acid)	Safflowerseed oil	Safflowerseed oil (high oleic acid)	Sesameseed oil	Soyabean oil	Sunflowerseed oil	Sunflowerseed oil (high oleic acid)	Sunflowerseed oil (mid-oleic acid)
Cholesterol	2.0-3.5	ND-1.3	ND- 0.7	ND-0.5	0.1-0.5	0.2-1.4	ND-0.7	ND-0.5	0.1-0.2
Brassicasterol	ND	5.0-13.0	ND-0.4	ND-2.2	0.1-0.2	ND-0.3	ND-0.2	ND-0.3	ND-0.1
Campesterol	22.0-26.0	24.7-38.6	9.2-13.3	8.9-19.9	10.1-20.0	15.8-24.2	6.5-13.0	5.0-13.0	9.1-9.6
Stigmasterol	18.2-20.0	0.2-1.0	4.5-9.6	2.9-8.9	3.4-12.0	14.9-19.1	6.0-13.0	4.5-13.0	9.0-9.3
Beta-sitosterol	55.0-70.0	45.1-57.9	40.2-50.6	40.1-66.9	57.7-61.9	47.0-60	50-70	42.0-70	56-58
Delta-5-avenasterol	0-1.0	2.5-6.6	0.8-4.8	0.2-8.9	6.2-7.8	1.5-3.7	ND-6.9	1.5- 6.9	4.8-5.3
Delta-7-stigmastenol	0-0.3	ND-1.3	13.7-24.6	3.4-16.4	0.5-7.6	1.4-5.2	6.5-24.0	6.5-24.0	7.7-7.9
Delta-7-avenasterol	0-0.3	ND-0.8	2.2-6.3	ND-8.3	1.2-5.6	1.0-4.6	3.0-7.5	ND-9.0	4.3-4.4
Others	0-2.0	ND-4.2	0.5-6.4	4.4-11.9	0.7-9.2	ND-1.8	ND-5.3	3.5-9.5	5.4-5.8
Total sterols (mg/kg)	300-600	4500-11300	2100-4600	2000-4100	4500-19000	1800-4500	2400-5000	1700-5200	

ND - Non-detectable.

[1] Data taken from species as listed in Section 2.
[2] Fractionated product from palm oil.

Table 4: Levels of tocopherols and tocotrienols in crude vegetable oils from authentic samples[1](mg/kg) (see Appendix 1 of the Standard)

	Arachis oil	Babassu oil	Coconut oil	Cottonseed oil	Grapeseed oil	Maize oil	Palm oil	Palm olein[2]	Palm kernel oil	Palm stearin[2]
Alpha-tocopherol	49-373	ND	ND-17	136-674	16-38	23-573	4-193	30-280	ND-44	ND-100
Beta-tocopherol	ND-41	ND	ND-11	ND-29	ND-89	ND-356	ND-234	ND-250	ND-248	ND-50
Gamma-tocopherol	88-389	ND	ND-14	138-746	ND-73	268-2468	ND-526	ND-100	ND-257	ND-50
Delta-tocopherol	ND-22	ND	ND	ND-21	ND-4	23-75	ND-123	ND-100	ND	ND-50
Alpha-tocotrienol	ND	25-46	ND-44	ND	18-107	ND-239	4-336	50-500	ND	20-150
Gamma-tocotrienol	ND	32-80	ND-1	ND	115-205	ND-450	14-710	20-700	ND-60	10-500
Delta-tocotrienol	ND	9-10	ND	ND	ND-3.2	ND-20	ND-377	40-120	ND	5-150
Total (mg/kg)	170-1300	60-130	ND-50	380-1200	240-410	330-3720	150-1500	300-1800	ND-260	100-700

	Palm superolein[2]	Rapeseed oil (low erucic acid)	Safflowerseed oil	Safflowerseed oil (high oleic acid)	Sesameseed oil	Soyabean oil	Sunflowerseed oil	Sunflowerseed oil (high oleic acid)	Sunflowerseed oil (mid-oleic acid)
Alpha-tocopherol	130-240	100-386	234-660	234-660	ND-3.3	9-352	403-935	400-1090	488-668
Beta-tocopherol	ND-40	ND-140	ND-17	ND-13	ND	ND-36	ND-45	10-35	19-52
Gamma-tocopherol	ND-40	189-753	ND-12	ND-44	521-983	89-2307	ND-34	3-30	2.3-19.0
Delta-tocopherol	ND-30	ND-22	ND	ND-6	4-21	154-932	ND-7.0	ND-17	ND-1.6
Alpha-tocotrienol	170-300	ND	ND	ND	ND	ND-69	ND	ND	ND
Gamma-tocotrienol	230-420	ND	ND-12	ND-10	ND-20	ND-103	ND	ND	ND
Delta-tocotrienol	60-120	ND	ND	ND	ND	ND	ND	ND	ND
Total (mg/kg)	400-1400	430-2680	240-670	250-700	330-1010	600-3370	440-1520	450-1120	509-741

ND - Non-detectable.
Note: Maize oil also contains ND-52 mg/kg beta tocotrienol.

