



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
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(CODEX/FATS AND OILS/REPORT V)  
October 1968

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION  
Sixth Session, Geneva, 4-14 March 1969

CODEX COMMITTEE ON FATS AND OILS

Report of Fifth Session: 16th September - 20th September, 1968

1. The Codex Committee on Fats and Oils held its fifth session from 16th - 20th September, 1968 in London under the Chairmanship of Mr. J. H. V. Davies of the United Kingdom. The meeting was attended by 57 delegates and observers from 23 countries and 7 international organisations. A list of those participating is attached at Appendix I.

General Standards for Edible Fats and Oils (Step 7 of the Procedure)

2. The Committee had before it Codex/Fats and Oils/45, Codex/Fats and Oils/51, Codex/Fats and Oils/52, Codex/Fats and Oils/53, Codex/Fats and Oils/54 and Codex/Fats and Oils/55. After a very full discussion, during which the following points of substance arose, the standard was revised as at Appendix II.

(a) Scope

The Committee decided to amend the Scope provision so as to read:-

"This standard applies to oils, fats and mixtures thereof, including those that have been subjected to processes of modification, but does not apply to any oil or fat which is the subject of a specific Codex commodity standard and is designated by a specific name laid down in such standard".

(b) Description

The Committee decided to amend the definition of Virgin fats and oils as follows:-

"Virgin fats and oils means edible fats and oils obtained by mechanical procedures and the application of heat only. They may have been purified by washing, settling, filtering and centrifuging only".

(c) Glycerides of Fatty Acids

The Committee agreed that the first sentence of the Description of Edible Fats and Oils referred only to fatty acid glycerides of vegetable, animal or marine origin.

(d) Odour and Taste

The Committee agreed that the words "either bland or" should be deleted, since a bland odour and taste was characteristic of a refined oil or fat.

(e) Values at Refinery and Retail Stage

The Committee decided that only a single acid and peroxide value should be included in each standard. These values would apply at any point of enforcement. Separate values at the refinery and at retail sale were not thought to be needed.

(f) Acid Value

The Committee agreed to increase the acid value for non-virgin fats and oils to 0.6 mg KOH per g.

(g) Colours

The Committee decided to add curcumin; the carotenoid colours listed as acceptable for use in food in Appendix VII of the Report of the Fifth Session of the Codex Committee on Food Additives were also added. The Committee recognised that carotene and annatto are liable to fade, particularly in hot climates. However, in the case of ghee substitutes (Vanaspati), the Committee did not have sufficient information before it of the colours, if any, used in those countries manufacturing this product. It decided therefore that any country wishing to use colours other than the carotenoids and annatto in the product would have to provide details of these colours, their specifications and toxicological data for consideration by the Codex Committee on Food Additives before consideration could be given to including them in the standard.

(h) Emulsifiers

The Committee decided that the use of emulsifiers should not be restricted to fats used for baking and cooking fats. It also agreed that there was a technological need for the use of mono-and

di-glycerides of fatty acids at higher levels than 5% by weight. It decided therefore not to include any limitation. The Committee decided not to delete polyglycerol esters of interesterified ricinoleic acid, but invited the delegate of the Argentine to supply detailed information about their toxicological objections to these emulsifiers to the Joint FAO/WHO Expert Committee on Food Additives. The Committee agreed to add polyoxyethylene (20) sorbitan monostearate and polyoxyethylene (20) sorbitan monooleate for which the Joint FAO/WHO Expert Committee on Food Additives has established an acceptable daily intake (ADI). The Committee amended "esters of 1, 2-propylene glycol with one fatty acid radical only" to "1, 2-propylene glycol esters of fatty acids" so as to accord with the substances evaluated by the Joint FAO/WHO Expert Committee on Food Additives. The delegate of the U.S.A. proposed the addition of diacetyl tartaric acid esters of mono- and di-glycerides. This was thought to be a synonym of mono- and di-glycerides of fatty acids esterified with acetyltartaric acid. It was decided that the Codex Committee on Food Additives should be asked to examine the toxicology of the following emulsifiers, suggested by the delegate of the U.S.A.:-

- (i) Succinylated monoglycerides;
- (ii) Stearoyl propylene glycol hydrogen succinate (syn. succistearin);
- (iii) stearylmonoglyceridyl citrate; and
- (iv) hydroxylated lecithin.

(i) Antioxidants

The Committee agreed to add isoamyl gallate to the list of gallates; to add ethyl protocatechuate at a maximum level of 200 mg/kg.; and ascorbyl stearate at 200 mg/kg. The delegate of Japan was asked to supply specifications and toxicological information about these antioxidants to the Codex Committee on Food Additives. It was also decided to add dilauryl thiodipropionate at a maximum level of 200mg/kg; this has been given an ADI by the Joint FAO/WHO Expert Committee on Food Additives. It was decided that the Codex Committee on Food Additives should be asked to examine the toxicology of the following antioxidants, suggested by the delegate of the U.S.A.:-

- (i) 4-hydroxymethyl -2,6-di-tert-butylphenol;
- (ii) stearyl citrate; and
- (iii) 2,4,5-trihydroxybutyrophenone (THBP)

(j) Synergists

The Committee agreed to add sodium citrate without limitation and monoisopropyl citrate and phosphoric acid up to a maximum of 100 mg/kg. The Committee noted the views of the Codex Committee on Food Additives about phosphoric acid, but recognised that this

synergist is at present being used in fats and oils and considered that there were technological reasons for this use. The Committee agreed that monoglyceride citrate, proposed by the delegate of the U.S.A. at a level of 100 mg/kg, was already included in the permitted list of emulsifiers (mono- and di-glycerides of fatty acids esterified with citric acid).

(k) Anti-foaming agents

The Committee agreed that the standard should include a provision for anti-foaming agents and that there was no need to limit their use to fats and oils used for frying. The Committee also agreed that the specification for dimethyl polysiloxane (syn dimethyl silicone) should be that in the Food Chemical Codex and that mixtures of it with silicon-dioxide should be permitted.

(l) Contaminants

The Committee agreed to put in separate figures for iron in virgin and refined oils. They fixed these figures at 5 mg/kg and 1.5 mg/kg respectively.

(m) Oxystearin

The Committee agreed that there were sound technological reasons for using oxystearin up to a maximum of 0.125% by weight in all oils. Oxystearin was useful not only as a crystallisation inhibitor but also as a release agent for bakery goods. The Committee also agreed to include oxystearin in the General Standard.

(n) The delegate of the Federal Republic of Germany did not agree with the provisions for food additives in this standard or in the standards for specific fats and oils or in margarine. He considered that curcumin should be deleted from the list of colours; that only natural flavours and their synthetic equivalents should be permitted; that polyglycerol esters of fatty acids and of interesterified ricinoleic acid, propylene glycol esters of fatty acids, sorbitan monostearate, sorbitan monopalmitate and sorbitan tristearate, stearyl lactic acid and calcium stearyl lactylate should not be permitted in the list of emulsifiers; that the other emulsifiers should be limited to fats and oils and to margarine destined for manufacturing purposes; that only the natural antioxidants should be permitted in products for direct human consumption; that the gallates and BHA should only be permitted in products destined for manufacturing purposes; that BHT, NDGA and resin guaiac should not be permitted; and that anti-foaming agents and oxystearin should not be permitted.

(o) Some delegates pointed out that not all the additives included in the standards were permitted in their countries and suggested that detailed information setting out which additives were permitted or prohibited in each country should be attached to the standards.

(p) Labelling

The Committee agreed:

- (i) that there was no need for the declaration of individual fats and oils to be in specific terms. It was, however, necessary for the consumer to know whether the fat or oil was of animal or vegetable origin and the Committee decided that the class names 'vegetable oil' 'vegetable fat' and 'animal fat' should be used;
- (ii) that where fats and oils are used as ingredients in other foods, it would be sufficient to use class names differentiating between fats and oils of animal and vegetable origin;
- (iii) that there might well be a need for some countries (e.g. for religious reasons) to insist on a statement of the kind of animal from which an oil or fat originated. In such circumstances, it would be a matter for that country to lay down the necessary requirement in its national legislation;
- (iv) that there should be a declaration of all additives present in fats and oils. The Committee agreed that whether the additive should be declared specifically or generically was a matter for the Codex Committees on Food Additives and Food Labelling; and
- (v) that the decisions under (i) to (iii) above should be conveyed to the Codex Committee on Food Labelling.

3. The Committee considered that the revised labelling section met the points raised by the Codex Committee on Food Labelling in paragraphs 47 and 50 of the Report of its Third Session.

4. The Committee decided that the standard should be advanced to Step 8 of the Procedure for the Elaboration of World Wide Standards.

Draft Standards for Specific Oils (Step 7 of the Procedure)

5. The Committee discussed the draft standards for specific oils, and amended them as at Appendices III to XI of this report. The following points emerged during the course of the discussion:-

(a) Colours, Flavours, Antioxidants, Synergists, Anti-foaming agents and Oxystearin

The Committee agreed that the provisions in the General Standard should be included in the standards for the individual vegetable oils, except in the case of virgin oils.

(b) Bellier Index

The Committee noted that this was still under discussion by the International Union of Pure and Applied Chemistry (IUPAC). It was agreed to take no further action until these discussions had been completed.

(c) Iron Content

The delegate of Turkey considered that the maximum level for iron content should be increased to 5 mg/kg in all the vegetable oils. The Committee decided that this figure was justified for virgin oils, but not for refined oils.

(d) Mustardseed Oil (Step 4 of the Procedure)

The Committee decided to elaborate a separate standard for mustard seed oil to cover the species Sinapis alba, Brassica juncea and Brassica nigra. It was also decided to provide for a maximum limit of 0.4% by weight for allyl isothiocyanate.

6. The Committee decided that the standards at Step 7 of the Procedure should be advanced to Step 8 of the Procedure for the Elaboration of World Wide Standards. In the case of Mustardseed Oil, which was at Step 4 of the Procedure, the Committee decided to advance the standard to Step 5 and to recommend to the Codex Alimentarius Commission that since it was uncontroversial the Commission might authorise the omission of Steps 6, 7 and 8 of the Procedures in accordance with paragraph 2 of the Introduction to the Procedure for the Elaboration of Codex Standards.

7. Draft Standards for Animal Fats (Step 7 of the Procedure)

The Committee discussed the draft standards for lard, rendered pork fat, premier jus and edible tallow, and amended them as at Appendices XIII to XV of this Report. The following points emerged during these discussions:-

(a) Need for Separate Standards for Lard and Rendered Pork Fat

The Committee decided that there should be separate standards for these products. The delegates of Canada, the Federal Republic of Germany, Japan and the U.S.A. were of the opinion that only one standard was necessary because rendered pork fat was not an important item in international trade and it was difficult if not impossible to distinguish analytically between lard and rendered pork fat. The delegate of Canada also considered that trade practices in his own and other countries were such that no distinction was in practice made between the two products.

(b) Boehmer Value

The Committee noted that investigations by IUPAC were still continuing. It was decided to take no further action until these investigations had been completed.

(c) Antioxidants

The Committee agreed to include all the antioxidants in the General Standard in the individual standards for animal fats. The Committee noted that the Codex Committee on Food Additives at its Fourth Session had not endorsed NDGA because of inadequate toxicological information and that that Committee had been informed that NDGA was perhaps no longer manufactured. The delegate of the U.S.A. thought that this antioxidant was still being manufactured and used in the U.S.A. in animal fats. The Committee decided therefore to retain it in the standard.

(d) Standard for Rendered Pork Fat

The Committee decided to amend the description to read:-

"Rendered pork fat is the fat rendered from the tissues and bones 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), from detached skin, from head skin, from ears, from tails and from other tissues fit for human consumption."

8. The Committee decided that these standards should be advanced to Step 8 of the Procedure for the Elaboration of World Wide Standards.

Revised Identity Standards for Fats and Oils

9. The Committee had before it Codex/Fats and Oils/45, Codex/Fats and Oils/46, Codex/Fats and Oils/51, Codex/Fats and Oils/52, Codex/Fats and Oils/53 and Codex/Fats and Oils/54.

