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CODEX/FATS AND OILS/REPORT III

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION

CODEX COMMITTEE ON FATS AND OILS

REPORT OF THIRD MEETING 29th MARCH - 1st APRIL, 1966

1. The Codex Committee on Fats and Oils held its third meeting from 29th March to 1st April, 1966 in London under the chairmanship of Mr. J. H. V. Davies of the United Kingdom. The meeting was attended by 42 delegates and observers from 16 Governments and 7 International Organisations. A list of those participating is attached at Appendix I.

2. The Committee took note of the decisions taken at the Third Session of the Codex Alimentarius Commission concerning the work of the Committee (Paragraph 43 of the Report of the Third Session) and the general principles agreed by the Commission (Appendix III of the Report of the Third Session).

Matters Arising from the Second Meeting of the Committee.

3. The Committee welcomed the co-operation of IUPAC in undertaking the work of elaborating a standard method for the determination of Kirschner Value and took note that an early report from IUPAC on this matter could not be expected. The Committee also noted that the Codex Committee on Methods of Analysis and Sampling was due to consider the question of possible collaborative trials on chromatographical techniques at its next meeting in September 1966.

Draft Standards for Products for Direct Human Consumption.

4. In addition to the Secretariat document CODEX/FATS AND OILS/ENGLISH/14 setting out suggested individual draft standards for certain refined vegetable oils and animal fats, the Committee had before it documents CODEX/FATS AND OILS/ENGLISH/22 and 23 submitted by the Netherlands and La Federation de l'Industrie de l'Huilerie de la C.E.E. (FEDIOL) respectively and circulated at the meeting. These proposed a general standard covering oils for direct consumption supplemented, where necessary, by specific standards for individual products.

5. The majority of delegations agreed that a general standard should be elaborated. The delegations of Canada and the United States were opposed to a general standard and considered that a separate and complete standard for each individual product should be prepared. It was decided to proceed with a general standard, using, as a basis, the FEDIOL proposals contained in CODEX/FATS AND OILS/ENGLISH/23. The following points emerged from the Committee's detailed discussion on the items proposed for inclusion in the general standard:-

- (a) Acid Value. The Committee agreed that it would be necessary to lay down separate limits for virgin oils and refined oils. The Committee also decided that, in the case of refined oils, two levels should be provided, one for the finished product just processed and ready to leave the factory and another, set at a higher level, to apply at the retail stage.
- (b) Peroxide Value. As in the case of acid value, the Committee agreed to provide for two different levels at the processing and retail stages respectively and to seek the views of IUPAC as to the best method of expressing these values. The delegation of Canada considered that the values specified for retail level were too high.
- (c) The Committee agreed that the provision of limits for acid and peroxide values at the processing stage was in accord with the General Principles of the Codex Alimentarius and would be of assistance both to producers and consumers. It was not intended, however, that these limits should apply to oils which, although ready to leave the factory, were to be subject to further processing before being sold for human consumption. The delegation of the United States doubted the practicability of fixing values to apply at retail level. The delegation of the Netherlands was opposed to the fixing of values to apply at the processing stage.
- (d) Some delegations considered that the determination of secondary oxidation products by a carbonyl or benzidine test together with peroxide value would be more informative. The Committee agreed to provide for peroxide values in the draft standard and to seek the views of Governments on the suggested additional criteria.
- (e) Colour, Odour and Taste. Some delegations doubted the need to include, in the standards, quality criteria for colour, odour and taste. There was at present no objective method which was internationally acceptable for the determination of colour. Moreover, odour and taste could not be expressed in objective terms and there were wide variations in consumer preferences to be taken into account. Whilst recognising these difficulties, a majority of delegations nevertheless considered that some provision was desirable for the protection of the consumer. The Committee agreed, therefore, to include a general provision relating to all edible oils and to draw the attention of Governments to its limitations in the hope that it would ultimately be possible to find acceptable objective methods.

(f) Additives.

- (i) Antioxidants. In considering its recommendations on specific antioxidants, the Committee's attention was drawn to the need to specify the actual levels of use of these substances. In view of the fact that the amount of antioxidants actually added varied according to the oil and to its uses and likely storage period, the Committee decided to base its recommendation on the position in national legislations as reported by various delegations. The Committee's decision did not imply any view as to the freedom from health hazard of all or any of the specified antioxidants at the maximum levels proposed.
- (ii) Other additives. The Committee considered that there was no special need for the use of colourings and flavourings in edible oils and in certain circumstances the addition of these substances could lead to the deception of the purchaser. The Committee also discussed the question of vitamins but decided to make no provision for the addition of these substances. This was a complex subject which involved medical considerations and the nutritional needs of individual countries. It needed to be dealt with on a general basis in relation to food as a whole. The delegation of the United States drew attention to the technological value in certain circumstances of the use of the anti-foaming agent dimethyl polysiloxane. The Committee decided to seek the views of other Governments on the need for a provision for anti-foaming agents.
- (g) Contaminants. In proposing the technologically appropriate limits for heavy metals, the Committee noted that copper was a pro-oxidant and that in the view of the delegations of Canada and the United States there appeared to be no justification for a copper limit higher than 0.1 mg/kg. It was agreed to ask Governments to comment specifically on this point.
- (h) Labelling. In considering the provisions to be included in the general standard the Committee noted that some countries permitted the declaration of the contents of larger containers (over 5 litres) to be expressed either by volume or by weight, while for smaller containers declaration was required to be expressed solely in terms of volume. This was in accord with the recommendation of the Codex Committee on Labelling. The Committee considered that there was a possibility of consumers in countries using the metric system being misled in the case of smaller containers if declaration were permitted to be by volume or weight. It was agreed to draw this matter to the attention of the Codex Committee on Labelling.
- (i) Definitions. The Committee agreed that, for the time being, it was best to confine the general standard to edible oils and to continue with separate standards for certain fats. Some delegations drew attention to the difficulties and varying practices in differentiating between oils and fats. The delegation of the United States reported that the U.S.A. trade had overcome this problem by designating all products as either oils or fats, irrespective of the fact that they might be solid at one time and liquid at other times. The United States proposal is at Appendix III. The Committee agreed to bring this to the notice of Governments.