[1] Data taken from species as listed in Section 2.
[2] Fractionated product from palm oil.

APPENDIX IV

DRAFT STANDARD FOR FAT SPREADS AND BLENDED SPREADS
(At Step 6 of the Procedure)

1. SCOPE

This Standard applies to fat products, containing not less than 10% and not more than 90% fat, intended primarily for use as spreads. However, this Standard does not apply to fat spreads derived exclusively from milk and/or milk products to which only other substances necessary for their manufacture have been added. It only includes margarine and products used for similar purposes and excludes products with a fat content of less than 2/3 of the dry matter (excluding salt). Butter and dairy spreads are not covered by this Standard.

2. DESCRIPTION

2.1 Fat Spreads and Blended Spreads

The products covered by this Standard are foods that are plastic or fluid emulsions, principally of water and edible fats and oils**.**

2.2 Edible Fats and Oils

"Edible fats and oils" means foodstuffs composed mainly of [tri]glycerides of fatty acids. They are of vegetable or animal (including milk) or marine origin. They may contain small amounts of other lipids such as partial glycerides or phosphatides, of unsaponifiable constituents and of free fatty acids naturally present in fat or oil. Fats of animal origin must, if originating from slaughtered animals, be obtained from animals in good health at the time of slaughter and fit for human consumption as determined by a competent authority recognised in national legislation. Fats and oils that have been subjected to processes of physical or chemical modification including fractionation, inter-esterification or hydrogenation are included.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Composition

3.1.1 <u>Fat Spreads</u>

3.1.1.1 For these products, any milk fat content must be no more than 3% of the total fat content.

3.1.1.2 The fat content shall be as follows:

(a)	Margarine	≥ 80%
(b)	Fat spreads [1]	< 80%

3.1.2 <u>Blended Spreads</u>

3.1.2.1 These are blended spreads in which milk fat is more than 3% of the total fat content. However a higher minimum percentage of milk fat may be specified in accordance with the requirements of the country of the retail sale.

3.1.2.2 The fat content shall be as follows:

[1] The term "margarine" may, in some cases, be used in the name of the food as provided for in section 7.1.1.

(a)	Blends	≥ 80%
(b)	Blended fat spread	< 80%

3.2 Permitted Ingredients

3.2.1 The following substances may be added to margarine:

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

Maximum and minimum levels for vitamins A, D and E 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.

Sodium Chloride

Sugars (any carbohydrate sweetening matter)

Suitable edible proteins

3.2.2 Use of other ingredients, including minerals, may be permitted in national legislation.

4. FOOD ADDITIVES

4.1 Colours

		MAXIMUM LEVEL
100	(i) Curcumin	GMP
160a	(i) Beta-carotene	25 mg/kg
160a	(ii) Natural carotenes	GMP
160b	Annatto extracts	10 mg/kg (calculated as total bixin or norbixin)
160e	Beta-apo-carotenal	25 mg/kg
160f	Beta-apo-8'-carotenoic acid, methyl or ethyl ester	25 mg/kg

4.2 Flavours

Natural flavours and their identical synthetic equivalents and other synthetic flavours, except those which are known to present a toxic hazard.

4.3 Emulsifiers

			MAXIMUM LEVEL
322	Lecithins	)	GMP
	Polyoxyethylene (20) sorbitan:	)	
432	Monolaurate	)	
433	Mono-oleate	)	10 g/kg singly or in combination
434	Monopalmitate	)	for baking purposes only
435	Monostearate	)	

			MAXIMUM LEVEL
436	Tristearate	)	
471	Mono- and di-glycerides of fatty acids		GMP
472(a)	Acetic and fatty acid esters of glycerol	)	
472(b)	Lactic and fatty acid esters of glycerol	)	
472(c)	Citric and fatty acid esters of glycerol	)	
472(d)	Tartaric acid esters of mono- and di-glycerides of fatty acids	)	GMP
472(e)	Diacetyltartaric and fatty acid esters of glycerol	)	
472(f)	Mixed tartaric, acetic and fatty acid esters of glycerol	)	
473	Sucrose esters of fatty acids		10 g/kg for baking purposes only
474	Sucroglycerides		10 g/kg
475	Polyglycerol esters of fatty acids		5 g/kg
476	Polyglycerol polyricinoleate		4 g/kg (for products containing < 41% fat only)
477	Propylene glycol esters of fatty acids		10g/kg for baking purposes only
479	Thermally oxidised soya bean oil interacted with mono and diglycerides of fatty acids		5g/kg
481	Sodium lactylates	)	
	(i) sodium stearoyl lactylate	)	10 g/kg singly or in combination
482	Calcium lactylates	)	
	(i) calcium stearoyl lactylate	)	
491	Sorbitan monostearate	)	
492	Sorbitan tristearate	)	
493	Sorbitan monolaurate	)	10 g/kg singly or in combination
494	Sorbitan monooleate	)	
495	Sorbitan monopalmitate	)	