10. After a full discussion the Committee agreed that considerable progress had been made in the use of gas-liquid chromatography for the identification of fats and oils in terms of their fatty acid composition; and that this method would become the method of choice in the not too distant future. However, there was, as yet, no internationally acceptable technique for the method and not all countries had the necessary equipment. Moreover, no agreement had been reached on acceptable ranges of values for the specific fats and oils. The Committee considered that it was necessary to initiate action at once with the aim of including in the standards as soon as possible ranges of fatty acid contents determined by gas-liquid chromatographic techniques as advisory criteria to assist in the identification of specific fats and oils; these would not be part of the mandatory provisions of the standards. In due course, these values could be substituted for the present mandatory identity characteristics based on classical methods of analysis. As a first step, the Committee agreed to submit the values put forward by the delegate of the U.S.A., as set out in Appendix XVI, to governments for comment and to consider at their next meeting whether the standards should be amended by inserting these values, revised as necessary, into the standards as advisory criteria. The Committee noted that it would be necessary to include values for mustardseed oil.

## Olive Oils (Step 4 of the Procedure)

11. The Committee had before it Codex/Fats and Oils/43 and Codex/Fats and Oils/50. The Committee discussed the draft standard for olive oil and amended it as at Appendix XIX of the Report. The following points arose during the course of the discussions:-

### (a) Description (Virgin Olive Oil)

The Committee decided to amend the definition of virgin olive oil so as to read:-

"Virgin olive oil is the oil obtained from the fruit of the olive-tree by mechanical or other physical means under conditions, particularly thermal, which do not lead to alteration of the oil. Virgin olive oil is an oil which is suitable for consumption in the natural state."

### (b) Description (Refined Olive Oil)

The Committee decided to amend the definition by omitting the words "detectable by the methods of analysis specified in this standard".

### (c) Refractive Index

Though some delegations considered that it might be desirable to bring the standard into line with those for the other vegetable oils by measuring the index at 40°C, it was agreed to leave the temperature at 20°C, since this was generally and traditionally used in olive oil producing countries.

### (d) Acidity

The Committee agreed to include both an Acid Value and a figure for Free Acidity (expressed as oleic acid) in the standard.

### (e) Additives

The Committee agreed that no additives should be permitted in virgin olive oils and in blends of virgin olive oils with refined and refined residue oils, since there was no evidence that they were technologically necessary. Some delegations were of the opinion that the use of additives should be permitted in refined and refined residue olive oils, sold as such. The Committee decided not to include any provisions for additives in the standard. It was pointed out that refined and refined residue olive oils were not normally sold direct to the consumer and that in this respect olive oils differed from the other refined vegetable oils, in which additives were permitted. It was agreed that the provision of the standard which prohibited the use of additives in refined and refined residue oils, sold as such, should be drawn



specifically to the attention of member countries and their views should be sought on the need for additives in these products together with details of the additives actually used and the levels of use.

(f) Methods of Analysis for Olive Oils

The Committee decided that the Soap Test (Page 12 of Appendix IV to the Report of the Third Session of the Codex Committee on Methods of Analysis and Sampling) should be amended by the substitution of the words "The upper acetonetic layer" for the words "The lower acetonetic layer" in the final sentence.

12. The Committee considered the note on the Olive Oil Index Files which had been contained in the previous draft of the standard. They did not think that this note was in a form that would assist in the interpretation or added to the usefulness of the standard. If the Index-files were to be referred to, a more precise reference to them would be required. The Committee agreed therefore to delete the note from the draft standard for the time being.

13. The Committee noted the fact that under exceptional ecological conditions some olive oils from Morocco and perhaps other countries could show a higher Iodine value than that contained in the standard although all other identification, purity and quality characteristics remained within the limits laid down.

14. The Committee emphasised that nothing in the labelling provisions of the standard would prevent blends of virgin olive oils and refined olive oils being classified and sold under type names (e.g. 'Type Riviera'), the characteristics of such types being determined by agreement between buyer and seller.

15. The Committee decided that the standard should be advanced to Step 5 of the Procedure for the Elaboration of World Wide Standards.

Methods of Analysis

16. The Committee had before it Codex/Fats and Oils/42 and Codex/Fats and Oils/48.

17. The Committee agreed that there was a need for qualitative tests to enable the rapid identification of the presence of additives in fats and oils to be made. The Committee agreed to the combined proposals of the delegates of the Netherlands and the U.S.A. that the methods listed in Appendix XVIII of the Report should be recommended to the Codex Committee on Methods of Analysis and Sampling. The observer of ISO drew the Committee's attention to a draft method for the qualitative determination of antioxidants in animal fats (ISO/TC34/SC6/WG3 (Secretariat 50)63).

## Margarine (Step 8 of the Procedure)

18. The Executive Committee of the Codex Alimentarius Commission, after having been informed of the principal comments received from governments decided at its Twelfth Session that the margarine standard should be referred back to the Codex Committee on Fats and Oils, which should re-examine it, in the light of comments received, before it was considered again by the Commission at its Sixth Session.

19. The Committee had before it document CX5/15.3 (March, 1968) and Codex/Fats and Oils/49. During the course of discussion of the margarine standard, the amended version of which is at Appendix XX to the Report, the following points arose:-

(a) Margarines of the type oil/water

The delegate of Japan drew attention to the production in his country of a margarine of the type oil/water, which was of particular value in the making of pastry, and which did not appear to be covered by the Description Section of the standard. The Committee agreed to amend the words "mainly of the type water/oil" to "which is usually mainly of the type water/oil" so as to bring this product clearly within the standard. The observer of I.F.M.A. considered that this amendment was not desirable since it brought a whole new range of foods, which were excluded by the existing description, within the standard. In the opinion of I.F.M.A., one of these foods was mayonnaise. Some delegates agreed with these views.

(b) Use of Milk Fat in Margarine

The Committee decided that the use of milk fat should be allowed in margarine. The Committee recognised that the use of milk fat was a well established manufacturing practice in many countries and an international standard should recognise this fact. The delegates of Australia, Italy and New Zealand considered that the use of milk fat should not be permitted.

(c) Limitation on the amount of milk fat

The Committee decided not to include any maximum figure for milk fat in the standard but to continue to rely on the words "produced principally from edible fats and oils, which are not or are not mainly derived from milk" to ensure a proper distinction between margarine and butter. A number of delegates considered that this might be better done by inserting a limit of 10% for milk fat. The delegates of Australia, the Federal Republic of Germany, New Zealand, Italy and Poland were in favour of no milk fat or only minimal amounts (up to 1%) and the delegate of Denmark of up to 3% - 4%.

(d) Maximum Water Content

Ten delegates were opposed to the inclusion of any provision about maximum water content in margarine on the ground that adequate

control was exercised by the minimum fat content of 80% in the standard. The observer from I.F.M.A. agreed with this view. Nine delegates thought that it was necessary to include provision for a maximum of 16% water content so as to protect consumers from the presence of excess water in the 20% of the composition left free. Since the Committee was fairly evenly divided on this issue, it decided not to include such a provision in the standard, but to draw the attention of the Commission to the division of opinion.

(e) Vitamins

The Committee recognised that the optional provision about vitamins permitted any country accepting the standard to prescribe in national legislation that any or all of the vitamins should not be present, having regard to nutritional and other conditions in that country. It was agreed that provision should be made to allow the presence of other vitamins in margarine besides those mentioned in the draft standard.

(f) Flavours

The Committee decided that this provision should be amended so as to include all natural and synthetic flavours, so as to coincide with the provisions of the General Standard for Fats and Oils.

(g) Antioxidants

The Committee agreed to add ascorbyl stearate up to a maximum of 200 mg/kg.

(h) Synergists

The Committee decided to add monoisopropyl citrate up to a maximum of 100 mg/kg. The delegate of the U.S.A. proposed that stearyl citrate should also be permitted. The Committee decided not to add this synergist but to draw the proposal to the attention of the Codex Alimentarius Commission.

(i) Sequestrants

The delegate of the U.S.A. proposed that the use of calcium disodium ethylenediaminetetraacetate (Calcium disodium EDTA) up to a maximum of 75 mg/kg on the finished product should be permitted. It had been given an ADI by the Joint FAO/WHO Expert Committee on Food Additives. The Committee decided not to add this substance to the standard but to draw the Commission's attention to the proposal.

(j) pH Correcting Agents

The delegate of Japan proposed that the use of phosphates and of polyphosphates should be permitted. The Committee decided not to add them to the standard, but to draw the attention of the Commission to the proposal.

(k) Tracers

The Committee decided that no provision for tracers was required in the standard. The delegates of Belgium, Denmark, the Federal Republic of Germany, Poland and Spain were of the opinion that the addition of a tracer should be obligatory.

(l) List of Ingredients

The Committee agreed that margarine should not be treated differently from other foods in respect of the general labelling provisions of the Codex Alimentarius Commission. It was agreed, in view of the range of fats and oils that could be used in the product, that the specific names of the individual fats or oils need not be declared and that the decision recorded in paragraph 2(p) of the Report in respect of the General Standard for Edible Fats and Oils would apply to margarine. It was noted that, in some countries, specific names were required under national legislation.

(m) Declaration of the Presence of Milk Fat

The delegates of Australia, Denmark, the Federal Republic of Germany, New Zealand and Spain considered that the standard should be amended so as to prohibit specifically any reference to the presence of milk fat or butter in margarine. The delegates of Austria, Japan, Sweden, Switzerland and the United Kingdom thought that a statement of the proportion of milk fat present should be permitted when the proportion was substantial - say 10%. They did not see any reason to ban accurate statements which were not misleading. The majority of the Committee, however, was of the opinion that the provision in the standard should not be amended.

20. The Committee agreed that the standard as revised at Appendix XX should be placed before the Sixth Session of the Codex Alimentarius Commission for further consideration at Step 8 of the Procedure.

Date and Place of Next Meeting

21. The Committee considered that, if no business was referred to it by the Sixth Session of the Codex Alimentarius Commission, the only business for its next meeting would be the question of the inclusion in the standards of criteria of identity based on analysis by gas-liquid chromatography and the Standard for Olive Oils at Step 7 of the Procedure. In these circumstances, the Committee thought there would be an advantage in arranging its next meeting, which should occupy two or three days, so as to coincide with a meeting of the International Olive Oil Council in Madrid in November, 1969. It was considered that if the meeting were held in this way, it would be easier to obtain a larger attendance of those members of the Codex Alimentarius Commission who were interested in Olive Oil. It was therefore decided to recommend to the Commission that consideration should be given to holding the next meeting of the Committee in Madrid in November, 1969 or in some other way which would facilitate the largest possible attendance of member countries interested in olive oil. The delegate of Spain and the observer from the International Olive Oil Council said they would be willing to consider how best to co-operate with the Commission in such an arrangement. The Committee requested the Secretariat of the Commission to pursue this matter with the countries and organisations mainly concerned and to

report on the possibilities to the Sixth Session of the Codex Alimentarius Commission.

Summary of Work to be Undertaken

22. Comments to be Supplied by Governments

- (a) information on colours, other than the carotenoids and annatto, uses in ghee substitutes, together with their specifications and toxicology (paragraph 2(g));
- (b) on the values for the fatty acid contents of fats and oils as set out in Appendix XVI and on the appropriate values for mustard-seed oil; comments to be sent to the Secretariat of the Committee not later than 30th April, 1969 (paragraph 10);
- (c) on the need for additives in refined and refined residue olive oil together with details of the additives used, if any, and the levels of use (paragraph 11(e)).

