CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 2 **CX/FO 21/27/02**

July 2021

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FATS AND OILS

Twenty-Seventh Session

Virtual, 18 - 26 October 2021

MATTERS REFERRED BY THE CODEX ALIMENTARIUS COMMISSION AND ITS SUBSIDIARY BODIES

MATTERS ARISING FROM THE CODEX ALIMENTARIUS COMMISSION (CAC)

A: Matters for information

42nd Session of the Commission (CAC42)[1]

1. CAC42 **adopted** the:

   a) Proposed amendments/revisions to the *Standard for Named Vegetable Oils* (CXS 210-1999):

   - Addition of Palm Oil with a higher content of Oleic Acid (OXG)
   - Inclusion of Almond oil, Flaxseed (linseed) oil; Hazelnut oil; Pistachio oil; and Walnut oil
   - Inclusion of Free Fatty acids as quality characteristic criteria for refined rice bran oil
   - Replacement of acid value with Free Fatty Acid for Virgin Palm Oil and Inclusion of Free Fatty Acid for Crude Palm Kernel Oil
   - Amendment to the values of the Refractive Index and Apparent Density of Palm Superolein at 40°C
   - Applicability of the fatty acid composition of other oils listed in Table 1 in relation to their corresponding crude form and consequential deletion of an equivalent note for rice bran oil

   b) Amendment to the sections of food additives provisions to: *Standard for Edible Fats and Oils not Covered by Individual Standards* (CXS 19-1981), Section 3.3, 3.4 & 3.5; *Standard for Named Vegetable Oils* (CXS 210- 1999), Section 4.2 & 4.3; and *Standard for Named Animal Fats* (CXS 211-1999), Section 4.2 & 4.4; and *Standard for Fat Spreads and Blended Spreads* (CXS 256-2007), Section 4.1 & 4.7.

Codex Strategic Plan 2020 - 2025[2]

2. CAC42 **adopted** the Codex Strategic Plan 2020 – 2025.

43rd Session of the Commission (CAC43)

Procedural aspects and meetings of subsidiary committees[3]

3. CAC43 recommended:

   (i) that CCEXEC80[4] share its recommendations based on the report of the sub-committee on Codex and the Pandemic – Strategic Challenges and Opportunities with all subsidiary bodies for their information and further consideration as appropriate; and

[1] REP19 CAC, para 14, Appendix II

[2] REP19 CAC, para 122

[3] REP20/CAC, para 20 (i-ii), 31(ii) &32

[4] REP21/EXEC1, para 35-36

(ii) to all subsidiary bodies and Members and Observers to make full use of existing remote working mechanisms such as Electronic Working Groups (EWGs) and Circular Letters (CLs) and to plan their virtual committee meetings in such a manner as to optimize the possibility to complete their agendas.

4. CCFO is requested to **note** the above decisions by the Commission (under paragraphs 1 to 3)

MATTERS ARISING FROM SUBSIDIARY BODIES

Matters for information

EXECUTIVE COMMITTEE OF THE CODEX ALIMENTARIUS COMMISSION (CCEXEC)

CCEXEC78

Follow-up to Regular Review of Codex Work Management 2017-2018: Use of References in Codex Texts

5. CCEXEC78 emphasized that while there may on occasion be merit in including references to standards of another standard setting organization, these should be kept to a minimum since they become an integral part of a Codex text and require life-long monitoring.

CCEXEC80

6. Recommended that when planning the agenda of Codex sessions to be convened virtually in 2021:

   - pre-meeting planning and preparations were optimized in order to distil key issues for consideration by Codex subsidiary bodies and that this was communicated in a transparent manner; and
   - the Chairpersons together with the host and Codex secretariats were adequately prepared for the sessions and how to deal with agenda items in recognition of the challenges associated with conducting a virtual session.

45th Session of the Codex Committee on Food Labelling[5] (CCFL45)

Draft guidance for the labelling of non-retail containers

7. CCFL45 noted that there had been a lot of progress on the work and therefore agreed to: forward the proposed draft standard to CAC42 for adoption at Step 5; and to inform the relevant Commodity Committees on the progress of the work.