The draft general standard elaborated by the Committee is set out in Part I of Appendix II.

6. When discussing the details of the content of the supplementary specific standards for individual products the Committee had before it, in addition to the Secretariat document CODEX/FATS AND OILS/ENGLISH/14, document CODEX/FATS AND OILS/ENGLISH/19 submitted by the delegation of Canada and circulated just before the meeting. This contained alternative proposals for identifying and defining the fats and oils and made provision defining the product on the basis of the ratio of saturated/unsaturated fatty acids, limits for fatty acid chain lengths and linolenic acid content, the determinations being made by gas liquid chromatography. Most delegations considered that it would be premature to make such provision in the standards at the present time and that further time was needed to study the Canadian proposals. At the request of the Committee, the delegation of Canada undertook to prepare, as soon as possible, a more detailed explanatory note on their proposals. This would be circulated by the U.K. Secretariat in time for Governments to consider the proposals at the same time as the draft standards subsequently agreed by the Committee and set out in Part II of Appendix II.

7. The following points emerged from the detailed discussion on the content of the supplementary draft standards for specific products:-

- (a) Winterisation. Some delegations considered that if oil were winterised provision should be made for a cold test value. The Committee decided to seek the views of Governments as to the need to include a special provision for winterisation.
- (b) Use of synonyms. It was agreed to draw the attention of Governments to the provisions made for synonyms and to ask them to confirm that these were sufficient.
- (c) Aflatoxin in Arachis Oil. The Committee took note that the Codex Committee on Food Hygiene was actively considering the general problem of aflatoxin and would include the consideration of aflatoxin in groundnuts and derived products such as arachis oil.
- (d) Halphen Test for Cottonseed Oil. It was agreed to deal with the limitations of this test when general consideration was given to analytical methods.
- (e) Gossypol in Cottonseed Oil. The delegation of Australia drew attention to the possible need to put forward a limitation and a method of analysis for the toxic substance gossypol which occurs naturally in crude Cottonseed Oil. The delegation of the United States agreed to prepare a paper on this subject for consideration at the next meeting of the Committee.
- (f) Tests for Sesameseed Oil. As in the case of the Halphen Test for Cottonseed Oil, it was agreed to deal with the limitations of the Villavechia and Sesame Oil Tests when general consideration was given to analytical methods.

8. The Committee agreed to submit the draft provisional standard for edible oils at Appendix II to the Codex Alimentarius Commission's Secretariat for circulation to Governments and appropriate International Organisations for comment under Step 3 of the Procedure for elaborating world wide standards.

Draft Standard for Lard

9. The Committee elaborated the draft standard for lard set out in Appendix IV. In discussing this draft standard the Committee took note that WG 3 of Sub-Committee 6 of ISO/TC/34 was undertaking work on Boehmer Value and on the detection of the bleaching and refining of lard. The representative of ISO reported that further information should be available after the meeting of WG 3 to be held in June 1966. The Committee agreed to submit the draft provisional standard for Lard at Appendix IV to the Codex Alimentarius Commission's Secretariat for circulation to Governments and appropriate International Organisations for comment under Step 3 of the Procedure for elaborating world wide standards.

Draft Standard for Rendered Pork Fat.

10. Some delegations considered it unnecessary to include, in a standard for Rendered Pork Fat, provision for the use of a tracer to help differentiate the product from Lard. The Committee decided, however, to ask Governments to comment specifically on whether the use of a tracer should be specified and, if so, to suggest the nature of the tracer. Several delegations considered that the presence of added stearine and hydrogenated pork fat should be declared and the Committee also discussed whether the definition should include reference to the refining or other processing of Rendered Pork Fat. It was decided to ask Governments to comment specifically on these points also. The Committee agreed to submit the draft provisional standard for Rendered Pork Fat at Appendix V to the Codex Alimentarius Commission's Secretariat for circulation to Governments and appropriate International Organisations for comment under Step 3 of the Procedure for elaborating world wide standards.

Draft Standard for Premier Jus.

11. In discussing a draft standard for Premier Jus the Committee considered a proposal from the delegation of Denmark for an alternative 'Derivation' and decided to ask Governments to comment on the two versions. It was agreed that the attention of Governments should be drawn to the view of the delegation of Denmark that proposed lower level of 42.5°C for titre should be raised to 44°C. The Committee agreed to submit the draft provisional standard for Premier Jus at Appendix VI to the Codex Alimentarius Commission's Secretariat for circulation to Governments and appropriate International Organisations for comment under Step 3 of the Procedure for elaborating world wide standards.

Draft Standard for Edible Tallow.

12. The delegations of Denmark, Australia and the Federal Republic of Germany considered that separate standards should be elaborated for beef tallow and mutton tallow. Other delegations considered that, commercially, it was unnecessary to require separation of these fats before rendering and that a single standard for edible tallow was all that was required. It was agreed to proceed on the basis of a single standard and the standard elaborated by the Committee is set out in Appendix VII. It was further agreed to submit this to the Codex Alimentarius Commission's Secretariat for circulation to Governments and appropriate International Organisations for comment under Step 3 of the Procedure for elaborating world wide standards.

Draft Standard for Margarine

13. The Committee considered the draft standard for Margarine, circulated with paper CODEX/FATS AND OILS/ENGLISH/12, together with the comments received on it from member Governments and International Organisations. The following points emerged from the Committee's detailed discussion:-