4.4 Preservatives

			MAXIMUM LEVEL
200	Sorbic acid	)	2,000 mg/kg singly or in combination
202	Potassium sorbate	)	(as sorbic acid) for fat contents < 60%,
203	Calcium sorbate	)	1,000mg/kg singly or in combination (as sorbic acid) for fat contents > 60%
210	Benzoic acid	)	
211	Sodium benzoate	)	1,000 mg/kg singly or in combination
212	Potassium benzoate	)	(as benzoic acid)
213	Calcium benzoate	)	

4.5 Thickening and stabilising agents

			MAXIMUM LEVEL
339	Na orthophosphate	)	
400	Alginic acid	)	
401	Sodium alginate	)	
402	Potassium alginate	)	
403	Ammonium alginate	)	
404	Calcium alginate	)	

			MAXIMUM LEVEL
405	Propylene glycol alginate	)	
406	Agar	)	
407 (i)	Carrageenan and its Na, K, NH_4 salts (including furcellaran)	)	
410	Carob bean gum	)	
412	Guar Gum	)	
413	Tragacanth gum	)	
414	Gum arabic	)	
415	Xanthan gum	)	
418	Gellan gum	)	
422	Glycerol	)	
440	Pectins	)	
450 (i)	Disodium diphosphate	)	
460 (i)	**MYCROCRYSTALLINE CELLULOSE**		
460 (ii)	**CELLULOSE**		
461	Methyl cellulose	)	
463	Hydroxypropyl cellulose	)	
464	Hydroxypropyl methyl cellulose	)	
465	Methyl ethyl cellulose	)	
466	Sodium carboxymethyl cellulose	)	
500 (i)	Sodium carbonates	)	
500(iii)	Sodium sesquicarbonate	)	
1400	Dextrine roasted starch	)	GMP
1401	Acid treated starch	)	
1402	Alkaline treated starch	)	
1403	Bleached starch	)	
1404	Oxidised starch	)	
1405	Enzyme treated starch	)	
1410	Monostarch phosphate	)	
1412	Distarch phosphate	)	
1413	Phosphated distarch phosphate	)	
1414	Acetylated distarch phosphate	)	
1420	Starch acetate ester. Acetic anhydride	)	
1421	Starch acetate ester. Vinyl acetate	)	
1422	Acetylated distarch adipate	)	
1440	Hydroxypropyl starch	)	
1442	Hydroxypropyl distarch phosphate	)	
	Starch acetate	)	GMP
	Cellulose and microcrystalline cellulose	)	

4.6 Acidity Regulators

			MAXIMUM LEVEL
260	Acetic acid	)	
261	Potassium acetate	)	
262 (i)	Sodium acetate	)	
263	Calcium acetate	)	
270	Lactic acid (L-, D- and DL-)	)	
325	Sodium lactate	)	

			MAXIMUM LEVEL
326	Potassium lactate	)	
327	Calcium lactate	)	
330	Citric acid	)	
331	Sodium citrates	)	
	(i) Sodium dihydrogen citrate	)	
	(iii)Trisodium citrate	)	
332	Potassium citrate	)	GMP
333	Calcium citrate	)	
334	Tartaric acid	)	
335	Sodium tartrates	)	
	(i) Monosodium tartrate	)	
	(ii) Disodium tartrate	)	
336	Potassium tartrate	)	
337	Sodium potassium tartrate	)	
338	Ortho-Phosphoric acid	)	
339	Sodium phosphates	)	[GMP]
340	Potassium phosphates	)	
341	Calcium orthophosphate	)	
500(i)	Sodium carbonate	)	
500(ii)	Sodium hydrogen carbonate	)	
524	Sodium hydroxide	)	GMP
526	Calcium hydroxide	)	
575	Glucono delta lactone	)	

4.7 Antioxidants

			MAXIMUM LEVEL
300	Ascorbic acid (L-)	)	
301	Sodium ascorbate	)	
302	Calcium ascorbate	)	GMP
304	Ascorbyl palmitate	)	
305	Ascorbyl stearate	)	500mg/kg
306	Mixed tocopherols concentrate	)	
307	Alpha-tocopherol	)	
310	Propyl gallate		100 mg/kg
319	Tertiary butyl hydroquinone (TBHQ)	)	200 mg/kg singly or in combination
320	Butylated hydroxyanisole (BHA)	)	
321	Butylated hydroxytoluene (BHT)		75 mg/kg
389	Diluaryl thioproprionate		200 mg/kg
	Any combination of gallates, BHA and BHT		Limits for individual compounds are not exceeded.