23. Questions Referred to the Codex Committee on Food Additives

- (a) endorsement of the inclusion in the General Standard for Edible Fats and Oils and in the standards for specific oils of the carotenoid colours listed as acceptable for use in food in Appendix VII of the Report of the Fifth Session of the Codex Committee on Food Additives (paragraphs 2(g), 5(a) and Appendices III to XI);
- (b) endorsement of the inclusion in the General Standard, in the standards for specific oils and in the standard for margarine of other synthetic flavours (the Committee has already temporarily endorsed natural flavours and their synthetic equivalents). (Appendices II-XI and IX);
- (c) endorsement of the use of emulsifiers and anti-foaming agents in all fats and oils covered by the General Standard (the endorsement at present covers only fats and oils used for baking, cooking and frying) and of anti-foaming agents in the specific oils (paragraphs 2(h) 2(k) and 5(a));
- (d) endorsement of the emulsifiers mono - and di-glycerides of fatty acid without limitation and of polyoxyethylene (20) sorbitan monostearate and polyoxyethylene (20) sorbitan monooleate (paragraph 2(h));
- (e) to examine the toxicology of the emulsifiers succinylated monoglycerides, stearyl propylene glycol hydrogen succinate, stearylmonoglyceridyl citrate and hydroxylated lecithin (paragraph 2(h));
- (f) endorsement of the antioxidants isoamyl gallate, ethyl protocatechuate, ascorbyl stearate and dilauryl thiodipropionate (paragraph 2(i));

- (g) to examine the toxicology of the antioxidants 4-hydroxymethyl-2,6-di-tert-butylphenol, stearyl citrate and 2,4,5 trihydroxybutyrophenone (THBP) (paragraph 2(i));
- (h) endorsement of the synergists sodium citrate, monoisopropyl citrate and phosphoric acid (paragraph 2(j));
- (i) endorsement of separate figures for iron in virgin and refined oils at 5 mg/kg and 1.5 mg/kg respectively (paragraph 2(k));
- (j) endorsement of the use of oxystearin (paragraph 2(m));
- (k) to note the views of the Codex Committee on Fats and Oils about the antioxidant NDGA (paragraph 7(c));

24. Questions Referred to the Codex Committee on Methods of Analysis and Sampling

- (a) endorsement of the proposed method of analysis for allyl isothiocyanate content of mustardseed oil (Appendix XI);
- (b) to note the views of the Committee on methods of analysis for preservative and antioxidants in fats and oils (paragraph 17 and Appendix XVIII);
- (c) amendment to the Soap Test proposed for olive oils (paragraph 11 (f));
- (d) endorsement of the proposed method of analysis for solvent residues in olive oils (Appendix XIX).

25. Questions Referred to the Codex Committee on Food Labelling

- (a) endorsement of the revised labelling proposals in the General Standard for Edible Fats and Oils, and in the standards for Olive Oils and Margarine (Appendices II, XIX and XX);
- (b) to note the views of the Committee on the use of generic terms and on the declaration of ingredients, including additives used in fats and oils (paragraphs 2(p) and 19(l)).

26. Questions Referred to the Codex Alimentarius Commission

The addition of an antioxidant, ascorbyl stearate; a synergist, stearyl citrate (but see also paragraph 23(g) of the Report); a sequestrant, calcium disodium ethylenediaminetetraacetate (calcium disodium EDTA); and the pH correcting agents, phosphates and polyphosphates to the standard for Margarine (paragraphs 19(h) to (j)).

27. Standards to be sent to the Codex Alimentarius Commission

- (a) For further consideration at Step 8 of the Procedure  
Margarine (Appendix XX)

(b) Step 8 of the Procedure

General Standard on Edible Fats and Oils	(Appendix II)
Edible Soya Bean Oil	(Appendix III)
Edible Arachis Oil	(Appendix IV)
Edible Cottonseed Oil	(Appendix V)
Edible Sunflowerseed Oil	(Appendix VI)
Edible Rapeseed Oil	(Appendix VII)
Edible Maize Oil	(Appendix VIII)
Edible Sesameseed Oil	(Appendix IX)
Edible Safflowerseed Oil	(Appendix X)
Lard	(Appendix XII)
Rendered Pork Fat	(Appendix XIII)
Premier Jus	(Appendix XIV)
Edible Tallow	(Appendix XV)

(c) Step 5 of the Procedure

Edible Mustardseed Oil (Appendix XI) (with the recommendation that Steps 6, 7 and 8 be omitted).

Olive Oils (Appendix XIX)

JOINT FAO/WHO CODEX ALIMENTARIUS COMMISSION

CODEX COMMITTEE ON FATS AND OILS

LIST OF PARTICIPATING DELEGATES, ADVISERS AND OBSERVERS

LONDON 16th - 20th SEPTEMBER, 1968

CHAIRMAN	Mr. J.H.V. Davies
ARGENTINA	Mr. J.M. Figuerero-Antequeda (Delegate) Argentine Embassy, 9 Wilton Crescent, London, S.W.1.
AUSTRALIA	Mr. G.E. Fewster (Delegate) Commonwealth Veterinary Officer, High Commissioner for Australia, Australia House, Strand, London, W.C.2.
AUSTRIA	Dr. Ing. E. Schnidl (Delegate) Greifensteiner Strasse 88, 3423 Wördern, Austria.
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DRAFT PROVISIONAL STANDARD FOR  
EDIBLE OILS AND FATS NOT COVERED BY INDIVIDUAL  
CODEX STANDARDS

(Step 8 of the Procedure)

**I. SCOPE**

This standard applies to oils, fats and mixtures thereof, including those that have been subjected to processes of modification, but does not apply to any oil or fat which is the subject of a specific Codex commodity standard and is designated by a specific name laid down in such standards.

**II DESCRIPTIONS**

- (a) Edible Fats and Oils means foodstuffs composed of glycerides of fatty acids of vegetable, animal or marine origin. Fats of animal origin must be produced from animals in good health at the time of slaughter and be fit for human consumption as determined by a competent authority recognised in national legislation. 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.
- (b) Virgin fats and oils means edible fats and oils obtained by mechanical procedures and the application of heat only. They may have been purified by washing, settling, filtering and centrifuging only.

**III ESSENTIAL COMPOSITION AND QUALITY FACTORS**

- (a) Raw materials  
Edible fats and/or oils or mixtures thereof.
- (b) Colour  
Characteristic of the designated product.
- (c) Odour and Taste  
Characteristic of the designated product and free from foreign and rancid odour and taste.
- |                                      |   |
|--------------------------------------|---|
| (d) <u>Acid Value</u>                | <u>Maximum level</u><br>(mg. KOH per g. fat or oil) |
| (i) <u>Virgin fats and oils</u>      | 4.0   |
| (ii) <u>Non-Virgin fats and oils</u> | 0.6   |
- 
- |                           |   |
|---------------------------|---|
| (e) <u>Peroxide Value</u> | <u>Maximum level</u><br>(meq. of peroxide oxygen per<br>kg. fat or oil) |
|                           | 10.0  |

**IV FOOD ADDITIVES**

The following provisions in respect of food additives apply to fats and oils, other than virgin fats and virgin oils and have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

(a) Colours

APPENDIX II cont'd

The following are permitted:-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta-apo-8-carotenal (6)	Not limited
(vi) Methyl and ethyl esters of beta-apo-8-carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Emulsifiers

The following are permitted but only in fats and oils not specifically designated with the name of the plant or animal from which they originate.

	<u>Maximum level of use</u>
(i) Mono- and di-glycerides of fatty acids (9)	Not limited
(ii) Mono- and di-glycerides of fatty acids esterified with the following acids acetic tartaric citric acetyltartaric lactic and their sodium and calcium salts.	2% by weight individually or in combination
(iii) Lecithins and components of commercial lecithin as des- cribed in the Specifications in the Seventh Report of the Joint FAO/WHO Expert Committee on Food Additives	
(iv) Polyglycerol esters of fatty acids.	
(v) Esters of fatty acids with polyalcohols other than glycerol: Sorbitan monopalmitate Sorbitan monostearate Sorbitan tristearate	
(commercially known under the names "Span 40", "Span 60" and "Span 65").	

(vi) 1,2-propylene glycol esters of fatty acids (11)	)	
(vii) Esters of mono- and di-saccharides with fatty acids (Sucroglycerides) (1)	)	
(viii) Mono- and di-glycerides of fatty acids esterified with the following acids:-	)	
acetylcitric	)	2% by weight
orthophosphoric	)	individually or
and their sodium and calcium salts (3)	)	in combination
(ix) Stearyl lactic acid and calcium stearyl lactylate (3)	)	
(x) Polyglycerol esters of interestified ricinoleic acid (3)	)	
(xi) Polyoxyethylene (20) Sorbitan monostearate (7)	)	
(xii) Polyoxyethylene (20) Sorbitan monooleate (7)	)	
<b>(d) <u>Antioxidants</u></b>		<b><u>Maximum level of use</u></b>
(i) Propyl-, octyl-, and dodecyl gallates	)	100 mg/kg individually or in combination
(ii) Isoamyl gallate (4)	)	
(iii) BHA, BHT		200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both.		200 mg/kg, but gallates not to exceed 100 mg/kg
(v) Ascorbyl palmitate		200 mg/kg
(vi) Natural and synthetic tocopherols		Not limited
(vii) Ethyl protocatechuate (4)		200 mg/kg
(viii) Ascorbyl stearate (4)		200 mg/kg
(ix) Dilauryl thiodipropionate (7)		200 mg/kg
<b>(e) <u>Synergists</u></b>		<b><u>Maximum level of use</u></b>
(i) Citric acid		Not limited
(ii) Sodium citrate (12)		Not limited
(iii) Monoisopropyl citrate (5)	)	100 mg/kg
(iv) Phosphoric acid (2)	)	individually or in combination
<b>(f) <u>Anti-foaming Agents</u></b>		<b><u>Maximum level of use</u></b>
The following are permitted:-		
(i) Dimethyl polysiloxane (Syn: Dimethyl silicone) (3)		10 mg/kg
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)		10 mg/kg



APPENDIX II cont'd

(g) Crystallisation Inhibitor

Maximum level of use

Oxystearin (4)

0.125% by weight

V CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	(Virgin Oil (4)) 5.0 mg/kg (Refined Oil) 1.5 mg/kg
Copper	(Virgin Oil) 0.4 mg/kg (Refined Oil) 0.1 mg/kg
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

VI HYGIENE

It is recommended that the products covered by the provisions of this Standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene.

VII LABELLING

(a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Prepackaged Foods will apply.

(b) The following provisions in respect of the labelling of these products are subject to endorsement by the Codex Committee on Food Labelling.

(i) The name designated for the product conforming to the definition at II (a) of the Standard shall be such as to give a true indication of the nature of the fat or oil, and not to mislead the consumer. Names such as edible oil and salad oil which do not indicate a plant or animal source may be used without further qualification.

(ii) Where an oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the specific name of the oil shall not be used unless qualified to indicate the nature of the process.

(iii) The designation virgin fat or virgin oil may only be used for individual fats or oils conforming to the definition at II (b) of this standard.

(iv) In any list of ingredients of products to which this standard applies, the fat constituents may be designated as animal fat, vegetable fat or vegetable oil, as appropriate.

VIII METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section IV of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS /REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in feeds by the Codex Committee on Feed Additives; endorsed specifically for Margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

DRAFT PROVISIONAL STANDARD FOREDIBLE SOYA BEAN OIL

(Step 8 of the Procedure)

I. DESCRIPTION

Soya Bean Oil (synonym: Soybean Oil) is derived from soya beans (the seeds of Glycine max (L.) Merr.).

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) <u>Relative Density</u> (20°C/water at 20°C) :	0.919 - 0.925
(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ ) :	1.466 - 1.470
(iii) <u>Saponification Value</u> (mg.KOH per g. oil) :	189 - 195
(iv) <u>Iodine Value</u> (Wijs) :	120 - 143

Maximum level

(v) Unsaponifiable Matter 1.5% by weight

(b) Quality Characteristics(i) Colour

Characteristic of the designated product.

(ii) Odour and Taste

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

(iii) Acid ValueMaximum level  
(mg. KOH per g.)

0.6

(iv) Peroxide ValueMaximum level  
(meq. of peroxide oxygen per kg.)

10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

(a) Colours

The following are permitted:-

	<u>Maximum level of use</u>	
(i) Beta-carotene	Not limited	
(ii) Annatto (1)	Not limited	
(iii) Curcumin (3)	Not limited	
(iv) Canthaxanthine (6)	Not limited	
(v) Beta - apo - 8 - carotenal (6)	Not limited	
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited	
 (b) <u>Flavours</u>		
The following are permitted:-		
	<u>Maximum level of use</u>	
(i) Natural and identical synthetic flavours (1)	Not limited	
(ii) Other synthetic flavours (4)	Not limited	
 (c) <u>Antioxidants</u>		
	<u>Maximum level of use</u>	
(i) Propyl-, octyl-, and dodecyl gallates )	100 mg/kg individually or in combination	
(ii) Isoamyl gallate (4) )		
(iii) BHA, BHT	200 mg/kg individually or in combination	
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.	
(v) Ascorbyl palmitate	200 mg/kg.	
(vi) Natural and synthetic tocopherols	Not limited	
(vii) Ethyl protocatechuate (4)	200 mg/kg.	
(viii) Ascorbyl stearate (4)	200 mg/kg.	
(ix) Dilauryl thiodipropionate (7)	200 mg/kg.	
 (d) <u>Synergists</u>		
	<u>Maximum level of use</u>	
(i) Citric acid	Not limited	
(ii) Sodium citrate (12)	Not limited	
(iii) Monoisopropyl citrate (5)	100 mg/kg. Individually or in combination	
(iv) Monoglyceride citrate (5)		
(v) Phosphoric acid (2)		
 (e) <u>Anti-foaming Agents</u>		
The following are permitted:-		

APPENDIX III contd.