- (a) Inclusion of milk and milk products. The majority of delegations were in favour of permitting the inclusion of fat derived from milk up to a maximum limit of 10% of the total fat content. The delegations of Australia and New Zealand did not accept that milk fat should be permitted in margarine. The delegations of Denmark and the Federal Republic of Germany considered that a limit of 10% was too high to allow a clear enough distinction between margarine and butter and suggested respectively that the limit should be set at 3% of the total weight of the product and 3% of the total fat content. The delegations of Canada, the United States and Sweden considered that there was no need to impose a limit on the amount of milk fat present in margarine.
- (b) Definition. The delegation of the United States drew attention to the need to provide for fluid types of margarine which were now being produced and it was agreed to make an appropriate amendment to the definition. The delegations of Australia and New Zealand considered that margarine should not in any way be associated with dairy produce and that there should be no reference to milk in the definition.
- (c) Definition of Edible Fats and Oils. Some delegations considered that there was a need to ensure that edible fats and oils were produced only from raw materials that were judged to be acceptable for the purpose by a competent authority recognised by national legislation. The Committee recognised the practical difficulty of giving effect to this proposal and decided that this was a general problem involving other Codex Committees and one which the Committee might possibly have to consider at a later stage. The delegation of Canada recorded that margarine imported into Canada must be accompanied by certification to the effect that any animal oils and fats used in the product were derived from animals in good health at time of slaughter.
- (d) Moisture Limit. The delegations of Australia, Denmark, Spain and the United Kingdom considered that there was a need to provide for a maximum moisture content in the standard but the majority of delegations considered that this was unnecessary in view of the fact that a minimum fat content had been stipulated.
- (e) Vitamins. In making provision for the addition of Vitamins, the Committee considered that maximum and minimum levels should be laid down for Vitamin A and Vitamin D but that these would best be fixed on a national basis in the light of the nutritional needs of individual countries. It was recognised that the stipulation of a maximum limit was particularly important for Vitamin D. The Committee considered that when the standards were eventually published in the Codex, they should be accompanied by an appendix setting out the limits for Vitamins which applied in each country accepting the standard.

(f) Additives.

- (i) Colours. It was agreed that the attention of the Codex Committee on Food Additives should be drawn to the view of some delegations that there was no need to restrict the use of colours to those specified and that any list of colours approved by the Codex Committee on Food Additives for use in food generally should apply to margarine.
- (ii) Flavours. The delegation of Canada drew attention to the use of cultured milk in margarine. The Committee agreed that this would be regarded as a naturally occurring flavouring substance.
- (iii) Emulsifiers. As in the case of colours, it was agreed that the attention of the Codex Committee on Food Additives should be drawn to the view of some delegations that any list of emulsifiers approved by the Codex Committee on Food Additives for use in food generally should apply to margarine. The Committee noted that mono-, and di-glyceride derivatives of sodium sulphacetate were permitted for use as emulsifiers in margarine in the United States and the United Kingdom and suggested that these substances should be added to the list of emulsifiers currently under consideration by the Codex Committee on Food Additives.
- (iv) Preservatives. Some delegations drew attention to the fact that under conditions applying in their countries, preservatives in margarine were unnecessary and were not therefore permitted for use in margarine under their national legislation.
- (g) Weight Categories. The Committee noted that the general provisions laid down by the Codex Committee on Food Labelling would probably require a correct declaration of the net weight. The Committee considered that such a requirement was all that was necessary for margarine and that there was no need to lay down additional requirements for specific weight categories.
- (h) Labelling.
- (i) The Committee did not accept the use of code as a substitute for the name and address of the manufacturer, etc. and agreed that this point would be adequately covered in any general provisions laid down by the Codex Committee on Food Labelling. The Committee considered that a labelling provision should be made to prevent confusion between margarine and dairy products and agreed to include a provision along the lines of Article 4.1 of the Code of Principles Concerning Milk and Milk Products. The delegations of the United States and Sweden registered their objection to the inclusion of this provision. The representative of I.F.M.A. also considered that such a provision was discriminatory and that the position would be adequately met by any general provisions laid down by the Codex Committee on Food Labelling.
- (ii) The Committee decided to lay down a provision to deal with claims for the presence of milk fat. Some delegations considered that the proposed provision was unnecessarily restrictive and that a reference to the presence of milk fat should be permitted when the proportion was below 10% of the total fat content.

- (i) Tracers. A number of delegations were in favour of the use of tracers in margarine so that its presence in butter could readily be detected by simple analytical techniques. Other delegations considered however that the use of tracers was outdated, no longer necessary and should not be provided for in national legislation.

14. The draft standard as revised by the Committee is set out in Appendix VIII and it was agreed to submit this to the Codex Alimentarius Commission for adoption at its next Session as a draft provisional standard under Step 5 of the Procedure for elaborating world wide standards.

"Cooking Fats"

15. The Committee considered the paper (CODEX/FATS AND OILS/ENGLISH/13) prepared by the U.K. Secretariat setting out the problems involved in the preparation of standards for cooking fats. Some delegations pointed out that "cooking fats" did not feature prominently in international trade and that it would be extremely difficult for any standard to cover the wide range of formulations in use in individual countries. The Committee decided not to proceed at this stage with the elaboration of a standard for the whole range of "cooking fats" but considered that there might be merit in having a general standard for fats along the general lines of that drawn up for edible oils. The Committee accepted an offer by the representative of FEDIOL to produce a paper on this subject in collaboration with the International Association of Seed Crushers. The Committee requested that this paper should reflect world-wide practice. It was agreed that the FEDIOL paper should be submitted to the U.K. Secretariat by the end of June 1966 who would then circulate it to Governments and International Organisations for comment by the end of October 1966 and for subsequent consideration at the next meeting of the Committee.

Olive Oil

16. The Committee welcomed the co-operation of the International Olive Oil Council in offering to prepare draft standards for Olive Oil for further consideration by the Committee. The Director of the Council had reported that the Council would be considering the appointment of a committee of experts at their next meeting in May 1966 to undertake this work. The Committee also welcomed the invitation from the Council for a representative of the Committee to attend the next meeting of the Council and agreed that the Chairman should attend on their behalf. It was further agreed that the work already undertaken by the Committee on edible oils would need to be taken into account in the preparation of standards for olive oil and that the possibility of eventually including it in the general standard should be borne in mind.

Future Work

17. The Committee noted that the major items to be dealt with at its 1967 meeting would probably be further consideration, under Step 4, of the standards for edible oils and animal fats elaborated at its third meeting, consideration of a possible general standard for fats referred to in paragraph 15, and possible consideration of draft standards for olive oil. It was also hoped that the draft standard for Margarine would be ready for further consideration under Step 7 of the Procedure for elaborating world wide standards.