Revision of provisions for date marking

8. CCFL45:

   - noted the continued use of the term “date of minimum durability” throughout several Codex texts which was inconsistent with the revised section on date marking in the *General Standard for Labelling of Prepackaged Foods* (GSLPF) (CXS 1-1985) and therefore alignment of these texts with the GSLPF was necessary.
   - agreed to inform commodity committees to ensure alignment of terminology with the newly revised GSLPF and noted that the Secretariat would also undertake a search for the texts where such alignment was needed and could make proposals for amendments to relevant Codex texts for approval by CAC.

Codex Committee on Methods of Analysis and Sampling

CCMAS 40

Methods of analysis for acid value and free fatty acids for virgin palm oil and crude palm kernel oil

9. CCMAS40

   i. Agreed to endorse the three methods for both acid value and free fatty acids and noted the explanation that the three methods i.e. ISO 660 / AOCS Cd 3d-63 / AOCS Ca 5a-40 could be used to calculate both acid value and free fatty acids.

   ii. Inform all Codex committees of the current work of CCMAS regarding the review and update of CXS 234 and the development of a database for methods of analysis and sampling endorsed by CCMAS and adopted by CAC.

[5] REP19/FL Para 6, 19-23

General Guidelines on Sampling (CXG 50-2004)

10. CCMAS41 agreed to inform other relevant Codex Committees of the ongoing work on the revision of the General Guidelines on Sampling and invite any comments as relevant.

11. Delegates to CCFO27 are requested to liaise at national level to provide comments on the CXG 50-2004 when it goes out for comment

CCNFSDU41

12. CCNFSDU41 agreed:

    i. To discontinue work on the claim for "free" of TFAs

    ii. To inform:

    - CCFO of CCNFSDU41's discussions, and to consider work in CCFO on possible ways to reduce TFAs or eliminate PHOs.
    - That any member could make proposals to other Codex committees for new work to address the issue of TFAs and could take necessary actions at the national level taking into account the work of WHO.

13th Session of the Codex Committee on Contaminants in Foods[6] (CCCF13)

13. CCCF13 agreed to inform all commodity committees that in the absence of MLs in the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995), GSCTFF, documents such as codes of practice could be referenced in the sections of contaminants or hygiene or other appropriate sections.

14. CCFO is invited to **note** the above information (paragraph 5 to 13).

B. Matters for Action

CCMAS 41[7]

Recommended Methods of Analysis and Sampling (CXS 234-1999)

15. CCMAS41 reviewed the methods of fats and oils in CXS 234-1999 and agreed to:

    i. Refer the endorsed methods to CCFO for their comments and/or agreement (Appendix II, Part 4.3) and if there is agreement on the methods, these could go directly to CAC 44 for adoption;

    ii. Refer the questions in paragraph 47 and the related methods (Appendix II, Part 4.4) to CCFO for their consideration and reply;

16. CCFO is invited to **consider** the above matters from CCMAS as outlined in the **Annex I** (i.e. CCMAS41 discussions related to methods review) and Appendix II (Part 4.3 – proposed revised methods; and Part 4.4 related to questions in paragraph 47)

[6] REP19/CF Para 9
[7] REP21/MAS Para 51 (i-iii)

Annex I

Fats and Oils workable package (Agenda Item 4.2)[8]

44. The Netherlands, Chair of the EWG, introduced the item, explained the process followed by the WG and the key recommendations as presented in CX/MAS 21/41/5.

45. The EWG Chair explained that:

- the review focused on checking the "fitness for purpose" of methods in CXS 234, and consideration of their Typing. New methods were not considered at this point and that such methods could go through the normal endorsement process on recommendation of the relevant commodity committee, e.g. CCFO;
- there were certain issues on which further discussion was needed and that might need to be referred also to CCFO; and
- review of the methods related to provisions in the *Standard for Olive Oils and Olive Pomace Oils* (CXS 33-1981) should be suspended pending the ongoing revision of this standard in CCFO.

Discussion

46. CCMAS considered the proposals in CX/MAS 21/41/5, Appendix I and in addition to some editorial or other corrections to either the method or principle, made the following comments and decisions.