	<u>Maximum level of use</u>
(i) Dimethyl polysiloxane (synonym: Dimethyl silicone) (3)	10 mg/kg.
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg.
(f) <u>Crystallisation Inhibitor</u>	<u>Maximum level of use</u>
Oxystearin (4)	0.125% by weight

IV. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives:

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	1.5 mg/kg.
Copper	0.1 mg/kg.
Lead	0.1 mg/kg.
Arsenic	0.1 mg/kg.

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as soya bean oil or soybean oil must conform to this Standard.
  - (ii) Where soya bean oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name Soya bean oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

## DRAFT PROVISIONAL STANDARD FOR

EDIBLE ARACHIS OIL

(Step 8 of the Procedure)

I. DESCRIPTION

Arachis Oil (synonyms: Peanut Oil; Groundnut Oil) is derived from groundnuts (the seeds of Arachis hypogaea L.)

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) <u>Relative Density</u> (20°C/water at 20°C)	: 0.914 - 0.917
(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	: 1.460 - 1.465
(iii) <u>Saponification Value</u> (mg.KOH per g. oil)	: 187 - 196
(iv) <u>Iodine Value</u> (Wijs)	: 80 - 106
	<u>Maximum Level</u>
(v) <u>Unsataponifiable Matter</u>	1.0% by weight
(b) <u>Arachidic and Higher Fatty Acids Content</u>	<u>Minimum Level</u>
As determined by either of the methods specified in Section VII of this standard	4.8% by weight
(c) <u>Quality Characteristics</u>	
(i) <u>Colour</u>	
Characteristic of the designated product.	
(ii) <u>Odour and Taste</u>	
Characteristic of the designated product and free from foreign and rancid odour and taste.	
(iii) <u>Acid Value</u>	<u>Maximum Level</u> (mg. KOH per g.)
(a) Virgin Oil	4.0
(b) Non-Virgin Oil	0.6
(iv) <u>Peroxide Value</u>	<u>Maximum Level</u> (meq. of peroxide oxygen per kg.)
	10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated, but these provisions do not apply to virgin oils, which shall not contain any additives.

(a) Colours

The following are permitted:

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates. )	100 mg/kg individually or in combination
(ii) Isoamyl gallate (4) )	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg
(vi) Natural and synthetic tocopherols	Not limited
(vii) Ethyl protocatechuate (4)	200 mg/kg
(viii) Ascorbyl stearate (4)	200 mg/kg
(ix) Dilauryl thiodipropionate (7)	200 mg/kg



(d) <u>Synergists</u>	<u>Maximum level of use</u>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate (5)	} 100 mg/kg individually or in combination
(iv) Monoglyceride citrate (5)	
(v) Phosphoric acid (2)	
(e) <u>Anti-foaming Agents</u>	<u>Maximum level of use</u>
The following are permitted:-	
(i) Dimethyl polysiloxane (syn: Dimethyl silicone) (3)	10 mg/kg
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
(f) <u>Crystallisation Inhibitor</u>	<u>Maximum level of use</u>
Oxystearin (4)	0.125% by weight

IV. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	(Virgin Oil (4) 5.0 mg/kg. (Refined Oil 1.5 mg/kg.
Copper	(Virgin Oil 0.4 mg/kg. (Refined Oil 0.1 mg/kg.
Lead	0.1 mg/kg.
Arsenic	0.1 mg/kg.

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.

- (i) All products designated as arachis oil, peanut oil or groundnut oil must conform to this Standard.
- (ii) Where arachis oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name arachis oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

(a) Arachidic and Higher Fatty Acids Content

- (i) Modified Renard Test - Section 26.077, A.O.A.C., Tenth Edition (1965) or
- (ii) Arachis Oil Test (Evers) Page 97, British Standard 684: 1958.

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed, but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

## DRAFT PROVISIONAL STANDARD FOR

## EDIBLE COTTONSEED OIL

## (Step 8 of the Procedure)

I. DESCRIPTION

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

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) <u>Relative Density</u> (20°C/Water at 20°C)	: 0.918 - 0.926
(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	: 1.458 - 1.466
(iii) <u>Saponification Value</u> (mg KOH per g. oil)	: 189 - 198
(iv) <u>Iodine Value</u> (Wijs)	: 99 - 119
	<u>Maximum level</u>
(v) <u>Unsaponifiable Matter</u>	1.5% by weight

Result

(b) <u>Halphen Test</u>	Positive
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Note: Kapok oil and some other oils give a positive test; and fats from animals fed on cottonseed meal may also give a positive test. Different lots of cottonseed oil may react with different intensities. Hydrogenation and heating of cottonseed oil reduce the intensity of the reaction and may destroy it entirely.

(c) Quality Characteristics

(i) <u>Colour.</u> Characteristic of the designated product.	
(ii) <u>Odour and Taste.</u> Characteristic of the designated product and free from foreign and rancid odour and taste.	
(iii) <u>Acid Value</u>	<u>Maximum level</u> (mg. KOH per g.) 0.6
(iv) <u>Peroxide Value</u>	<u>Maximum level</u> (meq. of peroxide oxygen per kg.) 10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

(a) Colours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates	} 100 mg/kg individ- ually or in combination
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg
(vi) Natural and synthetic tocopherols	Not limited
(vii) Ethyl protocatechuate (4)	200 mg/kg
(viii) Ascorbyl stearate (4)	200 mg/kg
(ix) Dilauryl thiodipropionate (7)	200 mg/kg

<u>(d) Synergists</u>	<u>Maximum level of use</u>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate (5)	} 100 mg/kg individually or in combination
(iv) Monoglyceride citrate (5)	
(v) Phosphoric acid (2)	
<u>(e) Anti-foaming Agents</u>	<u>Maximum level of use</u>
The following are permitted:-	
(i) Dimethyl polysiloxane (Syn: Dimethyl silicone) (3)	10 mg/kg
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
<u>(f) Crystallisation Inhibitor</u>	<u>Maximum level of use</u>
Oxystearin (4)	0.125% by weight

IV. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	1.5 mg/kg
Copper	0.1 mg/kg
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packed Foods will apply.

- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
- (i) All products designated as cottonseed oil must conform to this Standard.
  - (ii) Where cottonseed oil has been subject to any process of esterification or to processing which alters the fatty acid composition or its consistency the name cottonseed oil shall not be used unless qualified to indicate the nature of the process.

VII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

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

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

## DRAFT PROVISIONAL STANDARD FOR

EDIBLE SUNFLOWERSEED OIL

(Step 8 of the Procedure)

I. DESCRIPTION

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

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS(a) Identity Characteristics

	<u>Range</u>
(i) Relative Density (20°C/Water at 20°C)	: 0.918 - 0.923
(ii) Refractive Index ( $n_D^{40^\circ C}$ )	: 1.457 - 1.469
(iii) <u>Saponification Value</u> (mg. KOH per g. oil)	: 188 - 194
(iv) <u>Iodine Value</u> (Wijs)	: 110 - 143

Maximum Level(v) Unsatifiable Matter

1.5% by weight

(b) Quality Characteristics(i) Colour

Characteristic of the designated product.

(ii) Odour and Taste

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

(iii) Acid ValueMaximum Level  
(mg. KOH per g.)

Virgin Oil

4.0

Non-virgin oil

0.6

(iv) Peroxide ValueMaximum Level  
(mg. of peroxide  
oxygen per kg.)

10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated, but these provisions do not apply to virgin oils, which shall not contain any additives.

(a) Colours

The following are permitted:

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (3)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.	} 100 mg/kg individ- ually or in combination
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg



APPENDIX VI contd.

(vi) Natural and synthetic tocopherols	Not limited
(vii) Ethyl protocatechuate (4)	200 mg/kg
(viii) Ascorbyl stearate (4)	200 mg/kg
(ix) Dilauryl thiodipropionate (7)	200 mg/kg
(d) <u>Synergists</u>	<u>Maximum level of use</u>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate (5)	} 200 mg/kg individually or in combination
(iv) Monoglyceride citrate (5)	
(v) Phosphoric acid (2)	
(e) <u>Anti-foaming Agents</u>	<u>Maximum level of use</u>
The following are permitted:-	
(i) Dimethyl polysiloxane (syn: Dimethyl silicone) (3)	10 mg/kg
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
(f) <u>Crystallisation Inhibitor</u>	<u>Maximum level of use</u>
Oxystearin (4)	0.125% by weight

IV. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

	<u>Maximum level</u>
Matter volatile at 105° C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	(Virgin Oil (4) 5.0 mg/kg. (Refined Oil 1.5 mg/kg.
Copper	(Virgin Oil 0.4 mg/kg. (Refined Oil 0.1 mg/kg.
Lead	0.1 mg/kg.
Arsenic	0.1 mg/kg

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as sunflowerseed oil or sunflower oil must conform to this Standard.
  - (ii) Where sunflowerseed oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name sunflowerseed oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

APPENDIX VII

DRAFT PROVISIONAL STANDARD FOR

EDIBLE RAPESEED OIL

(Step 8 of the Procedure)

I DESCRIPTION

Rapeseed Oil (synonyms: Turnip Rape Oil; Colza Oil; Ravison Oil; Sarson oil and Toria Oil) is derived from the seeds of Brassica campestris L., Brassica napus L. and Brassica tournefortii Gouan.

II ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) <u>Relative Density</u> (20°C/water at 20°C)	: 0.910-0.920
(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	: 1.465-1.469
(iii) <u>Saponification Value</u> (mg.KOH per g. oil)	: 168-181
(iv) <u>Iodine Value</u> (Wijs)	: 94-120
(v) <u>Crismer Value</u>	: 80-85
	<u>Maximum level</u>
(vi) <u>Unsaponifiable Matter</u>	2.0% by weight
(b) <u>Quality Characteristics</u>	
(i) <u>Colour</u>	Characteristic of the designated product.
(ii) <u>Odour and Taste</u>	Characteristic of the designated product and free from foreign and rancid odour and taste.
(iii) <u>Acid Value</u>	<u>Maximum level</u> (mg. KOH per g.)
Virgin oil:	4.0
Non-virgin oil:	0.6
(iv) <u>Peroxide Value</u>	<u>Maximum level</u> (meq. of peroxide oxygen per kg.)
	10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated, but these provisions do not apply to virgin oils, which shall not contain any additives.

(a) Colours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl) gallates. )	100 mg/kg individu-
(ii) Isoamyl gallate (4) )	ally or in combination
(iii) BHA, BHT	200 mg/kg individ-
	ually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.

APPENDIX VII cont'd

	<u>Maximum level of use</u>
(v) Ascorbyl palmitate	200 mg/kg
(vi) Natural and synthetic tocopherols	Not limited
(vii) Ethyl protocatechuate (4)	200 mg/kg
(viii) Ascorbyl stearate (4)	200 mg/kg
(ix) Dilauryl thiodipropionate (7)	200 mg/kg
<b>(d) <u>Synergists</u></b>	<b><u>Maximum level of use</u></b>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate (5) )	100 mg/kg individually or in combination
(iv) Monoglyceride citrate (5) )	
(v) Phosphoric acid (2) )	
<b>(e) <u>Anti-foaming Agents</u></b>	<b><u>Maximum level of use</u></b>
The following are permitted:-	
(i) Dimethyl polysiloxane (syn Dimethyl silicone)	10 mg/kg
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
<b>(f) <u>Crystallisation Inhibitor</u></b>	<b><u>Maximum level of use</u></b>
Oxystearin (4)	0.125% by weight

**IV. CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight

APPENDIX VII cont'd

		<u>Maximum level</u>
Iron	(Virgin Oil (4) (Refined Oil	5.0 mg/kg. 1.5 mg/kg.
Copper	(Virgin Oil (Refined Oil	0.4 mg/kg. 0.1 mg/kg.
Lead		0.1 mg/kg
Arsenic		0.1 mg/kg

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as rapeseed oil, turnip rape oil, colza oil, ravison oil, sarson oil or toria oil must conform to this Standard.
  - (ii) Oil produced from the seeds of Eruca sativa Mill. and conforming to the standard may be designated jamba rape oil.
  - (iii) Where rapeseed oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name rapeseed oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VII METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

- (a) Crismer Value - A.O.C.S. Official Method Cb.4-35.