4.8 Antioxidant synergists

		MAXIMUM LEVEL
384	Iso propyl citrates	100 mg/kg
385	Calcium disodium EDTA	**75 MG/KG**

4.9 Anti-foaming agents

		MAXIMUM LEVEL
900a	Polydimethylsiloxane	**10 MG/KG (FOR FRYING PURPOSES ONLY)**

4.10 Flavour enhancers

		MAXIMUM LEVEL
508	Potassium chloride	GMP
509	Calcium chloride	
510	Ammonium chloride	
511	Magnesium chloride	
620	Glutamic acid	10 g/kg singly or in combination (as glutamic acid)
621	Monosodium glutamate	
622	Monopotassium glutamate	
623	Calcium diglutamate	
624	Monoammonium glutamate	
625	Magnesium diglutamate	
626	Guanylic acid	500 mg/kg singly or in combination (expressed as guanylic acid)
627	Sodium guanylate	
628	Potassium guanylate	
629	Calcium guanylate	
630	Inosinic acid	
631	Disodium inosinate	
632	Dipotassium inosinate	
633	Calcium inosinate	
634	Calcium 5'-ribonucleotides	
635	Disodium 5'-ribonucleotides	

4.11 Sweeteners

		MAXIMUM LEVEL
420	Sorbitol and sorbitol syrup	GMP
421	Mannitol	GMP
953	Isomalt	GMP
965	Maltitol	GMP
966	Lactitol	GMP
967	Xylitol	GMP

4.12 Miscellaneous

		MAXIMUM LEVEL
290	Carbon dioxide	GMP
338	Orthophosphoric acid	GMP
1520	Propylene glycol	GMP
551	Silicon dioxide amorphous	500 mg/kg
941	Nitrogen	GMP
942	Nitrous oxide	GMP

[Suggested amendment to Section 4

Note: The Committee in Paragraph 45 agreed to the two statements used in the Table below that referred to the Tables of the GSFA.

4. FOOD ADDITIVES

(NOTE- the following text is for the purpose of aiding the reader of this draft. It is not intended to be part of the Standard:
Lines that are struck through are intended to be removed from the Table of Additive Provisions for any of the following reasons:
(1) The provisions for use correspond to those for the GSFA. Reference to the GSFA is sufficient.
(2) The additive does not have a full JECFA ADI and will be deleted from the Standard. The additive will be reinstated when the temporary ADI designation is replaced by a full ADI.
(3) A numerical maximum level of use, rather than GMP, has not been established, as is currently required for additives with numerical ADIs listed in the GSFA. These additive provisions, although deleted, will be reinstated when a numerical ML is agreed.

Entries in columns 1 and 2 in **Bold font** (struck through or not) indicate proposed modifications. Some of these are editorial and others are substantive.)

4.1 Colours

Any colour intended for use with the provisions in the Food Categories: 2.0, 2.2, 2.2.1.2 and 2.2.2 of Table 2 of the Codex GSFA, subject to any deviations noted below:

		MAXIMUM LEVEL	COMMENTS
~~100**(i)**~~	~~(i) Curcumin~~	~~GMP~~	Has temporary JECFA ADI
~~160a**(I)**~~	~~(i)Beta-carotene~~	~~25 mg/kg~~	1,000 mg/kg in GSFA
~~160a **(ii)**~~	~~(ii) Natural carotenes~~	~~GMP~~	GMP in GSFA
~~160b~~	~~Annatto extracts~~	~~10 mg/kg (calculated as total bixin or norbixin)~~	2.2.1 – 100 mg/kg 02.2.2 – 30 mg/kg ***But seek further comments***
~~160e~~	~~Beta-apo-carotenal~~	~~25 mg/kg~~	1,000 mg/kg
~~160f~~	~~Beta-apo-8'-carotenoic acid, methyl or ethyl ester~~	~~25 mg/kg~~	1,000 mg/kg

4.2 Flavours

Natural flavours and their identical synthetic equivalents and other synthetic flavours, except those which are known to present a toxic hazard.

4.3 Emulsifiers

Any emulsifier listed in Table 3 of the Codex GSFA. Table 3 Emulsifiers with restrictions are included in the Table below:

No restrictions noted

Any emulsifier intended for use with the provisions in the Food Categories: 2.0, 2.2, 2.2.1.2 and 2.2.2 of Table 2 of the Codex GSFA, subject to any deviations noted below:

		MAXIMUM LEVEL	COMMENTS
~~322~~	~~Lecithins~~	~~GMP~~	Table 3 GSFA

		MAXIMUM LEVEL	COMMENTS
	Polyoxyethylene (20) sorbitan:		
432	Monolaurate		
433	Mono-oleate	10,000 mg/kg singly or in combination for baking purposes only	02.0 of Table 2 GSFA ***discuss*** ***"singly or in combination"*** ***"for baking purposes only"***
434	Monopalmitate		
435	Monostearate		
436	Tristearate		
~~471~~	~~Mono- and di-glycerides of fatty acids~~	~~GMP~~	Table 3 GSFA
~~472(a)~~	~~Acetic and fatty acid esters of glycerol~~	~~GMP~~	Table 3 GSFA
~~472(b)~~	~~Lactic and fatty acid esters of glycerol~~	~~GMP~~	Table 3 GSFA
~~472(c)~~	~~Citric and fatty acid esters of glycerol~~	~~GMP~~	Table 3 GSFA
~~472(d)~~	~~Tartaric acid esters of mono- and di-glycerides of fatty acids~~ I	~~GMP~~	No JECFA ADI
~~472(e)~~	~~Diacetyltartaric and fatty acid esters of glycerol~~	~~GMP~~	Temporary JECFA ADI
~~472(f)~~	~~Mixed tartaric, acetic and fatty acid esters of glycerol~~	~~GMP~~	Same as 472(e)
473	Sucrose esters of fatty acids	10,000 mg/kg for baking purposes only	02.2 of Table 2 GSFA ***discuss*** ***"for baking purposes only"***
474	Sucroglycerides	10,000 mg/kg **for baking purposes only**	02.2 of Table 2 GSFA ***discuss*** ***"for baking purposes only"***
475	Polyglycerol esters of fatty acids	5,000 mg/kg	20,000 mg/kg in 2.0 of Table 2 GSFA ***Recommend CCFAC add 2.2.1.2 & 02.2.2*** ***At 5,000 mg/kg***
476	~~Ploygylcerol polyricinoleate~~ **Polyglycerol esters of ineteresterified ricinoleic acid**	4,000 mg/kg ~~(for products containing < 41% fat only)~~	10,000 mg/kg in 2.2 of Table 2 ***Recommend CCFAC add 2.2.1.2 & 02.2.2*** ***At 4,000 mg/kg***
477	Propylene glycol esters of fatty acids	10,000mg/kg for baking purposes only	20,000 mg/kg of Table 2 (Step 8) ***discuss*** ***"for baking purposes only"***
479	**TOSOM** (Thermally oxidised soya bean oil interacted with mono and diglycerides of fatty acids)	5,000 mg/kg **in fat emulsions for frying and baking purposes only**	2.2.1.2 & 02.2.2 of Table 2 GSFA ***Recommend CCFAC add*** ***"in fat emulsions for frying and baking purposes only"***
~~481~~	~~Sodium lactylates~~		
481(i)	~~(i)~~ Sodium stearoyl lactylate	10,000 mg/kg singly	02.2 of Table 2 GSFA

		MAXIMUM LEVEL	COMMENTS
		or in combination with 482(i)	***discuss "singly or in combination"***
482(i)	~~Calcium lactylates~~ ~~(i) c~~Calcium stearoyl lactylate	10,000 mg/kg singly or in combination with 481(i)	02.2 of Table 2 GSFA ***discuss "singly or in combination"***
484	**Stearyl citrate**	**100 mg/kg**	100 mg/kg in 2.2.1.2 of Table 2 (Step 8) ***Recommend CCFAC add for 2.2.2 because it applies to emulsion products also***
491	Sorbitan monostearate		
492	Sorbitan tristearate		
493	Sorbitan monolaurate	10,000 mg/kg singly or in combination	30,000 mg/kg in 2.0 of Table 2 ***Recommend CCFAC add 2.2.1.2 & 02.2.2 At 10,000 mg/kg singly or in combination***
494	Sorbitan monooleate		
495	Sorbitan monopalmitate		

4.4 Preservatives

Any preservative intended for use with the provisions in the Food Categories: 2.0, 2.2, 2.2.1.2 and 2.2.2 of Table 2 of the Codex GSFA, subject to any deviations noted below:

		MAXIMUM LEVEL	COMMENTS
200-203	**SORBATES**		
200	Sorbic acid	2,000 mg/kg singly or in combination (as sorbic acid) ~~for fat contents <60%,~~ ~~1000 mg/kg singly or in combination (as sorbic acid) for fat contents >60%~~	1,000 mg/kg for 02.2.1 and 2,000 for 02.2.2 in Table 2 ***Recommend CCFAC add for 2.2.1.2 At 2,000 mg/kg singly or in combination (as sorbic acid)***
201	**Sodium sorbate**		
202	Potassium sorbate		
203	Calcium sorbate		
210-213	**BENZOATES**		
210	Benzoic acid		
211	Sodium benzoate	1,000 mg/kg singly or in combination	02.2.1.2 & 2.2.2 of Table 2 GSFA

		MAXIMUM LEVEL	COMMENTS
212	Potassium benzoate	(as benzoic acid)	
213	Calcium benzoate		
214, 216, 218	**HYDROXYBENZOATES**		
214	**Ethyl p-hydroxybenzoate**	**1000 mg/kg for fat contents <80%, 300 mg/kg for fat contents >80% ; singly or in combination (as p-hydroxybenzoic acid)**	**1000 mg/kg for 2.2.2 and 300 mg/kg for 2.2.1.2 in Table 2 of the GSFA** ***Require justification of their technological effect at indicated levels***
216	**Propyl p-hydroxybenzoates**		
218	**Methyl p-hydroxybenzoates**		