47. CCMAS:

- agreed to not consider the methods for olive oils and olive pomace oils at this time in view of the ongoing work in CCFO. This part of the package could be reconsidered in future upon finalization of the revision of the *Standard for Olive Oils and Olive Pomace Oils* by CCFO;
- endorsed some of the methods for provisions pertaining to fat spreads and blended spreads; fats and oils (all); fats and oils not covered by individual standards; fish oils; named animal fats; named vegetable oils; and named animal fats (Appendix II, Part 1). In particular, CCMAS noted that for fish oils, methods for arsenic should determine inorganic arsenic. Currently there is not a provision for inorganic arsenic in fish oil and therefore no numeric criteria have been developed and no applicable methods have been endorsed. CCMAS also noted, the criteria approach could be considered for the methods for determination of total arsenic in fats and oils (all) and inorganic arsenic in fish oils and agreed to request CCFO to consider the criteria approach, and that pending feedback from CCFO, criteria could be developed, if a provision exists, by the EWG for consideration by the next session.;
- agreed that specific feedback was needed from CCFO on the following matters to guide further work on the review by the EWG before the methods could be considered for endorsement:

  Fats and oils

  - What would be the trade impact on the retyping of one of 2 (two) proposed methods for determination of synthetic antioxidants in fats and oils. It was noted that AOCS and ISO are collaborating to produce identical methods to replace AOCS Ce-6-86 by 2023.

  Fish oils

  - What would be the trade impact on the retyping of the method AOCS Ce 2-66 and AOCS Ce 1i-07 for fatty acid composition in fish oils as Type II;
  - Consider the trade impact of retyping the ISO methods to Type III.

  Named animal fats

  - What would be the trade impact on the retyping of the methods for fatty acid composition as Type II; and
  - Noting that the methods currently listed in CXS 234 for titre, ISO 935 and AOCS Cc 12-59 were not identical and therefore cannot both be Type I methods, and noting that ISO 935 is more "fit for purpose", what would be the trade impact on retyping the ISO method as Type I. AOCS Cc 12-59 is proposed as Type IV.

  Named vegetable oils

  - Whether the methods for Crismer value and Halphen test are still in active use; and
  - ISO 18609 is not identical to ISO 3596 and AOCS Ca 6b-53. ISO 18609 is a method which produces systematically underestimated results. What would be the impact for trade if ISO 18609 were retyped to Type IV.

8 CX/MAS 21/41/5

48. CCMAS noted that the proposals agreed by CCMAS for methods on the fats and oils package should be referred to CCFO for their information, agreement and /or further comment in line with the procedure agreed by CCMAS37 (REP16/MAS Appendix IV).

49. Furthermore, to simplify the review process on this package, any new methods could be put directly to CCFO and submitted to CCMAS through the normal endorsement procedures. In this regard, CCMAS noted the intervention from an observer that two important methods used in industry globally for quantification of omega-3-fatty acids, EPA, DHA and total omega-3-fatty acids in fish oils were not listed, namely, the European Pharmacopoeia method 2.4.29 and the United States Pharmacopoeia Method USP401 and would be brought to the attention of CCFO.

50. CCMAS did not discuss the methods for Vitamins A and D in fish oils; and carotenoids and relative density in named vegetable oils and agreed to refer these to the EWG for further consideration. (Appendix II, Part 5).

Conclusion

51. CCMAS agreed to:

i. Refer the endorsed methods to CCFO for their comments and/or agreement (Appendix II, Part 4.3) and if there is agreement on the methods, these could go directly to CAC44 for adoption;

ii. Refer the questions in paragraph 47 and the related methods (Appendix II, Part 4.4) to CCFO for their consideration and reply;

iii. Inform CCFO that work on the review of methods for provisions in the *Standard for Olive Oils and Olive Pomace Oils* (CXS 33-1981) would be considered in future upon completion of the revision of the Standard by CCFO;

iv. Re-establish the EWG on the review of the fats and oils package, chaired by The Netherlands, and working in English to

- Continue reviewing the remaining methods in Appendix II, Part 5
- To consider replies from CCFO and the issues raised;
- Prepare revised proposals for consideration by CCMAS42.