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

DRAFT PROVISIONAL STANDARD FOR

EDIBLE MAIZE OIL

(Step 8 of the Procedure)

**I** DESCRIPTION

Maize Oil (syn. Corn Oil) is derived from maize germ (the embryos of Zea mays L.)

**II** ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a)	<u>Identity Characteristics</u>	<u>Range</u>
	(i) <u>Relative Density</u> (20°C/water at 20°C)	: 0.917-0.925
	(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	: 1.465-1.468
	(iii) <u>Saponification Value</u> (mg. KOH per g. oil)	: 187-195
	(iv) <u>Iodine Value</u> (Wijs)	: 103-128
		<u>Maximum level</u>
	(v) <u>Unsatifiable Matter</u>	2.8% by weight

(b) Quality Characteristics

(i) Colour

Characteristic of the designated product.

(ii) Odour and Taste

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

(iii) Acid Value

Maximum level  
(mg. KOH per g.)

Virgin oil:  
Non-virgin oil:

4.0  
0.6

(iv) Peroxide Value

Maximum level  
(meq. of peroxide oxygen per kg.)

10.0



**III FOOD ADDITIVES**

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated, but these provisions do not apply to virgin oils, which shall not contain any additives.

**(a) Colours**

The following are permitted :-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

**(b) Flavours**

The following are permitted :-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

**(c) Antioxidants**

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.	} 100 mg/kg individually or in combination
(ii) Isoamyl gallate(4)	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg
(vi) Natural and synthetic tocopherols	Not limited

APPENDIX VIII Cont.

(vii)	Ethyl protocatechuate (4)	200 mg/kg
(viii)	Ascorbyl stearate (4)	200 mg/kg
(ix)	Dilauryl thiodipropionate (7)	200 mg/kg
(d)	<u>Synergists</u>	<u>Maximum level of use</u>
(i)	Citric acid	Not limited
(ii)	Sodium citrate (12)	Not limited
(iii)	Monoisopropyl citrate (5)	} 100 mg/kg individually or in combination
(iv)	Monoglyceride citrate (5)	
(v)	Phosphoric acid (2)	
(e)	<u>Anti-foaming Agents</u>	<u>Maximum level of use</u>
	The following are permitted:-	
(i)	Dimethyl polysiloxane (Syn: Dimethyl silicone) (3)	10 mg/kg
(ii)	Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
(f)	<u>Crystallisation Inhibitor</u>	<u>Maximum level of use</u>
	Oxystearin (4)	0.125% by weight

**IV CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	(Virgin Oil (4) 5.0 mg/kg. (Refined Oil 1.5 mg/kg.
Copper	(Virgin Oil 0.4 mg/kg. (Refined Oil 0.1 mg/kg.
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as maize oil or corn oil must conform to this Standard.
  - (ii) Where maize oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name maize oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2 (j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

DRAFT PROVISIONAL STANDARD FOREDIBLE SESAMESEED OIL(Step 8 of the Procedures)I. DESCRIPTION

Sesameseed Oil (Synonyms: Sesame Oil; Gingelly Oil; Benne Oil; Ben Oil; Till Oil and Tillie Oil) is derived from sesame seeds (the seeds of Sesamum indicum L.)

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a)	<u>Identity Characteristics</u>	<u>Range</u>
(i)	<u>Relative Density</u> (20°C/water at 20°C):	0.915-0.923
(ii)	<u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	: 1.465-1.469
(iii)	<u>Saponification Value</u> (mg.KOH per g.oil):	187-195
(iv)	<u>Iodine Value</u> (Wijs)	: 104-120
		<u>Maximum level</u>
(v)	<u>Unsatifiable Matter</u>	2.0% by weight
(b)	<u>Modified Villavechia Test or Sesame Oil Test</u>	<u>Result</u>
	(Baudoin)	Positive
(c)	<u>Quality Characteristics</u>	
(i)	<u>Colour</u>	
	Characteristic of the designated product.	
(ii)	<u>Odour and Taste</u>	
	Characteristic of the designated product and free from foreign and rancid odour and taste.	
(iii)	<u>Acid Value</u>	<u>Maximum Level</u> (mg. KOH per g.)
	Virgin oil:	4.0
	Non-virgin oil:	0.6
(iv)	<u>Peroxide Value</u>	<u>Maximum level</u> (meq. of peroxide oxygen per kg.)
		10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated, but these provisions do not apply to virgin oils, which shall not contain any additives.

(a) Colours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.	100 mg/kg individually or in combination
(ii) Isocanyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg
(vi) Natural and synthetic tocopherols	Not limited
(vii) Ethyl protocatechuate (4)	200 mg/kg
(viii) Ascorbyl stearate (4)	200 mg/kg
(ix) Dilauryl thiodipropionate (7)	200 mg/kg

<u>(d) Synergists</u>	<u>Maximum level of use</u>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate (5)	} 100 mg/kg individually or in combination
(iv) Monoglyceride citrate (5)	
(v) Phosphoric acid (2)	
<u>(e) Anti-foaming Agents</u>	<u>Maximum level of use</u>
The following are permitted:-	
(i) Dimethyl polysiloxane (Syn:Dimethyl silicone (3)	10 mg/kg
(ii) Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
<u>(f) Crystallisation Inhibitor</u>	<u>Maximum level of use</u>
Oxystearin (4)	0.125% by weight

**IV. CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron (Virgin Oil (4) (Refined Oil)	5.0 mg/kg 1.5 mg/kg
Copper (Virgin Oil (Refined Oil)	0.4 mg/kg 0.1 mg/kg
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

**V. HYGIENE**

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

IV. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as sesameseed oil, sesame oil, gingelly oil, benne oil, ben oil, till oil or tillie oil must conform to this Standard.
  - (ii) Where sesameseed oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name sesameseed oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

- (a) Modified Villavechia Test - A.O.C.S. Official Method Cb. 2-40.
- (b) Sesame Oil Test (Baudoin) Page 96, British Standard 684: 1958.

Notes with regard to Additives (See Section III of the Standard)

- 1. Temporarily endorsed, pending toxicological evaluation.
- 2. Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- 3. Not endorsed, pending toxicological evaluation.
- 4. To be endorsed.
- 5. To be endorsed for oils; but already endorsed for animal fats.
- 6. To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- 7. To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- 8. To be endorsed; but temporarily endorsed for margarine.
- 9. Endorsed, but at a maximum level of 5% by weight.
- 10. To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- 11. To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- 12. To be endorsed; but citric acid and its salts already endorsed for margarine.



DRAFT PROVISIONAL STANDARD FOR

EDIBLE SAFFLOWERSEED OIL

(Step 8 of the Procedure)

I. DESCRIPTION

Safflowerseed Oil (synonyms: Safflower Oil; Carthamus Oil and Kurdee Oil) is derived from safflower seeds (the seeds of Carthamus tinctorius L.)

II. ESSENTIAL COMPOSITION AND QUALITY FACTORS

<u>(a) Identity Characteristics</u>	<u>Range</u>
(i) <u>Relative Density</u> (20°C/water at 20°C)	:0.922 - 0.927
(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	:1.467 - 1.470
(iii) <u>Saponification Value</u> (mg.KOH per g.oil)	: 186 - 198
(iv) <u>Iodine Value</u> (Wijs)	: 135 - 150
	<u>Maximum Level</u>
(v) <u>Unsataponifiable Matter</u>	1.5% by weight
 <u>(b) Quality Characteristics</u>	
(i) <u>Colour</u>	
	Characteristic of the designated product.
(ii) <u>Odeur and Taste</u>	
	Characteristic of the designated product and free from foreign and rancid odour and taste.
(iii) <u>Acid Value</u>	<u>Maximum Level</u> (mg. KOH per g.)
	0.6
(iv) <u>Peroxide Value</u>	<u>Maximum Level</u> (meq. of peroxide oxygen per kg.)
	10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

(a) Colours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.                                 }	100 mg/kg individually or in combination
(ii) Isoamyl gallate (4)                         }	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg
(vi) Natural and synthetic tocopherols	Not limited
(vii) Ethyl protocatechuate (4)	200 mg/kg
(viii) Ascorbyl stearate (4)	200 mg/kg
(ix) Dilauryl thiodipropionate (7)	200 mg/kg

<p>(d) <u>Synergists</u></p> <p>(i) Citric acid</p> <p>(ii) Sodium citrate (12)</p> <p>(iii) Monoisopropyl citrate (5)</p> <p>(iv) Monoglyceride citrate (5)</p> <p>(v) Phosphoric acid (2)</p>	<p><u>Maximum level of use</u></p> <p>Not limited</p> <p>Not limited</p> <p>100 mg/kg individually or in combination</p>	
<p>(e) <u>Anti-foaming Agents</u></p> <p>The following are permitted:-</p> <p>(i) Dimethyl polysiloxane (Syn: Dimethyl Silicone) (3)</p> <p>(ii) Mixtures of dimethyl polysiloxane and Silicon dioxide (4)</p>		<p><u>Maximum level of use</u></p> <p>10 mg/kg</p> <p>10 mg/kg</p>
<p>(f) <u>Crystallisation Inhibitor</u></p> <p>Oxystearin (4)</p>	<p><u>Maximum level of use</u></p> <p>0.12% by weight.</p>	

IV. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives.

	<u>Maximum level</u>
Matter volatile at 105°C	0.2% by weight
Insoluble impurities	0.05% by weight
Soap content	0.005% by weight
Iron	1.5 mg/kg
Copper	0.1 mg/kg
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
- (i) All products designated as safflowerseed oil, safflower oil, carthamus oil or kurdee oil must conform to this Standard.
- (ii) Where safflowerseed oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency the name safflowerseed oil or any synonym shall not be used unless qualified to indicate the nature of the process.

VIII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section III of the Standard)

1. Temporarily endorsed, pending toxicological evaluation.
2. Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
3. Not endorsed, pending toxicological evaluation.
4. To be endorsed.
5. To be endorsed for oils; but already endorsed for animal fats.
6. To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
7. To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
8. To be endorsed; but temporarily endorsed for margarine.
9. Endorsed, but at a maximum level of 5% by weight.
10. To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
11. To be endorsed; esters of 1, 2- propylene glycol with one fatty acid radical only already endorsed.
12. To be endorsed; but citric acid and its salts already endorsed for margarine.

## DRAFT PROVISIONAL STANDARDS FOR

EDIBLE MUSTARDSEED OIL

(Step 5 of the Procedure)

I DESCRIPTION

Mustardseed oil is derived from the seeds of the white mustard (Sinapis alba L. synonym: Brassica hirta Moench), the brown mustard (Brassica juncea (L.) Czern. and Coss) and of the black mustard (Brassica nigra (L.) Koch).

II ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) <u>Relative Density</u> (20°C/water at 20°C)	: 0.910-0.921
(ii) <u>Refractive Index</u> ( $n_D^{40^\circ C}$ )	: 1.461-1.469
(iii) <u>Saponification Value</u> (mg. KOH per g. oil):	170-184
(iv) <u>Iodine Value</u> (Wijs)	: 92-125
	<u>Maximum level</u>
(v) <u>Unsataponifiable Matter</u>	1.5% by weight
(b) <u>Allyl isothiocyanate content</u>	<u>Maximum level</u>
As determined by the method specified in Section VII of the standard.	0.4% by weight
(c) <u>Quality Characteristics</u>	
(i) <u>Colour</u>	
Characteristic of the designated product.	
(ii) <u>Odour and Taste</u>	
Characteristic of the designated product and free from foreign and rancid odour and taste.	
(iii) <u>Acid Value</u>	<u>Maximum level</u> (mg. KOH per g.)
Virgin oil:	4.0
Non-virgin oil:	0.6
(iv) <u>Peroxide Value</u>	<u>Maximum level</u> (meq. of peroxide oxygen per kg.)
	10.0

III. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated, but these provisions do not apply to virgin oils, which shall not contain any additives.