4.5 Thickening and stabilising agents

Any thickening and stabilising agents listed in Table 3 of the Codex GSFA. Table 3 Thickening and Stabilising Agents with restrictions are included in the Table below:

No restrictions noted

Any thickening and stabilising agents intended for use with the provisions in the Food Categories: 2.0, 2.2, 2.2.1.2 and 2.2.2 of Table 2 of the Codex GSFA, subject to any deviations noted below:

		MAXIMUM LEVEL	COMMENTS
339(i)-(iii)	**PHOSPHATES**		
~~339~~	~~Na orthophosphate~~	~~GMP~~	
~~**339(i)**~~	~~**Monosodium orthophosphate**~~	~~**GMP**~~	2200 mg/kg for 2.2.1.2 & 2.2.2 in Table 2 of GSFA
~~**339(ii)**~~	~~**Disodium orthophosphate**~~	~~**GMP**~~	***Numerical Maximum Level (ML) required***
~~**339(iii)**~~	~~**Trisodium orthophosphate**~~	~~**GMP**~~	
~~400~~	~~Alginic acid~~	~~GMP~~	
~~401~~	~~Sodium alginate~~	~~GMP~~	
~~402~~	~~Potassium alginate~~	~~GMP~~	
~~403~~	~~Ammonium alginate~~	~~GMP~~	
~~404~~	~~Calcium alginate~~	~~GMP~~	
~~405~~	~~Propylene glycol alginate~~	~~GMP~~	3000 mg/kg in Table 2 of GSFA
			Numerical Maximum Level (ML) required
~~406~~	~~Agar~~	~~GMP~~	
~~407 (i)~~	~~Carrageenan and its Na, K,~~	~~GMP~~	

		MAXIMUM LEVEL	COMMENTS
	~~NH_4 salts (including furcellaran)~~		
~~**407a**~~	~~**Processed Eucheuma Seaweed**~~	~~**GMP**~~	
~~410~~	~~Carob bean gum~~	~~GMP~~	
~~412~~	~~Guar Gum~~	~~GMP~~	
~~413~~	~~Tragacanth gum~~	~~GMP~~	
~~414~~	~~Gum arabic~~	~~GMP~~	
~~415~~	~~Xanthan gum~~	~~GMP~~	
~~418~~	~~Gellan gum~~	~~GMP~~	
~~422~~	~~Glycerol~~	~~GMP~~	
~~440~~	~~Pectins~~	~~GMP~~	
~~450 (i)~~	~~Disodium diphosphate~~	~~GMP~~	
~~460 (i)~~	~~**MYCROCRYSTALLINE CELLULOSE**~~	~~GMP~~	
~~460 (ii)~~	~~**CELLULOSE**~~	~~GMP~~	
~~461~~	~~Methyl cellulose~~	~~GMP~~	
~~463~~	~~Hydroxypropyl cellulose~~	~~GMP~~	
~~464~~	~~Hydroxypropyl methyl cellulose~~	~~GMP~~	
~~465~~	~~Methyl ethyl cellulose~~	~~GMP~~	
~~466~~	~~Sodium carboxymethyl cellulose~~	~~GMP~~	
~~500 (i)~~	~~Sodium carbonates~~	~~GMP~~	
~~500(iii)~~	~~Sodium sesquicarbonate~~	~~GMP~~	
~~1400~~	~~Dextrine roasted starch~~	~~GMP~~	
~~1401~~	~~Acid treated starch~~	~~GMP~~	
~~1402~~	~~Alkaline treated starch~~	~~GMP~~	
~~1403~~	~~Bleached starch~~	~~GMP~~	
~~1404~~	~~Oxidised starch~~	~~GMP~~	
~~1405~~	~~Enzyme treated starch~~	~~GMP~~	
~~1410~~	~~Monostarch phosphate~~	~~GMP~~	
~~1412~~	~~Distarch phosphate~~	~~GMP~~	
~~1413~~	~~Phosphated distarch phosphate~~	~~GMP~~	
~~1414~~	~~Acetylated distarch phosphate~~	~~GMP~~	
~~1420~~	~~Starch acetate ester. Acetic anhydride~~	~~GMP~~	
~~1421~~	~~Starch acetate ester. Vinyl acetate~~	~~GMP~~	
~~1422~~	~~Acetylated distarch adipate~~	~~GMP~~	
~~1440~~	~~Hydroxypropyl starch~~	~~GMP~~	
~~1442~~	~~Hydroxypropyl distarch phosphate~~	~~GMP~~	
	~~Starch acetate~~	~~GMP~~	
	~~Cellulose and microcrystalline cellulose~~	~~GMP~~	