18. The Committee asked the Secretariat to prepare a paper, for consideration at its next meeting, setting out proposed standard methods of analysis, and a further paper covering hygiene aspects of fats and oils.

19. It was agreed that a suitable date for the fourth meeting of the Committee would be towards the end of April, 1967.

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PROPOSED DRAFT PROVISIONAL STANDARD FOR EDIBLE OILSPART I - GENERAL REQUIREMENTS1. DEFINITIONS

- 1.1. Edible Oils means foodstuffs, liquid at 20°C, composed of glycerides of fatty acids of vegetable or animal origin. They may contain small amounts of other lipids, such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in the oil.
- 1.2. Virgin Oils means edible oils obtained by mechanical procedures only, and purified by washing, settling, filtering and centrifuging only.

2. QUALITY CHARACTERISTICS2.1. Colour, Odour and Taste

Characteristic of the designated product and free from foreign and rancid odour and taste.

2.2. Acid Value (mg. KOH per g.oil)

Virgin oils - 4.0 max.
(except in specified cases)

Non-virgin oils

Fresh from Refinery	0.2 max
Retail sale	0.3 max

2.3. Peroxide Value

Fresh from Refinery - 0.5 max (ml.N/500 sodium thiosulphate per g.oil), or 1.0 max (meq/kg)

Retail Sale - 10.0 max (ml.N/500 sodium thiosulphate per g.oil), or 20.0 max (meq/kg)

3. ADDITIVES

3.1. The substances approved by the Codex Committee on Food Additives either specifically as suitable for use in fats and oils for human consumption or in a general list of food additives.

3.2. The following is recommended for consideration by the Codex Committee on Food Additives:-

(a) Antioxidants*

Propyl - octyl - and dodecyl gallates, individually or in combination, up to 100 mg/kg;

BHA, BHT, individually or in combination up to 200 mg/kg;

Any combination of gallates with BHA or BHT, or both, not greater than 200 mg/kg;

(b) Citric acid up to 100 mg/kg;

(c) Natural and synthetic tocopherols.]

(* The recommendations on antioxidants do not imply any opinion of the freedom from health hazard of these substances at the maximum levels suggested).

4. CONTAMINANTS

The following maximum limits by weight shall apply:-

Matter volatile at 105°C	:	0.2 per cent
Insoluble impurities	:	0.05 per cent
Soap content	:	0.005 per cent
Iron	:	0.5 mg/kg
∅ Copper	:	0.4 mg/kg
∅ Lead	:	0.5 mg/kg
∅ Arsenic	:	1.0 mg/kg

(∅ The limits for Copper, Lead and Arsenic should fall within any overall limits for heavy metals specified for all foods by the Codex Committee on Food Additives. The limits proposed are put forward as technologically unavoidable.)

5. LABELLING

5.1. General. The provisions of this paragraph are subject to ratification by the Codex Committee on Food Labelling and to any general provisions laid down by that Committee and subsequently approved by the Commission.

5.2. The name designated for the product conforming to the definition at 1.1, of this standard shall be such as to give a true indication of the nature of the oil and not to mislead the consumer.

5.3. Where an oil has been subject to processing which alters its physical characteristics the name of the oil shall not be used unless qualified to indicate the nature of the process.

5.4. The designation 'virgin oil' may only be used for oils conforming to the definition at 1.2. of this standard.

6. METHODS OF ANALYSIS AND SAMPLING

[To be developed in collaboration with the Codex Committee on Methods of Analysis and Sampling.]

PART II - SPECIFIC REQUIREMENTS

The following additional provisions shall apply to the oils specified:-

No.1 SOYA BEAN OIL

1. Derivation

Soya Bean Oil is derived from soya beans (the seeds of Glycine max L. or Glycine hispida).

2. Synonyms

Soybean Oil.

3. Identity Characteristics

Ranges

Relative Density (20°C/water at 20°C)	:	0.919-0.925
Refractive Index ($n_D^{40^\circ C}$)	:	1.466-1.470
Saponification Value (mg.KOH per g.oil)	:	189-195
Unsaponifiable Matter (%)	:	1.5 (maximum)
Iodine Value (Wijs)	:	120-143

4. Labelling

All products designated as Soya Bean (or Soybean) Oil must also conform to this standard.

No.2 ARACHIS OIL

1. Derivation

Arachis Oil is derived from groundnuts (the seeds of Arachis hypogaea).

2. Synonyms

Peanut Oil.

Groundnut Oil.

3. Identity Characteristics

Ranges

Relative Density (20°C/water at 20°C)	:	0.914-0.917
Refractive Index ($n_D^{40^\circ C}$)	:	1.460-1.465
Saponification value (mg.KOH per g.oil)	:	188-196
Unsaponifiable Matter (%)	:	1.0 (maximum)
Iodine Value (Wijs)	:	80-105

4. Specific Test

The minimum arachidic and higher fatty acids content as determined by either of the methods specified in 6 of this standard shall be 4.8 per cent.

5. Labelling

All products designated as Arachis (Peanut or Groundnut) Oil must also conform to this standard.

6. Methods of Analysis

Arachidic and Higher Fatty Acids Content

(a) Modified Renard Test - Section 26.077, A.O.A.C., Tenth Edition (1965), or

(b) Arachis Oil Test (Evers) - Page 97, British Standard 684: 1958

(The foregoing is subject to ratification by the Codex Committee on Methods of Analysis and Sampling).

No. 3 COTTONSEED OIL

1. Derivation

Cottonseed Oil is derived from the seeds of various cultivated species of Gossypium.

2. Identity Characteristics

Ranges

Relative Density (20°C/water at 20°C)	0.918-0.926
Refractive Index ($n_D^{40^\circ C}$)	1.458-1.463
Saponification Value (mg.KOH per g.oil)	189-198
Unsaponifiable Matter (%)	1.5 (maximum)
Iodine Value (Wijs)	99-115

3. Special Test

Halphen Test.

4. Labelling

All products designated as Cottonseed Oil must also conform to this standard.

5. Methods of Analysis

Halphen Test - A.O.C.S. Official Method Cb. 1-25.