(a) Colours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Beta-carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (8)	Not limited
(iv) Canthaxanthine (6)	Not limited
(v) Beta - apo - 8 - carotenal (6)	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 8 - carotenoic acid (6)	Not limited

(b) Flavours

The following are permitted:-

	<u>Maximum level of use</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited

(c) Antioxidants

	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.	100 mg/kg individually or in combination
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) Any combination of gallates with BHA or BHT, or both	200 mg/kg, but gallates not to exceed 100 mg/kg.
(v) Ascorbyl palmitate	200 mg/kg

APPENDIX XI Cont'd.

		<u>Maximum level of use</u>
(vi)	Natural and synthetic tocopherols	Not limited
(vii)	Ethyl protocatechuate (4)	200 mg/kg
(viii)	Ascorbyl stearate (4)	200 mg/kg
(ix)	Dilauryl thiodipropionate (7)	200 mg/kg
 (d) <u>Synergists</u>		 <u>Maximum level of use</u>
(i)	Citric acid	Not limited
(ii)	Sodium citrate (12)	Not limited
(iii)	Monoisopropyl citrate (5) )	100 mg/kg individually or in combination
(iv)	Monoglyceride citrate (5) )	
(v)	Phosphoric acid (2) )	
 (e) <u>Anti-foaming Agents</u>		 <u>Maximum level of use</u>
The following are permitted:-		
(i)	Dimethyl polysiloxane (Syn: Dimethyl silicone) (3)	10 mg/kg
(ii)	Mixtures of dimethyl polysiloxane and silicon dioxide (4)	10 mg/kg
 (f) <u>Crystallisation Inhibitor</u>		 <u>Maximum level of use</u>
	Oxystearin (4)	0.125% by weight

IV. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

		<u>Maximum level</u>
Matter volatile at 105°C		0.2% by weight
Insoluble impurities		0.05% by weight
Soap content		0.005% by weight
Iron	(Virgin Oil (4) (Refined Oil	5.0 mg/kg. 1.5 mg/kg.
Copper	(Virgin Oil (Refined oil	0.4 mg/kg. 0.1 mg/kg.
Lead		0.1 mg/kg
Arsenic		0.1 mg/kg

V. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VI. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product are subject to endorsement by the Codex Committee on Food Labelling.
  - (i) All products designated as mustardseed oil must conform to this Standard.
  - (ii) Where mustardseed oil has been subject to any process of esterification or to processing which alters its fatty acid composition or its consistency, the name mustardseed oil shall not be used unless qualified to indicate the nature of the process.

VII METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling, unless otherwise indicated.

(a) Allyl isothiocyanate content(to be endorsed)

Indian Standard: 548 - 1964

∟ Principle of Method: The allyl isothiocyanate in the oil is steam distilled into a known excess of silver nitrate solution, and the excess of silver nitrate solution is determined by titration with standard ammonium thiocyanate solution using ferric ammonium sulphate indicator

Notes with regard to Additives (See Section III of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.



APPENDIX XI Cont'd.

- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1,2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

DRAFT PROVISIONAL STANDARD OF LARD(Step 8 of the Procedure)I. SCOPE

This standard applies to lard, but does not apply to refined lard, so designated.

II. DESCRIPTION

(a) 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, skinings, settlings, pressings, and the like, and are reasonably free from muscle tissues and blood.

(b) Lard Subjected to Processing

Lard may contain refined lard, lard stearine and hydrogenated lard, provided that it is labelled in accordance with paragraph VII (b)(ii) of this standard.

III. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) Relative Density ( $40^{\circ}$ C/water at $20^{\circ}$ C)	0.896 - 0.904
(ii) Refractive Index ( $n_D^{40^{\circ}$ C)	1.448 - 1.460
(iii) Titre ( $^{\circ}$ C)	32 - 45
(iv) Saponification Value (mg.KOH per g.fat)	192 - 203
(v) Iodine Value (Wijs)	45 - 70
	<u>Maximum Level</u>
(vi) Unsaponifiable matter	1.0% by weight.

Inclusion of a Bochner value to be considered when there is agreement on a satisfactory method of analysis.

(b) Quality Characteristics(i) Colour

White when solid

(ii) Odour and Taste

Characteristic and free from foreign odours and tastes.

(iii) Acid Value

Maximum Level  
(mg. KOH per g).

1.3

(iv) Peroxide Value

Maximum Level  
(meq. of peroxide  
oxygen per kg)

10.0

IV. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

<u>(a) Antioxidants</u>	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.	} 100 mg/kg individually or in combination.
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination.
(iv) N D G A (3)	100 mg/kg.
(v) Any combination of gallates, BHA, BHT, or NDGA (3)	200 mg/kg, but gallates and NDGA not to exceed 100mg/kg.
(vi) Resin guaiac (3)	1000 mg/kg.
(vii) Ascorbyl palmitate	200 mg/kg.
(viii) Natural and synthetic tocopherols	Not limited.
(ix) Ethyl protocatechuate (4)	200 mg/kg.
(x) Ascorbyl stearate (4)	200 mg/kg.
(xi) Dilauryl thiodipropionate (7)	200 mg/kg.
<u>(b) Synergists</u>	<u>Maximum level of use</u>
(i) Citric acid	Not limited.
(ii) Sodium citrate (12)	Not limited.
(iii) Monoisopropyl citrate	} 100 mg/kg. individually or in combination
(iv) Monoglyceride citrate	
(v) Phosphoric acid (2)	

**V. CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives.

	<u>Maximum level</u>
Matter volatile at 105°C	0.5% by weight
Impurities	0.05% by weight
Soap content	Nil
Iron	1.5 mg/kg.
Copper	0.4 mg/kg
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

**VI. HYGIENE**

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene of the Codex Alimentarius.

**VII. LABELLING**

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as Lard must conform to this standard.
  - (ii) If refined lard, lard stearine or hydrogenated lard are present, this must be declared in the designation of the product.

**VIII. METHODS OF ANALYSIS AND SAMPLING**

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

- (a) Boehmer Value

[to be considered when a satisfactory method is available]

Notes with regard to Additives (See Section IV of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

DRAFT PROVISIONAL STANDARD FOR RENDERED PORK FAT

(Step 8 of the Procedure)

**I. SCOPE**

This standard applies to rendered pork fat, but does not apply to refined rendered pork fat, so designated.

**II. DESCRIPTION**

(a) Rendered pork fat is the fat rendered from the tissues and bones 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), from detached skin, from head skin, from ears, from tails and from other tissues fit for human consumption.

(b) Rendered Pork Fat Subjected to Processing

Rendered Pork Fat may contain refined lard, refined rendered pork fat, hydrogenated lard, hydrogenated rendered pork fat, lard stearine and rendered pork fat stearine, provided it is labelled in accordance with paragraph VII (b) (ii) of this standard.

**III. ESSENTIAL COMPOSITION AND QUALITY FACTORS**

(a) Identity Characteristics

	<u>Range</u>
(i) Relative Density (40°C/Water at 20°C)	0.894 - 0.906
(ii) Refractive Index ( $n_D^{40°C}$ )	1.448 - 1.461
(iii) Titre (°C)	32 - 45
(iv) Saponification Value (mg. KOH per g. fat)	192 - 203
(v) Iodine Value (Wijs)	45 - 70
	<u>Maximum Level</u>
(vi) Unsaponifiable matter	1.2% by weight

(b) Quality Characteristics

(i) <u>Colour</u>	: White when solid	
(ii) <u>Odour and Taste</u>	: Characteristic, and free from foreign odours and tastes.	
(iii) <u>Acid Value</u>		<u>Maximum Level</u> (mg.KOH per g.) 2.5
(iv) <u>Peroxide Value</u>		<u>Maximum Level</u> (meq. of peroxide oxygen per kg.) 16.0

**IV. FOOD ADDITIVES**

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

<u>(a) Antioxidants</u>	<u>Maximum Level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates	} 100 mg/kg individually or in combination.
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination.
(iv) NDGA (3)	100 mg/kg.
(v) Any combination of gallates, BHA, BHT or NDGA (3)	200 mg/kg, but gallates & NDGA not to exceed 100 mg/kg.
(vi) Resin guaiac (3)	1000 mg/kg.
(vii) Ascorbyl palmitate	200 mg/kg.
(viii) Natural and synthetic tocopherols	Not limited.
(ix) Ethyl protocatechuate (4)	200 mg/kg.
(x) Ascorbyl stearate (4)	200 mg/kg.
(xi) Dilauryl thiodipropionate (7)	200 mg/kg.
 <u>(b) Synergists</u>	 <u>Maximum Level of use</u>
(i) Citric acid	Not limited.
(ii) Sodium citrate (12)	Not limited.
(iii) Monoisopropyl citrate	} 100 mg/kg. individually or in combination.
(iv) Monoglyceride citrate	
(v) Phosphoric acid (2)	

**V. CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives:

	<u>Maximum Level</u>
Matter volatile at 105°C	0.3% by weight
Impurities	0.05% by weight
Soap content	0.005% by weight
Iron	1.5 mg/kg.
Copper	0.4 mg/kg.
Lead	0.1 mg/kg.
Arsenic	0.1 mg/kg.

VI. HYGIENE

It is recommended that the product covered by the provisions of the Standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VII. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee on Food Labelling.
  - (i) All products designated as Rendered Pork Fat must conform to this standard.
  - (ii) If refined lard, refined rendered pork fat, hydrogenated lard, hydrogenated rendered pork fat, lard stearine or rendered pork fat stearine are present, this must be declared in the designation of the product.

VIII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section IV of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.



DRAFT PROVISIONAL STANDARD FOR PREMIER JUS

(Step 8 of the Procedure)

**I. SCOPE**

This standard applies to premier jus, but does not apply to refined premier jus, so designated.

**II. DESCRIPTION**

Premier Jus (Synonym: Olee Steak) is the product obtained by rendering at low heat the fresh fat (killing fat) of heart, caul, kidney and mesentery collected at the time of slaughter 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 raw material does not include cutting fats.

**III. ESSENTIAL COMPOSITION AND QUALITY FACTORS**

<u>(a) Identity Characteristics</u>	<u>Range</u>
(i) Relative Density (40°C/water at 20°C)	0.893 - 0.898
(ii) Refractive Index ( $n_D^{40^\circ C}$ )	1.448 - 1.460
(iii) Titre (°C)	42.5 - 47
(iv) Saponification Value (mg.KOH per g.fat)	190 - 200
(v) Iodine Value (Wijs)	32 - 47
	<u>Maximum Level</u>
(vi) Unsaponifiable matter	1.0% by weight

**(b) Quality Characteristics**

(i) <u>Colour</u>	: Creamy white to pale yellow
(ii) <u>Odour and Taste</u>	: Characteristic and free from foreign odours and tastes.
(iii) <u>Acid Value</u>	<u>Maximum Level</u> (mg.KOH per g.)
	2.0
(iv) <u>Peroxide Value</u>	<u>Maximum Level</u> (meq. of peroxide oxygen per kg.)
	10.0

IV. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

<u>(a) Antioxidants</u>	<u>Maximum level of use</u>
(i) Propyl-, octyl-, and dodecyl gallates.	} 100 mg/kg individually or in combination.
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination.
(iv) NDGA (3)	100 mg/kg.
(v) Any combination of gallates, BHA, BHT, or NDGA (3)	200 mg/kg, but gallates and NDGA not to exceed 100 mg/kg.
(vi) Resin guaiac (3)	1000 mg/kg.
(vii) Ascorbyl palmitate	200 mg/kg.
(viii) Natural and synthetic tocopherols	Not limited.
(ix) Ethyl protocatechuate (4)	200 mg/kg.
(x) Ascorbyl stearate (4)	200 mg/kg.
(xi) Dilauryl thiodipropionate (7)	200 mg/kg.
 <u>(b) Synergists</u>	 <u>Maximum level of use</u>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate	} 100 mg/kg. individually or in combination.
(iv) Monoglyceride citrate	
(v) Phosphoric acid (2)	

V. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives:-

	<u>Maximum Level</u>
Matter volatile at 105°C	0.5% by weight
Impurities	0.05% by weight
Soap content	Nil
Iron	1.5 mg/kg.
Copper	0.4 mg/kg.
Lead	0.1 mg/kg.
Arsenic	0.1 mg/kg.

**VI. HYGIENE**

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene of the Codex Alimentarius.

**VII. LABELLING**

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provision in respect of the labelling of this product has been endorsed by the Codex Committee on Food Labelling.
  - (1) All products designated as Premier Jug or Oleo Stock must conform to this standard.