4.6 Acidity Regulators (to be reviewed)

		MAXIMUM LEVEL
260	Acetic acid	GMP
261	Potassium acetate	GMP
262 (i)	Sodium acetate	GMP
263	Calcium acetate	GMP
270	Lactic acid (L-, D- and DL-)	GMP
325	Sodium lactate	GMP
326	Potassium lactate	GMP
327	Calcium lactate	GMP
330	Citric acid	GMP
331	Sodium citrates	GMP
	(i) Sodium dihydrogen citrate	GMP
	(iii)Trisodium citrate	GMP
332	Potassium citrate	GMP
333	Calcium citrate	GMP
334	Tartaric acid	GMP
335	Sodium tartrates	GMP
	(i) Monosodium tartrate	GMP
	(ii) Disodium tartrate	GMP
336	Potassium tartrate	GMP
337	Sodium potassium tartrate	GMP
338	Ortho-Phosphoric acid	GMP
339	Sodium phosphates	GMP
340	Potassium phosphates	GMP
341	Calcium orthophosphate	GMP
500(i)	Sodium carbonate	GMP
500(ii)	Sodium hydrogen carbonate	GMP
524	Sodium hydroxide	GMP
526	Calcium hydroxide	GMP
575	Glucono delta lactone	GMP

4.7 Antioxidants (to be reviewed)

		MAXIMUM LEVEL
300	Ascorbic acid (L-))	
301	Sodium ascorbate)	
302	Calcium ascorbate)	GMP
304	Ascorbyl palmitate)	
305	Ascorbyl stearate)	500mg/kg
306	Mixed tocopherols concentrate)	
307	Alpha-tocopherol)	
310	Propyl gallate	100 mg/kg
319	Tertiary butyl hydroquinone (TBHQ))	200 mg/kg singly or in combination
320	Butylated hydroxyanisole (BHA))	
321	Butylated hydroxytoluene (BHT)	75 mg/kg
389	Diluaryl thioproprionate	200 mg/kg
	Any combination of gallates, BHA and BHT	Limits for individual compounds are not exceeded.

4.8 Antioxidant synergists (to be reviewed)

		MAXIMUM LEVEL
384	Iso propyl citrates	100 mg/kg
385	Calcium disodium EDTA	**75 MG/KG**

4.9 Anti-foaming agents (to be reviewed)

		MAXIMUM LEVEL
900a	Polydimethylsiloxane	**10 mg/kg (for frying purposes only)**

4.10 Flavour enhancers (to be reviewed)

		MAXIMUM LEVEL
508	Potassium chloride)	
509	Calcium chloride)	GMP
510	Ammonium chloride)	
511	Magnesium chloride)	
620	Glutamic acid)	
621	Monosodium glutamate)	
622	Monopotassium glutamate)	10 g/kg singly or in combination
623	Calcium diglutamate)	(as glutamic acid)
624	Monoammonium glutamate)	
625	Magnesium diglutamate)	
626	Guanylic acid)	
627	Sodium guanylate)	
628	Potassium guanylate)	
629	Calcium guanylate)	
630	Inosinic acid)	500 mg/kg singly or in combination
631	Disodium inosinate)	(expressed as guanylic acid)
632	Dipotassium inosinate)	
633	Calcium inosinate)	
634	Calcium 5'-ribonucleotides)	
635	Disodium 5'-ribonucleotides)	

4.11 Sweeteners (to be reviewed)

		MAXIMUM LEVEL
420	Sorbitol and sorbitol syrup	GMP
421	Mannitol	GMP
953	Isomalt	GMP
965	Maltitol	GMP
966	Lactitol	GMP
967	Xylitol	GMP

4.12 ~~Miscellaneous~~ Packing Gases & Propellants

Any packing gases and propellants listed in Table 3 of the Codex GSFA.

		MAXIMUM LEVEL	COMMENTS
~~290~~	~~Carbon dioxide~~	~~GMP~~	Table 3 GSFA
~~941~~	~~Nitrogen~~	~~GMP~~	
~~942~~	~~Nitrous oxide~~	~~GMP~~	

4.13 Miscellaneous (still to be classified)

		MAXIMUM LEVEL
338	Orthophosphoric acid	GMP
1520	Propylene glycol	GMP
551	Silicon dioxide amorphous	500 mg/kg **]**

5. CONTAMINANTS

5.1 Heavy metals

The products covered by the provisions of this Standard shall comply with maximum limits being established by the Codex Alimentarius Commission but in the meantime the following limits will apply:

	Maximum permissible concentration
Lead (Pb)	0.1 mg/kg
Arsenic (As)	0.1 mg/kg

5.2 Pesticide residues

The products covered by the provisions of this Standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for these commodities.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. LABELLING

The product shall be labelled in accordance with the Codex General Standard for the Labelling of Pre-packaged Foods (Ref. CODEX STAN 1-1985, Rev. 1-1991; Codex Alimentarius, Volume 1A), Codex Guidelines on the Use of Nutrition Claims (CAC/GL 23-1997) and other relevant food labelling guidelines (Codex Alimentarius, Volume 1A). The product designations should be translated into other languages in a meaningful way and not strictly word by word.