(Subject to ratification by the Codex Committee on Methods of Analysis and Sampling).

No.4 SUNFLOWERSEED OIL

1. Derivation

Sunflowerseed Oil is derived from Sunflower seeds (the seeds of Helianthus annuus).

2. Synonyms

Sunflower Oil.

3. Identity Characteristics

Ranges

Relative Density (20°C/water at 20°C)	:	0.918-0.923
Refractive Index ($n_D^{40^\circ C}$)	:	1.467-1.469
Saponification Value (mg.KOH per g.oil)	:	188-194
Unsaponifiable Matter (%)	:	1.5 maximum
Iodine Value (Wijs)	:	110-143

4. Labelling

All products designated as Sunflowerseed (or Sunflower) Oil must also conform to this standard.

No.5 RAPESEED OIL

1. Derivation

Rapeseed Oil is derived from the seeds of Brassica campestris, Brassica napus and Brassica tournefortii.

2. Synonyms

Turnip Rape Oil

Colza Oil

Revison Oil

Sarson Oil

Toria Oil

3. Identity Characteristics

Ranges

Relative Density (20°C/water at 20°C)	:	0.910-0.920
Refractive Index ($n_D^{40^\circ C}$)	:	1.465-1.469
Saponification Value (mg.KOH/g.oil)	:	168-181
Unsaponifiable Matter (%)	:	2.0 (maximum)
Iodine Value (Wijs)	:	97-120
Crismer Value	:	80-85

4. Labelling

- 4.1. All products designated as Rapeseed (Turnip Rape, Colza, Ravison, Sarson or Toria) Oil, must also conform to this standard.
- 4.2. Oil produced from the seeds of ErUCA sativa and conforming to this standard may be designated as Jamba Rape Oil.

5. Methods of Analysis

Crismer Value by A.O.C.S. Official Method Cb 4-35.

(Subject to ratification by the Codex Committee on Methods of Analysis and Sampling.)

No.6 MAIZE OIL

1. Derivation

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

2. Synonyms

Corn Oil.

3. Identity Characteristics

	<u>Ranges</u>
Relative Density (20°C/water at 20°C)	0.917-0.925
Refractive Index ($n_D^{40^\circ C}$)	1.465-1.468
Saponification Value (mg.KOH per g.oil)	187-195
Unsaponifiable Matter (%)	2.8 (maximum)
Iodine Value (Wijs)	103-128

4. Labelling

All products designated as Maize (or Corn) Oil must also conform to this standard.

No.7 SESAMESEED OIL

1. Derivation

Sesame seed Oil is derived from sesame seeds (the seeds of Sesamum indicum L).

2. Synonyms

Sesame Oil
Gingelly Oil
Benne Oil
Ben Oil
Till Oil
Tillie Oil

<u>3. Identity Characteristics</u>	<u>Ranges</u>
Relative Density (20°C/water at 20°C)	0.915-0.923
Refractive Index ($n_D^{40^\circ C}$)	1.465-1.469
Saponification Value (mg.KOH per g.oil)	187-195
Unsaponifiable Matter (%)	2.0 (maximum)
Iodine Value (Wijs)	104-120

4. Specific Tests

Modified Villavechia Test or Sesame Oil Test (Baudoin)

5. Labelling

All products designated as Sesameseed (Sesame, Gingelly, Benne, Ben, Till or Tillie) Oil must also conform to this standard.

6. Methods of Analysis

- (a) Modified Villavechia Test - A.O.C.S. Official Method Cb2 - 40
- (b) Sesame Oil Test (Baudoin) - Page 96, British Standard 684 : 1958

(The foregoing is subject to ratification by the Codex Committee on Methods of Analysis and Sampling.)

No.8 SAFFLOWERSEED OIL

1. Derivation

Safflowerseed Oil is derived from safflower seeds (the seeds of Carthamus tinctorius).

2. Synonyms

Safflower Oil
Carthamus Oil
Kurdee Oil

<u>3. Identity Characteristics</u>	<u>Ranges</u>
Relative Density (20°C/water at 20°C)	0.922-0.927
Refractive Index ($n_D^{40^\circ C}$)	1.467-1.469
Saponification Value (mg.KOH per g.oil)	186-198
Unsaponifiable Matter (%)	1.5 maximum
Iodine Value (Wijs)	135-150

4. Labelling

All products designated as Safflowerseed (Safflower, Carthamus or Kurdee) Oil must also conform to this standard.

U.S.A. DESIGNATIONS OF FATS AND OILS

EDIBLE VEGETABLE OILS

Cottonseed
Arachis (Peanut)
Soya Bean (Soybean)
Sunflowerseed
Rapeseed
Sesameseed
Safflowerseed
Olive Oil
Corn Oil
Coconut
Palm Kernel
Palm
Babassu Kernel

MARINE OILS

Whale
Sperm Whale
Fish (including liver)

ANIMAL FATS

Butter
Lard
Tallow and Grease
Premier Jus
Rendered Pork Fat

PROPOSED DRAFT PROVISIONAL STANDARD FOR LARD1. DEFINITION1.1. Derivation

Lard is the fat rendered from fresh, clean, sound fatty tissues from swine (sus scrofa) in good health at the time of slaughter and fit for human consumption as determined by a competent authority recognised in national legislation. The tissues do not include bones, detached skin, head skin, ears, tails, organs, windpipes, large blood vessels, scrap fat, skimmings, settlings, pressings and the like, and are reasonably free from muscle tissues and blood.