**VIII. METHODS OF ANALYSIS AND SAMPLING**

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section IV of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

DRAFT PROVISIONAL STANDARD FOR EDIBLE TALLOW(Step 8 of the Procedure)I. SCOPE

This standard applies to edible tallow, but does not apply to refined edible tallow, so designated.

II. DESCRIPTION

(a) Edible Tallow (Synonym: Dripping) is the product obtained by rendering the 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 time of slaughter and fit for human consumption as determined by a competent authority recognised in national legislation.

(b) Edible Tallow Subjected to Processing

Edible Tallow may contain refined edible tallow, provided it is labelled in accordance with paragraph VII (b) (ii) of this standard.

III. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(a) <u>Identity Characteristics</u>	<u>Range</u>
(i) Relative Density (40°C/water at 20°C)	0.893 - 0.904
(ii) Refractive Index ( $n_D^{40^\circ C}$ )	1.448 - 1.460
(iii) Titre (°C)	40 - 49
(iv) Saponification Value (mg.KOH per g.fat)	190 - 202
(v) Iodine Value (Wijs)	32 - 50
	<u>Maximum Level</u>
(vi) Unsaponifiable matter	1.2% by weight
(b) <u>Quality Characteristics</u>	
(i) <u>Colour</u>	: Off-white to pale yellow.
(ii) <u>Odour and Taste</u>	: Characteristic and free from foreign odours and tastes.
(iii) <u>Acid Value</u>	: <u>Maximum Level</u> (mg.KOH per g.) 2.5
(iv) <u>Peroxide Value</u>	: <u>Maximum Level</u> (meq. of peroxide oxygen per kg.) 16.0

**IV. FOOD ADDITIVES**

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

<u>(a) Antioxidants</u>	<u>Maximum level of use</u>
(i) Propyl-, butyl-, and dodecyl gallates )	100 mg/kg individually or in combination
(ii) Isoamyl gallate (4)	
(iii) BHA, BHT	200 mg/kg individually or in combination
(iv) NDGA (3)	100 mg/kg
(v) Any combination of gallates, BHA, BHT or NDGA (3)	200 mg/kg, but gallates and NDGA not to exceed 100 mg/kg
(vi) Resin guaiac (3)	1000 mg/kg
(vii) Ascorbyl palmitate	200 mg/kg
(viii) Natural and synthetic tocopherols	Not limited
(ix) Ethyl protocatechuate (4)	200 mg/kg
(x) Ascorbyl stearate (4)	200 mg/kg
(xi) Dilauryl thiodipropionate (7)	200 mg/kg
 <u>(b) Synergists</u>	 <u>Maximum level of use</u>
(i) Citric acid	Not limited
(ii) Sodium citrate (12)	Not limited
(iii) Monoisopropyl citrate )	100 mg/kg individually or in combination
(iv) Monoglyceride citrate	
(v) Phosphoric acid (2)	

**V. CONTAMINANTS**

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives.

	<u>Maximum level</u>
Matter volatile at 105°C	0.3% by weight
Impurities	0.05% by weight
Soap content	0.005% by weight
Iron	1.5 mg/kg.
Copper	0.4 mg/kg.
Lead	0.1 mg/kg.
Arsenic	0.1 mg/kg.

VI. HYGIENE

It is recommended that the product covered by the provisions of the Standard be prepared in accordance with the appropriate sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VII. LABELLING

- (a) The provisions of Sections 1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling Pre-packaged Foods will apply.
- (b) The following provisions in respect of the labelling of this product have been endorsed by the Codex Committee of Food Labelling.
  - (i) All products designated as Edible Tallow or Dripping must conform to this standard.
  - (ii) Any product designated as Beef Tallow must be produced exclusively from bovine fat and any product designated Mutton Tallow must be produced exclusively from sheep fat.
  - (iii) If refined edible tallow is present, this must be declared in the designation of the product.

VIII. METHODS OF ANALYSIS AND SAMPLING

The Methods of Analysis and Sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section IV of the Standard

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2(j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.
- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.

**FATTY ACID COMPOSITION BY GAS-LIQUID CHROMATOGRAPHY**  
(Percent by weight of methyl esters)

PROPOSED RANGES

Fatty acid	Symbol	Arachis oil	Cotton-seed oil	Maize oil	Rapeseed oil	Safflower seed oil	Sesame seed oil	Soya bean oil	Sunflower seed oil	Lard and rendered pork fat	Premier gas and edible tallow
Sat. acids											
<14 C acids	<14:0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0
Myristic acid	14:0	<1.0	0.5-2.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	0.5-2.5	1.0-8.0
Palmitic acid	16:0	6-14	17-29	6-19	0.5-5.0	2-10	7-12	7-12	3-10	20-32	23-37
Stearic acid	18:0	2.0-6.5	1.0-4.0	0.5-4.0	0.5-3.0	1.0-6.0	3.5-6.0	2.0-5.5	1-10	5-18	6-30
Arachidic acid	20:0	1.0-2.0	<0.5	<1.0	<1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Behenic Acid	22:0	2.0-4.0	-	-	<1.5	<1.0	<1.0	<0.5	<1.0	<0.5	-
Lignoceric acid	24:0	1.0-2.0	-	-	<2.0	-	-	-	-	-	-
Palmitoleic acid	16:1	4.1.0	0.5-1.5	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	2.0-5.0	1.5-6.0
Oleic acid	18:1	40-72	13-44	19-50	9-40	7-42	35-50	20-50	14-72	35-62	36-50
Linoleic acid	18:2	13-38	33-58	34-62	11-29	55-80	35-50	35-65	20-75	3-16	0.5-5.0
Linolenic acid	18:3	<0.5	<0.5	<1.0	5-12	<3.0	<1.0	2-13	<0.5	<2.0	<1.0
Eicosenoic acid	20:1	0.5-1.5	<0.5	<0.5	5-15	<0.5	<0.5	<1.0	<0.5	<1.0	<1.0
Erucic acid	22:1	-	-	-	30-60	-	-	-	-	-	-
Docosadienoic acid	22:2	-	-	-	<1.0	-	-	-	-	-	-
Arachidonic acid	20:4	-	-	-	-	-	-	-	-	<1.0	<0.5
Pentadecenoic acid	15:0	-	-	-	-	-	-	-	-	-	0.5-1.0
Heptadecenoic acid	17:0	-	-	-	-	-	-	-	-	-	0.5-2.0

INDEX TO NAMES OF VEGETABLE  
OILS AND THE CODEX STANDARDS  
IN WHICH THEY ARE INCLUDED

<u>Name of Oil</u>	<u>Standard</u>
Arachis Oil	Arachis Oil
Ben Oil	Sesameseed Oil
Benne Oil	Sesameseed Oil
Carthamus Oil	Safflowerseed Oil
Colza Oil	Rapeseed Oil
Corn Oil	Maize Oil
Cottonseed Oil	Cottonseed Oil
Gingelly Oil	Sesameseed Oil
Groundnut Oil	Arachis Oil
Kurdee Oil	Safflowerseed Oil
Maize Oil	Maize Oil
Mustardseed Oil	Mustardseed Oil
Peanut Oil	Arachis Oil
Rapeseed Oil	Rapeseed Oil
Ravison Oil	Rapeseed Oil
Safflower Oil	Safflowerseed Oil
Safflowerseed Oil	Safflowerseed Oil
Sarson Oil	Rapeseed Oil
Sesame Oil	Sesameseed Oil
Sesameseed Oil	Sesameseed Oil
Soyabean Oil	Soyabean Oil
Soybean Oil	Soyabean Oil
Sunflower Oil	Sunflowerseed Oil
Sunflowerseed Oil	Sunflowerseed Oil
Till Oil	Sesameseed Oil
Tillie Oil	Sesameseed Oil
Toria Oil	Rapeseed Oil
Turnip Rape Oil	Rapeseed Oil



FATS AND OILS

Recommended Methods of Analysis for  
Preservatives and Antioxidants

1. Sorbic acid

(a) Qualitative

Gosselé J.A.W. and others,  
J. Chromatog., (1966), 23, 305

(b) Quantitative

Roos J.B. and A. Versnel  
Chem. Weekblad, (1959), 55, 521

2. Benzoic acid

(a) Qualitative

Gosselé J.A.W. and others,  
J. Chromatog., (1966), 23, 305

(b) Quantitative

Roos J.B. and A. Versnel,  
Chem. Weekblad, (1959), 55, 67.

3. Gallates

(a) Qualitative

Scheidt S.A. and H.W. Conroy,  
J. Am. Offic. Anal. Chemists, (1966), 49, 807

(b) Quantitative

Vos H.J. and others,  
The Analyst, (1957), 82, 362

Note: No entirely satisfactory method, but the above considered suitable for the determination of propyl gallate and of octyl and dodecyl gallates together.

4. Butylated hydroxyanisole (BHA)

(a) Qualitative

Scheidt S.A. and H.W. Conroy,  
J. Am. Offic. Anal. Chemists, (1966), 49, 807  
and Official Methods of Analysis of the  
Association of Official Agricultural Chemists,  
10th Edition, (1965), p.444, Section 26.107(c).

(b) Quantitative

(i) Sloman and others,

J. Am. Offic. Agric. Chemists, (1962), 45, 76.

or (ii) Nordisk Metodik-Komit  for

Levnedsmidler, (1963), Nr. 50.

5. Butylated hydroxytoluene (BHT)

(a) Qualitative

Scheidt S.A. and H.W. Conroy,  
J. Am. Offic. Anal. Chemists, (1966), 49, 807.

(b) Quantitative

(i) Szalkowski C.R. and J.B. Garber,

J. Agr. Food Chem., (1962), 10, 490.

or (ii) Sahasrabudhe M.R.,

J. Assoc. Offic. Agric. Chemists, (1964), 47, 888.

6. Nordihydroguaiaretic acid (NDGA)

(a) Qualitative

Official Methods of Analysis of the Association of  
Official Agricultural Chemists, 10th Edition, (1965). p.444, section 26.107(b)

(b) Quantitative

Sahasrabudhe M.R.,

J. Assoc. Offic. Agric. Chemists, (1964), 47, 888.

DRAFT PROVISIONAL STANDARD FOR  
OLIVE OILS, VIRGIN AND REFINED, AND FOR REFINED

RESIDUE OLIVE OILS

(Step 5 of the Procedure)

I. SCOPE

The standard applies to virgin olive oil, refined olive oil and refined residue olive oil and blends and mixtures thereof. Refined olive oil may be marketed alone or blended with virgin olive oil; refined residue olive oil may be marketed alone or mixed with virgin olive oil.

II. DESCRIPTION

- (a) Olive oil is the oil obtained from the fruit of the olive-tree (*Olea europaea* L.) without having been subjected to manipulation or any form of unauthorised treatment.
- (b) (i) Virgin olive oil is the oil obtained from the fruit of the olive-tree by mechanical or other physical means under conditions, particularly thermal, which do not lead to alteration of the oil. Virgin olive oil is an oil which is suitable for consumption in the natural state.
- (ii) Refined olive oil is the oil obtained from virgin olive oil, the acid content and/or organoleptic characteristics of which render it unsuitable for consumption in the natural state, by means of refining methods which do not lead to alterations in the initial glyceridic structure.
- (c) Refined residue olive oil is the oil obtained from "olive residues" by extraction by means of solvents and made edible by means of refining methods which do not lead to alterations in the initial glyceridic structure.