7.1 Name of the Food

The name of the food to be declared on the label shall be as specified in Sections 3.1.1 and 3.1.2.

[For item 3.1.2.2, the name of the product may incorporate the name of the fats and oils in a generic or specific manner.]

7.1.1 In accordance with requirements acceptable in the country of retail sale, fat spreads defined in

section 3.1.1.2 with a fat content of less than 80% may incorporate the term “margarine” in the name of the food, provided that the term is qualified to make clear the lower fat content. Fat spreads with a fat content of 39 to 41% may be designated as “Minarine” or “Halvarine”.

7.2 Labelling of Non-Retail Containers

Information on the above labelling requirements shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address of the manufacturer or packer shall appear on the container.

However, lot identification, and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

7.3 Declaration of Fat Content

7.3.1 The product shall be labelled to indicate fat content in a manner found acceptable in the country of sale.

7.3.2 The milk fat content of blended spreads (3.1.2) shall be indicated in a manner that is clear and not misleading to the consumer.

8. METHODS OF ANALYSIS AND SAMPLING

8.1 Determination of lead

According to AOAC 994.02; or ISO 12193: 1994; or AOCS Ca 18c-91 (97).

8.2 Determination of arsenic

According to AOAC 952.13; AOAC 942.17; or AOAC 985.16.

8.3 Determination of water, solids-non-fat and fat content

According to ISO 3727: 1977; AOAC 920.116; or IDF 80: 1977.

8.4 Determination of milk fat content (Butyric acid)

According to AOAC 990.27; or AOCS Ca 5c-87 (97).

8.5 Determination of salt content

According to IDF 12B: 1988, ISO CD 1738 or AOAC 960.29.

8.6 Determination of vitamin A content

According to AOAC 985.30; AOAC 992.04; or JAOAC 1980, 63, 4.

8.7 Determination of vitamin D content

According to AOAC 981.17.

8.8 Determination of vitamin E content

According to ISO 9936: 1997.

APPENDIX V

RECOMMENDED INTERNATIONAL CODE OF PRACTICE FOR THE STORAGE AND TRANSPORT OF EDIBLE OILS AND FATS IN BULK –
TABLE 1, TEMPERATURES DURING STORAGE, TRANSPORT, LOADING AND DISCHARGE
(At Step 3 of the Accelerated Procedure)(5)

	Storage and bulk shipments		Loading and Discharge	
Oil or fat	**Min °C**	**Max °C**	**Min °C**	**Max °C**
Castor oil	20	25	30	35
Coconut oil	27	32	40 (1)	45 (1)
Cottonseed oil	Ambient	Ambient	20	25 (4)
Fish oil	20	25	25	30
Grapeseed oil	Ambient	Ambient	15	20 (4)
Groundnut oil	Ambient	Ambient	20	25 (4)
Hydrogenated oils	Various	-	Various	- (2)
Illipe butter	38	41	50	55
Lard	40	45	50	55
Linseed oil	Ambient	Ambient	15	20 (4)
Maize (corn) oil	Ambient	Ambient	15	20 (4)
Olive oil	Ambient	Ambient	15	20 (4)
Palm oil	32	40	50	55
Palm olein	25	30	32	35
Palm stearin	40	45	60	70 (3)
Palm kernel oil	27	32	40 (1)	45 (1)
Palm kernel olein	25	30	30	35
Palm kernel stearin	32	38	40	45
Rapeseed/low erucic acid rapeseed oil	Ambient	Ambient	15	20 (4)
Safflower oil	Ambient	Ambient	15	20 (4)
Sesame oil	Ambient	Ambient	15	20 (4)
Sheanut butter	38	41	50	55
Soyabean oil	Ambient	Ambient	20	25 (4)
Sunflower oil	Ambient	Ambient	15	20 (4)
Tallow	45	55	55	65

Notes

(1) For warmer climates, the loading and discharge temperatures for coconut oil and palm kernel oil are Min 30°C, Max 39°C or ambient temperature.

(2) Hydrogenated oils can vary considerably in their slip melting points, which should always be declared. It is recommended that during the voyage, the temperature should be maintained at around the declared melting point and that this should be increased prior to discharge to give a temperature of between 10° C and 15°C above that point to effect a clean discharge.

(3) Different grades of palm stearin may have wide variations in their slip melting points and the temperature quoted may need to be adjusted to suit specific circumstances.

(4) It is recognised that in some cases the ambient temperatures may exceed the recommended maximum figures shown in the Table.

(5) Accelerated Procedure subject to the approval as new work by the Codex Alimentarius Commission