APPENDIX II

4.3 FOR REFERRAL TO CCFO

(endorsed by CCMAS, for consideration by CCFO)

Commodity	Provision	Method	Principle	Type
~~**Fat spreads and blended spreads**~~	~~Fat content~~	~~ISO 17189 | IDF 194~~	~~Gravimetry~~	~~I~~
Fat spreads and blended spreads	Total fat	ISO 17189 | IDF 194	Gravimetry. Direct determination of fat using solvent extraction.	I
~~**Fats and Oils (all)**~~	~~Arsenic~~	~~AOAC 942.17~~	~~Colorimetry (molybdenum blue)~~	~~III~~
Fats and Oils (all)	Arsenic	AOAC 963.21 and AOAC 942.17	Kjeldahl flask digestion and colorimetry (molybdenum blue)	III
~~**Fats and Oils (all)**~~	~~Arsenic~~	~~AOAC 952.13~~	~~Colorimetry (diethyldithiocarbamate)~~	~~II~~
Fats and Oils (all)	Arsenic	AOAC 963.21 and AOAC 952.13	Kjeldahl flask digestion and colorimetry (diethyldithiocarbamate)	**III**
~~**Fats and Oils (all)**~~	~~Arsenic~~	~~AOAC 986.15~~	~~Atomic absorption spectrophotometry~~	~~III~~
Fats and Oils (all)	Arsenic	AOAC 986.15	Atomic absorption spectrophotometry (hydride generation)	**II**
~~**Fats and Oils (all)**~~	~~Insoluble impurities~~	~~ISO 663~~	~~Gravimetry~~	~~I~~
Fats and Oils (all)	Insoluble impurities	ISO 663	Calculation from total insoluble content in *n*-hexane or light petroleum. Gravimetry, drying at 103 °C	I
~~**Fats and Oils (all)**~~	~~Lead~~	~~AOAC 994.02; or ISO 12193; or AOCS Ca 18c-91~~	~~Atomic absorption spectrophotometry (direct graphite furnace)~~	~~II~~
Fats and Oils (all)	Lead	AOAC 994.02 / ISO 12193 / AOCS Ca 18c-91	Atomic absorption spectrophotometry (direct graphite furnace)	II
~~**Fats and Oils (all)**~~	~~Matter volatile at 105°C~~	~~ISO 662~~	~~Gravimetry (open-drying)~~	~~I~~

Commodity	Provision	Method	Principle	Type
Fats and Oils (all)	Moisture and volatile matter	ISO 662	Gravimetry, drying at 103 °C	I
~~**Fats and Oils (all)**~~	~~Soap content~~	~~BS EN ISO 10539 or AOCS Cc 17-95~~	~~Gravimetry~~	~~I~~
Fats and Oils (all)	Soap content	ISO 10539 / AOCS Cc 17-95	Titrimetry (Colorimetric)	I
~~**Fats and Oils not covered by individual standards**~~	~~Acid value~~	~~ISO 660; or AOCS Cd 3d-63~~	~~Titrimetry~~	~~I~~
Fats and Oils not covered by individual standards	Acidity: acid value	ISO 660 / AOCS Cd 3d-63	Titrimetry	I
~~**Fats and Oils not covered by individual standards**~~	~~Copper and Iron~~	~~AOAC 990.05; or ISO 8294; or AOCS Ca 18b-91~~	~~Atomic absorption spectrophotometry (direct graphite furnace)~~	~~II~~
Fats and Oils not covered by individual standards	Copper and Iron	AOAC 990.05 / ISO 8294 / AOCS Ca 18b-91	Atomic absorption spectrophotometry (direct graphite furnace)	II
~~**Fats and Oils not covered by individual standards**~~	~~Peroxide value~~	~~AOCS Cd 8b-90 ISO 3960~~	~~Titrimetry using iso-octane~~	~~I~~
Fats and Oils not covered by individual standards	Peroxide value	AOCS Cd 8b-90 / ISO 3960 / NMKL 158	Titrimetry (Colorimetric)	I
~~**Fish oils**~~	~~Acid value~~	~~AOCS Ca 5a-40 AOCS Cd 3d-63 ISO 3960 NMKL 38~~	~~Titration~~	~~I~~
Fish oils	Acidity: acid value	AOCS Ca 5a-40 / AOCS Cd 3d-63 / ISO 660 / NMKL 38	Titrimetry	I
~~**Fish oils**~~	~~Peroxide value~~	~~AOCS Cd 8b-90 ISO 3960 NMKL 158~~	~~Titration~~	~~I~~
~~**Fish oils**~~	~~Peroxide value~~	~~European Pharmacopoeia 2.5.5 (Part B Iso-octane as solvent)~~	~~Titration~~	~~I~~
Fish oils	Peroxide value	AOCS Cd 8b-90 / ISO 3960 / NMKL 158 / European Pharmacopoeia 2.5.5	Titrimetry (Colorimetric)	I
~~**Fish oils**~~	~~Phospholipids~~	~~USP-FCC 10 2S (Krill oil): Phospholipids Nuclear Magnetic Resonance, Appendix IIC~~	~~NMR Spectroscopy~~	~~I~~