1.2. Identity Characteristics

	<u>Range</u>
<u>RELATIVE DENSITY</u> (40°C/water at 20°C)	: 0.896-0.904
<u>REFRACTIVE INDEX</u> ($n_D^{40^\circ C}$)	: 1.448-1.460
<u>TITRE</u> (°C)	: 32-45
<u>SAPONIFICATION VALUE</u> (mg.KOH per g.fat)	: 192-203
<u>UNSAAPONIFIABLE MATTER</u> (%)	: 1.0 max.
<u>IODINE VALUE</u> (Wijs)	: 45-70

2. SPECIFIC TESTS

✓ To be considered, e.g. Bohmer Value

3. QUALITY CHARACTERISTICS

- 3.1. Colour : White when solid
- 3.2. Odour and taste : Characteristic and free from foreign odours and tastes.
- 3.3. Acid value (mg. KOH per g. fat)
- | | |
|-------------------------------|------------|
| Fresh from place of rendering | : 1.0 max. |
| Retail sale | : 1.3 max. |

3.4. Peroxide value

- | | |
|-------------------------------|--|
| Fresh from place of rendering | : 3.0 max. ml. N/500 sodium thiosulphate per g. fat, or 6.0 max. meq/kg. |
| Retail sale | : 5.0 max. ml. N/500 sodium thiosulphate per g. fat, or 10.0 max meq/kg. |

4. ADDITIVES

4.1. The substances approved by the Codex Committee on Food Additives either, specifically as suitable for use in fats and oils for human consumption, or in a general list of food additives.

4.2. The following is recommended for consideration by the Codex Committee on Food Additives:-

(a) Antioxidants

Propyl, octyl and dodecyl gallates, individually or in combination up to 100 mg/kg.

BHA, BHT, individually or in combination up to 200 mg/kg.

NDGA, up to 100 mg/kg.

Any combination of the above antioxidants, within the limits specified, not to exceed a total of 200 mg/kg., or

Resin guaiac, up to 1,000 mg/kg.

(b) Natural and synthetic tocopherols

(c) Synergists

Citric acid up to 100 mg/kg.

Monoisopropyl citrate up to 100 mg/kg.

Phosphoric acid up to 100 mg/kg.

Monoglyceride up to 100 mg/kg.

Any combination of the above synergists, within the limits specified, not to exceed a total of 100 mg/kg.

5. CONTAMINANTS

The following maximum limits, by weight, shall apply:-

Matter volatile at 105°C	:	0.3 per cent
Impurities	:	0.05 per cent
Soap content	:	0.005 per cent
Iron	:	0.5 mg/kg
*Copper	:	0.4 mg/kg
*Arsenic	:	1.0 mg/kg
*Lead	:	0.5 mg/kg

* The limits for Copper, Arsenic and Lead should fall within any overall limits specified for all foods by the Codex Committee on Food Additives. The proposed limits are put forward as technologically unavoidable.

6. LABELLING

6.1. General. The provisions of this paragraph are subject to ratification by the Codex Committee on Food Labelling and to any general provisions laid down by that Committee and subsequently approved by the Commission.

6.2. All products designated as Lard must conform to this standard.

7. METHODS OF SAMPLING AND ANALYSIS

[To be developed in collaboration with the Codex Committee on Methods of Analysis and Sampling.]

PROPOSED DRAFT PROVISIONAL STANDARD FOR RENDERED PORK FAT1. DEFINITION1.1. Derivation

Rendered pork fat is prepared from the fat of swine (sus scrofa) in good health at time of slaughter and fit for human consumption as judged by a competent authority recognised by national legislation. It may contain fat from bones (properly cleaned), detached skin, from head skin, from ears and from tails, also added pork fat stearine and added hardened pork fat. It may not contain fat associated with stomachs, organs, glands, large blood vessels, scrap fat, skimmings, settlings, pressings and the like. The product may be refined.

1.2. Identity Characteristics

	<u>Range</u>
Relative Density (40°C/water at 20°C)	: 0.894-0.906
Refractive Index ($n_D^{40^\circ C}$)	: 1.448-1.461
Titre (°C)	: 32-45
Saponification Value (mg.KOH per g. fat)	: 192-203
Unsaponifiable matter (%)	: 1.2 max.
Iodine Value (Wijs)	: 45-70

2. SPECIFIC TESTS

[To be developed; this might include provision for use of an easily detectable tracer material to enable the product to be distinguished from lard.]

3. QUALITY CHARACTERISTICS

- 3.1. Colour : White when solid
- 3.2. Odour and Taste : Characteristic, and free from foreign odours and tastes.
- 3.3. Acid value (mg. KOH per g. fat)
- | | |
|--|------------|
| Fresh from place of rendering or from Refinery | : 2.0 max. |
| Retail sale | : 2.5 max. |
- 3.4. Peroxide value
- | | |
|--|--|
| Fresh from place of rendering or from Refinery | : 4.0 max. ml. thiosulphate per g. fat, or 8.0 max. meq/kg. |
| Retail sale | : 8.0 max. ml. thiosulphate per g. fat, or 16.0 max. meq/kg. |

4. ADDITIVES

4.1. The substances approved by the Codex Committee on Food Additives either, specifically as suitable for use in fats and oils for human consumption, or in a general list of food additives.

4.2. The following is recommended for consideration by the Codex Committee on Food Additives:-

(a) Antioxidants

Propyl, octyl and dodecyl gallates, individually or in combination up to 100 mg/kg.

BHA, BHT, individually or in combination up to 200 mg/kg.

NDGA, up to 100 mg/kg.

Any combination of the above antioxidants, within the limits specified, not to exceed a total of 200 mg/kg., or

Resin guaiac, up to 1,000 mg/kg.

(b) Natural and synthetic tocopherols

(c) Synergists

Citric acid up to 100 mg/kg.

Monoisopropyl citrate up to 100 mg/kg.

Phosphoric acid up to 100 mg/kg.

Monoglyceride up to 100 mg/kg.

Any combination of the above synergists, within the limits specified, not to exceed a total of 100 mg/kg.]

5. CONTAMINANTS

The following maximum limits, by weight, shall apply:-

Matter volatile at 105°C	:	0.3 per cent
Impurities	:	0.05 per cent
Soap content	:	0.005 per cent
Iron	:	0.5 mg/kg
*Copper	:	0.4 mg/kg
*Arsenic	:	1.0 mg/kg
*Lead	:	0.5 mg/kg

* The limits for Copper, Arsenic and Lead should fall within any overall limits specified for all foods by the Codex Committee on Food Additives. The proposed limits are put forward as technologically unavoidable.

6. LABELLING

6.1. General. The provisions of this paragraph are subject to ratification by the Codex Committee on Food Labelling and to any general provisions laid down by that Committee and subsequently approved by the Commission.