III. ESSENTIAL COMPOSITIONAL AND QUALITY FACTORS

- (a) Identity Characteristics (under normal ecological conditions)

- (i) Fatty acid composition - MA1

	<u>Range</u> (per cent by weight)
Oleic acid	56.0 - 83.0
Palmitic acid	7.5 - 20.0
Linoleic acid	3.5 - 20.0
Stearic acid	0.5 - 3.5
Palmitoleic acid	0.3 - 3.5
Linolenic acid	0.0 - 1.5
Myristic acid	0.0 - 0.05
Arachidic acid	} minute amounts only
Behenic acid	
Gadoleic acid	
Lignoceric acid	
Erucic acid	
Lauric acid	} not present in discernible amounts

(ii) Chemical and physical indices

	<u>Virgin Oil</u>	<u>Refined Oil</u>	<u>Refined Residue Oil</u>
<u>Density</u> (20°C/water at 20°C) - MA2	0.910-0.916	0.910-0.916	0.910-0.916
<u>Refractive index</u> (n <sub>D</sub> <sup>20°C</sup> ) - MA3	1.4677-1.4705	1.4677-1.4705	1.4680-1.4707
<u>Iodine value</u> (Wijs) - MA4	75-94	75-94	75-92
<u>Saponification value</u> - MA5	184-196	184-196	182-193
<u>Unsaponifiable matter</u> (using light petroleum) - MA6	maximum 1.5% (by weight)	maximum 1.5% (by weight)	maximum 2.5% (by weight)
<u>Bellier Index</u> - MA7	maximum 17	maximum 17	not applicable
<u>Semi-siccative oil test</u> - MA8	negative	negative	negative
<u>Residue olive oil test</u> - MA9	negative	negative	not applicable
<u>Cottonseed oil test</u> - MA10	negative	negative	negative
<u>Teaseed oil test</u> - MA11	negative	negative	negative
<u>Sesame seed oil test</u> - MA 12	negative	negative	negative

A characteristic feature of the unsaponifiable matter in olive oil is its content of squalene, which is higher than that of the other vegetable oils. Another distinctive feature is that its sterols are composed of practically pure  $\beta$ -sitosterol. The unsaponifiable matter of residue olive oil contains more alcoholic compounds than that of virgin or refined olive oils, and its iodine value is therefore lower than that normally noted in virgin or refined olive oils, and its fusion point is higher.

(b) Quality Characteristics(i) Colour, Odour Taste

Virgin olive oil: Clear oils, of a yellow to green colour, with specific odour and taste, free of odours or tastes indicating alteration or pollution of the oil.

Refined olive oil: Clear oil, limpid, without sediments, of clear yellow colour, without specific odour or taste, but free

of odours or tastes indicating alteration or pollution of the oil.

Refined residue olive oil: Clear oil, limpid, without sediment, of a yellow to yellow-brown colour, without specific odour or taste, but free from odours or tastes indicating alteration or pollution of the oil.

Blends and Mixtures: The colour, odour and taste shall be intermediates between those of the two types blended or mixed.

	Virgin Oil	Refined Oil	Refined Residue Oil
(ii) <u>Free Acidity -MA13</u>	maximum	maximum	maximum
Expressed as % oleic acid by weight	3.3	0.3	0.3
Expressed as Acid Value (mg.KoH per g.)	6.6	0.6	0.6
(iii) <u>Peroxide value -MA14</u> (meq. of peroxide oxygen per kg.)	maximum 20	maximum 20	maximum 20

The peroxide value of blends and mixtures shall not exceed 20 meq. per kg.

	Virgin Oil	Refined Oil	Refined Residue Oil	Blends of virgin and refined oils	Mixtures of virgin and refined residue oils
(iv) <u>Specific Extinction in Ultra-violet</u> ( $E_{1cm}^{1\%}$ ) MA 15					
$E_{1cm}^{1\%}$ maximum at 232nm.	3.5	-	6.0	-	5.50
$E_{1cm}^{1\%}$ maximum at 270nm.	0.25	1.10	2.00	0.90	1.70
$\Delta E$ , maximum variation at near 270nm.	*	0.16	0.20	0.15	0.18

\* Oils having a specific extinction at 270nm. exceeding 0.25 may still be regarded as virgin oils if, after passage of the sample through activated alumina, their specific extinction at 270nm. is less than 0.11.

IV. FOOD ADDITIVES

None permitted.

V. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives.

APPENDIX XIX Contd.

	Virgin Oil	Refined Oil	Refined Residue Oil
<u>Matter volatile at 105°C - MA16</u> (% by weight, maximum)	0.2	0.1	0.1
<u>Insoluble impurities - MA17</u> (% by weight, maximum)	0.1	0.05	0.05
<u>Soap Test - MA18 *</u>	not applicable	negative	negative
<u>Solvent residues - MA19</u>	not applicable	not applicable	none

\* Not applicable to blends or mixtures with virgin oil

VI. HYGIENE

It is recommended that the product covered by the provisions of this Standard be prepared in accordance with the appropriate Sections of the General Principles of Food Hygiene of the Codex Alimentarius.

VII. LABELLING

- (a) The provisions of Sections 1. to 2.9, 2.11 and 2.12 of the General Standard for Labelling of Prepackaged Foods apply.
- (b) The following provisions in respect of the labelling of this product are subject to endorsement by the Codex Committee on Food Labelling:-
  - (i) All products designated as olive oil must conform to the provisions of this standard for virgin olive oil or refined olive oil and must be either virgin olive oil or a blend of virgin and refined olive oil.
  - (ii) All products designated as virgin olive oil must conform to the provisions for virgin olive oil in this standard.
  - (iii) All products designated as refined olive oil must conform to the provisions for refined olive oil.
  - (iv) All products designated as refined residue olive oil must conform to the provisions for refined residue olive oil.
  - (v) Refined residue olive oil must not be described as olive oil without qualification, but always as refined residue olive oil.
  - (vi) Mixtures of refined residue olive oil and virgin olive oil must be described as refined residue olive oil and olive oil.

VIII. METHODS OF ANALYSIS

The methods of analysis and sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

- (a) Solvent residues MA19 (to be endorsed)

See Annex 'A' to this Standard.

ANNEX 'A'  
to APPENDIX XIX

Tentative Method for the Determination of Solvent  
Residues in Refined Residue Olive Oil

Method

"Gas Chromatographic Determination of Residual Hydrocarbon  
Solvents in Solvent - Extracted Edible Oils,"  
James O. Watts & Wendell Holswade.

Journal of the Association of Official Agricultural Chemists (1967), 50, 717.

Principle of Method

Oil samples are injected directly on to a GLC column containing  
10 per cent didodecyl phthalate liquid phase on 60-80 mesh Chromosorb P.  
The method is stated to detect down to 10 ppm residual commercial  
hexanes, commercial heptanes, benzene and toluene in edible oils.

DRAFT PROVISIONAL STANDARDFORMARGARINE(Step 8 of the Procedure)I. SCOPE

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.

II. DESCRIPTION

- (a) Margarine is a food in the form of a plastic or fluid emulsion, which is usually mainly of the type water/oil, produced principally from edible fats and oils, which are not or are not mainly derived from milk.
- (b) Other definitions
- (i) Edible fats and oils means foodstuffs composed of glycerides of fatty acids of vegetable, animal or marine origin. Fats of animal origin must be produced from animals in good health at the time of slaughter and be fit for human consumption as determined by a competent authority recognised in national legislation. 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.
- (ii) Pre-packed means packed or made up in advance, ready for retail sale in a container.

III. ESSENTIAL COMPOSITION AND QUALITY FACTORS

- (a) Raw materials
- (i) Edible fats and/or oils or mixtures of these, whether or not they have been subjected to a process of modification.
- (ii) Water and/or milk and/or milk products.
- (b) Minimum fat content: 80% of the product by weight
- (c) Additions

The following substances may be added to margarine:

- (i) Vitamins: Vitamin A (esters included)  
Vitamin D  
Vitamin E (esters included)  
Other Vitamins

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



- (ii) Sodium chloride
- (iii) Sugars (as defined by the Codex Committee on Sugars)
- (iv) Suitable Edible Proteins

IV. FOOD ADDITIVES

The following provisions in respect of food additives have been endorsed by the Codex Committee on Food Additives, unless otherwise indicated.

(a) <u>Colours</u>	<u>Maximum level</u>
(i) Beta-Carotene	Not limited
(ii) Annatto (1)	Not limited
(iii) Curcumin (1)	Not limited
(iv) Canthaxanthine	Not limited
(v) Beta - apo - 3 - carotenal	Not limited
(vi) Methyl and ethyl esters of Beta - apo - 3 - carotenoic acid	Not limited
(b) <u>Flavours</u>	<u>Maximum level</u>
(i) Natural and identical synthetic flavours (1)	Not limited
(ii) Other synthetic flavours (4)	Not limited
(c) <u>Emulsifiers</u>	<u>Maximum level of use</u>
(i) Mono-and di-glycerides of fatty acids	Not limited
(ii) Mono-and di-glycerides of fatty acids esterified with the follow- ing acids:	1% by weight
acetic	
tartaric	
citric	
acetyltartaric	
lactic	
and their sodium and calcium salts.	
(iii) Lecithins and components of commercial lecithin as described in the Specifica- tions in the Seventh Report of the Joint FAO/WHO Expert Committee on Food Additives	Not limited
(iv) Polyglycerol esters of fatty acids	0.5% by weight
(v) 1, 2- propylene glycol esters of fatty acids	2% by weight

		<u>Maximum level of use</u>
(vi)	Esters of fatty acids with polyalcohols other than glycerol:	1% by weight
	Sorbitan monopalmitate Sorbitan monostearate Sorbitan tristearate	
	(commercially known under the names "Span 40", "Span 60" and "Span 65")	
(vii)	Esters of mono- and di- saccharides with fatty acids (Sucroglycerides) (1)	1% by weight
(d)	<u>Preservatives</u>	<u>Maximum level of use</u>
	(i) Sorbic acid and its sodium potassium and calcium salts	1000 mg/kg, individually or in combination, expressed as the acids.
	(ii) Benzoic acid and its sodium and potassium salts.	
(e)	<u>Antioxidants</u>	
	(i) Propyl-, octyl-, and dodecyl gallates,	100 mg/kg individually or in combination
	(ii) BHA, BHT.	
	(iii) Natural and synthetic tocopherols	Not limited
	(iv) Ascorbyl palmitate	200 mg/kg
	(v) Ascorbyl stearate (4)	200 mg/kg
(f)	<u>Synergists</u>	<u>Maximum level of use</u>
	Monoisopropyl citrate (10)	100 mg/kg
(g)	<u>Other Additives</u>	<u>Maximum level of use</u>
	(i) Citric, lactic and tartaric acid and their salts.	Not limited
	(ii) Sodium bicarbonate, sodium carbonate, sodium hydroxide.	

V. CONTAMINANTS

The following provisions in respect of contaminants have been endorsed by the Codex Committee on Food Additives:

<u>Contaminant</u>	<u>Maximum level</u>
Iron	1.5 mg/kg
Copper	0.1 mg/kg
Lead	0.1 mg/kg
Arsenic	0.1 mg/kg

VI. HYGIENE

It is recommended that the product covered by the provisions of this

standard be prepared in accordance with the appropriate Section of the General Principles of Food Hygiene of the Codex Alimentarius.

VII. PACKAGING

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

VIII. LABELLING

- (a) The provisions of Sections 1 and 2.1 to 2.9, 2.11 and 2.12 of the General Standard for Labelling of Prepackaged Foods apply.
- (b) The following specific provisions in respect of the labelling of margarine are subject to endorsement by the Codex Committee on Food Labelling:
  - (i) The product shall be designated margarine and all products designated as margarine shall conform to this Standard.
  - (ii) In any list of ingredients of margarine the fat constituents may be designated as animal fat, vegetable fat or vegetable oil, as appropriate.
  - (iii) No reference shall be made to the presence of milk fat or butter in margarine except in a complete list of ingredients.
  - (iv) No reference shall be made, other than in a complete list of ingredients, to the presence of any vitamin in margarine unless the name and quantity of the vitamin is stated on the label.

IX. METHODS OF ANALYSIS AND SAMPLING

The methods of analysis and sampling described hereunder are international referee methods which have been endorsed by the Codex Committee on Methods of Analysis and Sampling.

Notes with regard to Additives (See Section IV of the Standard)

- (1) Temporarily endorsed, pending toxicological evaluation.
- (2) Not endorsed; but see paragraph 2 (j) of CODEX/FATS AND OILS/REPORT V.
- (3) Not endorsed, pending toxicological evaluation.
- (4) To be endorsed.
- (5) To be endorsed for oils; but already endorsed for animal fats.
- (6) To be endorsed; but included in list of colours found acceptable for use in foods by the Codex Committee on Food Additives; endorsed specifically for margarine.
- (7) To be endorsed; but given an A.D.I. by the Joint FAO/WHO Expert Committee on Food Additives.
- (8) To be endorsed; but temporarily endorsed for margarine.
- (9) Endorsed, but at a maximum level of 5% by weight.

Notes with regard to Additives (See Section IV of the Standard) (Cont.)

- (10) To be endorsed for margarine; but endorsed at a maximum level of 100 mg/kg for animal fats.
- (11) To be endorsed; esters of 1, 2 - propylene glycol with one fatty acid radical only already endorsed.
- (12) To be endorsed; but citric acid and its salts already endorsed for margarine.