6.2. All products designated as Rendered Pork Fat must conform to this standard.

7. METHODS OF SAMPLING AND ANALYSIS

[To be developed in collaboration with the Codex Committee on Methods of Analysis and Sampling.]

PROPOSED DRAFT PROVISIONAL STANDARD FOR PREMIER JUS1. DEFINITION1.1. Derivation

Premier Jus is the product obtained by rendering at low heat the fresh fat of heart, caul, kidney and mesentery of bovine animals (Bos taurus) in good health at the time of slaughter and fit for human consumption as determined by a competent authority recognised in national legislation.

Note: Denmark suggests the following alternative derivation aimed at making a clearer distinction between 'killing' and 'cutting' fats:

"Premier Jus is the product obtained by rendering at low heat fresh clean sound fatty tissues from the killing of bovine animals (Bos taurus) in good health at the time of slaughter and fit for human consumption as determined by a competent authority recognised in national legislation.
The tissues do not include cutting fats."]

1.2. Identity Characteristics

	<u>Range</u>
Relative Density (40°C/water at 20°C) :	0.893-0.898
Refractive Index ($n_D^{40^\circ C}$) :	1.450-1.460
Titre (C) :	42.5-47
Saponification value (mg. KOH per g. fat) :	195-200
Unsaponifiable Matter (%) :	1.0 (max.)
Iodine value (Wijs) :	32-45

2. QUALITY CHARACTERISTICS

2.1. Colour : Creamy white to pale yellow.

2.2. Odour and Taste : Characteristic and free from foreign odours and tastes.

2.3. Acid Value (mg. KOH per g. fat)

Fresh from place of rendering : 1.5 max.

Retail sale : 2.0 max.

2.4. Peroxide Value

Fresh from place of rendering : 3.0 max. ml. N/500 sodium thiosulphate per g. fat, or 6.0 max. meq/kg.

Retail sale : 5.0 max. ml. N/500 sodium thiosulphate per g. fat, or 10.0 max. meq/kg.

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3. ADDITIVES,

3.1. The substances approved by the Codex Committee on Food Additives either, specifically as suitable for use in fats and oils for human consumption, or in a general list of food additives.

3.2. The following is recommended for consideration by the Codex Committee on Food Additives:-

(a) Antioxidants

Propyl, octyl and dodecyl gallates, individually or in combination up to 100 mg/kg.

BHA, BHT, individually or in combination up to 200 mg/kg.

NDGA, up to 100 mg/kg.

Any combination of the above antioxidants, within the limits specified, not to exceed a total of 200 mg/kg., or

Resin guaiac up to 1000 mg/kg.

(b) Natural and synthetic tocopherols

(c) Synergists

Citric acid up to 100 mg/kg.

Monoisopropyl citrate up to 100 mg/kg.

Phosphoric acid up to 100 mg/kg.

Monoglyceride up to 100 mg/kg.

Any combination of the above synergists, within the limits specified, not to exceed a total of 100 mg/kg.

4. CONTAMINANTS

The following maximum limits, by weight, shall apply:-

Matter volatile at 105°C	:	0.3 per cent
Impurities	:	0.05 per cent
Soap content	:	Nil
Iron	:	0.5 mg/kg.
*Copper	:	0.4 mg/kg.
*Arsenic	:	1.0 mg/kg.
*Lead	:	0.5 mg/kg.

* The limits for Copper, Arsenic and Lead should fall within any overall limits specified for all foods by the Codex Committee on Food Additives. The proposed limits are put forward as technologically unavoidable.

5. LABELLING

5.1. General. The provisions of this paragraph are subject to ratification by the Codex Committee on Food Labelling and to any general provisions laid down by that Committee and subsequently approved by the Commission.

5.2. All products designated as Premier Jus must conform to this standard.

6. METHODS OF SAMPLING AND ANALYSIS

To be developed in collaboration with the Codex Committee on Methods of Analysis and Sampling.

PROPOSED DRAFT PROVISIONAL STANDARD FOR EDIBLE TALLOW1. DEFINITION1.1. Derivation

Edible Tallow is the product obtained by rendering the fresh, clean, sound, fatty tissues (including trimming and cutting fats), attendant muscles and bones of bovine animals (Bos taurus) and/or sheep (Ovis aries) in good health at the time of slaughter and fit for human consumption as determined by a competent authority recognised in national legislation. The product may be refined.

1.2. Identity Characteristics

	<u>Range</u>
Relative Density (40°C/water at 20°C)	: 0.893-0.904
Refractive Index ($n_D^{40^\circ C}$)	: 1.448-1.460
Titre (°C)	: 40-49
Saponification value (mg. KOH per g. fat)	: 190-202
Unsaponifiable matter (%)	: 1.2 (max.)
Iodine value (Wijs)	: 32-50

2. QUALITY CHARACTERISTICS

- 2.1. Colour : White to pale yellow
- 2.2. Odour and taste : Characteristic and free from foreign odours and tastes.
- 2.3. Acid value (mg. KOH per g. fat)
- | | |
|---|------------|
| Fresh from place of rendering or Refinery | : 2.0 max. |
| Retail sale | : 2.5 max. |
- 2.4. Peroxide value
- | | |
|---|---|
| Fresh from place of rendering or Refinery | : 4.0 max. ml. N/500 sodium thiosulphate per g. fat, or 8.0 max. meq/kg. |
| Retail sale | : 8.0 max. ml. N/500 sodium thiosulphate per g. fat, or 16.0 max. meq/kg. |

3. ADDITIVES

- 3.1. The substances approved by the Codex Committee on Food Additives either, specifically as suitable for use in fats and oils for human consumption, or in a general list of food additives.

3.2. The following is recommended for consideration by the Codex Committee on Food Additives:-

(a) Antioxidants

Propyl, octyl and dodecyl gallates, individually or in combination up to 100 mg/kg.

BHA, BHT, individually or in combination up to 200 mg/kg.

NDGA, up to 100 mg/kg.

Any combination of the above antioxidants, within the limits specified, not to exceed a total of 200 mg/kg., or

Resin guaiac, up to 1000 mg/kg.

(b) Natural and synthetic tocopherols

(c) Synergists

Citric acid up to 100 mg/kg.

Monoisopropyl citrate up to 100 mg/kg.

Phosphoric acid up to 100 mg/kg.

Monoglyceride up to 100 mg/kg.

Any combination of the above synergists, within the limits specified, not to exceed a total of 100 mg/kg.

4. CONTAMINANTS

The following maximum limits, by weight, shall apply:-

Matter volatile at 105 ^o C	:	0.3 per cent
Impurities	:	0.05 per cent
Soap content	:	0.005 per cent
Iron	:	0.5 mg/kg.
*Copper	:	0.4 mg/kg.
*Arsenic	:	1.0 mg/kg.
*Lead	:	0.5 mg/kg.

* The limits for Copper, Arsenic and Lead should fall within any overall limits specified for all foods by the Codex Committee on Food Additives. The proposed limits are put forward as technologically unavoidable.

5. LABELLING

5.1. General. The provisions of this paragraph are subject to ratification by the Codex Committee on Food Labelling and to any general provisions laid down by that Committee and subsequently approved by the Commission.

5.2. All products designated as Edible Tallow must conform to this standard.

5.3. The fats present must be declared, e.g. "made from beef fat", "made from mutton fat", or "made from beef and mutton fat".

6. METHODS OF SAMPLING AND ANALYSIS

✓To be developed in collaboration with the Codex Committee on Methods
of Analysis and Sampling.✓

PROPOSED DRAFT PROVISIONAL STANDARD FOR MARGARINE1. Definition and Application of Standard1.1. Definition

Margarine is a food in the form of a plastic or fluid emulsion, mainly of the type water/oil, produced principally from edible fats and oils, which are not or are only partly derived from milk.

1.2. Application of Standard

This standard will not apply to any product which contains less than 80% fat and is not labelled in any manner which implies, either directly or indirectly, that the product is margarine.

2. Definitions of other terms used in the Standard

'Edible fats and oils' means foodstuffs composed of glycerides of fatty acids of vegetable, animal or marine origin and include fats and oils that have been subjected to processes of modification. They may contain small amounts of other lipids such as phosphatides, unsaponifiable constituents and free fatty acids naturally present in the fat or oil.

'pre-packed' means packed or made up in advance, ready for retail sale in a container.

3. Composition3.1. Raw Materials

- (a) Edible fats and oils or mixtures of these.
- (b) Water and/or milk and/or milk products.

3.2. Minimum fat content: 80% of the product by weight but not more than 10% of the total fat content may be fat derived from milk.

3.3. Additions

The following substances may be added to margarine:

- (a) Vitamins: Vitamin A (esters included)
Vitamin D
Vitamin E

Maximum and minimum levels for Vitamin A and D should be laid down by national legislation in accordance with the needs of each individual country.

- (b) Sodium Chloride.
- (c) Edible carbohydrate sweetening matters.
- (d) Edible Proteins.

4. Food Additives

The substances approved by the Codex Committee on Food Additives as suitable for use in margarine either specifically or in a general list of food additives.

The following is a tentative list put forward for consideration by the Codex Committee on Food Additives:

- a. Colours: Natural carotenes, other carotenoids, colouring substances derived from annatto seeds, curcumin and identical synthetic products.
- b. Flavours: flavouring substances which occur naturally in foodstuffs and identical synthetic products.
- c. Emulsifiers: lecithin (phosphatides), mono - and di-glycerides of non-polymerised fatty acids of vegetable and animal origin.
- d. Preservatives: sorbic acid and benzoic acid and their sodium potassium and calcium salts up to, separately or mixed, expressed as acids, 1,000 mg/kg. of the product.
- e. Anti-oxidants: Propyl, octyl and dodecyl gallates, individually or in combination up to 100 mg/kg.
BHA, BHT, individually or in combination up to 200 mg/kg.
Any combination of the above antioxidants, within the limits specified, not to exceed a total of 200 mg/kg., or Resin guaiac, up to 1,000 mg/kg.
- f. Synergists: Citric acid up to 100 mg/kg.
Monoisopropyl citrate up to 100 mg/kg.
Phosphoric acid up to 100 mg/kg.
Monoglyceride up to 100 mg/kg.
Calcium disodium ethylenediaminetetraacetate up to 75 mg/kg.
Any combination of the above synergists, within the limits specified, not to exceed a total of 100 mg/kg.
- g. Natural and synthetic tocopherols.
- h. Other additives; citric, lactic and tartaric acid and their salts and pH correcting agents.]

5. Packaging

Margarine when sold by retail shall be prepacked and may be sold in a pack of any shape.

6. Labelling

6.1. General. The provisions of this paragraph are subject to ratification by the Codex Committee on Food Labelling and to any general provisions on food labelling laid down by that Committee and subsequently approved by the Commission.

6.2. The product shall be designated 'margarine'.

6.3. Margarine shall not be described or designated on any label, advertisement or publicity material by words or pictorial device or be presented in such a manner as to refer to or be suggestive of milk, butter, other milk products or other dairy term, if likely to lead the purchaser or consumer to suppose that the product is butter or any other milk product, or any other product of which milk or any milk product forms an essential part.

6.4. No reference shall be made for the presence of milk fat or butter in margarine other than a statement of the proportion of milk fat present when this proportion is 10% of the total fat.

6.5. No reference shall be made for the presence of any vitamin in margarine unless the name and quantity of the vitamin is stated on the label.

6.6. 'Reference' for the purposes of paragraphs 6.4 and 6.5 shall not be construed as including a simple mention of milk fat or vitamins in a list of ingredients if such a list is required by national legislation or by general provisions on food labelling laid down by the Codex Committee on Food Labelling and subsequently approved by the Commission.

7. Sampling

7.1. The provisions of this paragraph are subject to ratification by the Codex Committee on Methods of Analysis and Sampling.

7.2. Sampling to determine net weight shall be carried out on a statistically representative number of samples. At the time of sale, the net weight must not be more than 1% less than the net weight stated on the pack. The average weight of the fat present must be at least 80% of the net weight mentioned on the pack.