Commodity	Provision	Method	Principle	Type
Fish oils	Phospholipids	USP-FCC 12 2S (krill oil - phospholipids)	Nuclear Magnetic Resonance Spectroscopy	I
~~**Fish oils**~~	~~Triglycerides~~	~~AOCS Cd 11d-96~~	~~HPLC-ELSD~~	~~III~~
Fish oils	Triglycerides	AOCS Cd 11d-96	Liquid chromatography with evaporative light scattering detection	**II**
~~**Fish oils**~~	~~Triglycerides~~	~~European Pharmacopoeia 1352 (Omega-3 acid triglycerides): Oligomers and partial glycerides~~	~~HPLC-RI~~	~~III~~
Fish oils	Triglycerides	European Pharmacopoeia 1352	Liquid chromatography with refractive index detection	III
~~**Fish oils**~~	~~Triglycerides~~	~~USP 40-NF35 (Omega-3 Acid Triglycerides):Content of oligomers and partial glyceride~~	~~HPLC-RI~~	III
Fish oils	Triglycerides	USP 40 NF37	Liquid chromatography with refractive index detection	III
~~**Named Animal Fats**~~	~~Acidity~~	~~ISO 660; or AOCS Cd 3d-63~~	~~Titrimetry~~	~~I~~
Named Animal Fats	Acidity: acid value	ISO 660 / AOCS Cd 3d-63	Titrimetry	I
~~**Named Animal Fats**~~	~~Copper and Iron~~	~~AOAC 990.05; or ISO 8294; or AOCS Ca 18b-91~~	~~Atomic absorption Spectrophotometry (direct graphite furnace)~~	~~II~~
Named Animal Fats	Copper and Iron	AOAC 990.05 / ISO 8294 / AOCS Ca 18b-91	Atomic absorption Spectrophotometry (direct graphite furnace)	II
~~**Named Animal Fats**~~	~~Iodine value (IV)~~	~~ISO 3961; or AOAC 993.20; or AOCS Cd 1d-92~~	~~Wijs-Titrimetry~~	~~I~~
Named Animal Fats	Iodine value	ISO 3961 / AOAC 993.20 / AOCS Cd 1d-92 / NMKL 39	Titrimetry (Wijs)	I
~~**Named Animal Fats**~~	~~Peroxide value~~	~~AOCS Cd 8b-90; or ISO 3960~~	~~Titrimetry using iso-octane~~	~~I~~
Named Animal Fats	Peroxide value	AOCS Cd 8b-90 / ISO 3960 / NMKL 158	Titrimetry (Colorimetric)	I
~~**Named Animal Fats**~~	~~Refractive index~~	~~ISO 6320; or AOCS Cc 7-25~~	~~Refractometry~~	~~II~~
Named Animal Fats	Refractive index	ISO 6320 / AOCS Cc 7-25	Refractometry	II

Commodity	Provision	Method	Principle	Type
~~**Named Animal Fats**~~	~~Relative density~~	~~ISO 6883, with the appropriate conversion factor; or AOCS Cc 10c-95~~	~~Pycnometry~~	~~I~~
Named Animal Fats	Relative density	ISO 6883, with the appropriate conversion factor / AOCS Cc 10c-95	Pycnometry	I
~~**Named Animal Fats**~~	~~Saponification value~~	~~ISO 3657; or AOCS Cd 3-25~~	~~Titrimetry~~	~~I~~
Named Animal Fats	Saponification value	ISO 3657 / AOCS Cd 3-25	Titrimetry (Colorimetric)	I
~~**Named Animal Fats**~~	~~Unsaponifiable matter~~	~~ISO 3596; or ISO 18609; or AOCS Ca 6b-53~~	~~Titrimetry after extraction with diethyl ether~~	~~I~~
Named Animal Fats	Unsaponifiable matter	ISO 3596 / ISO 18609 / AOCS Ca 6b-53	Gravimetry, drying at 103 ^{o}C and titrimetry (colorimetry)	I
~~**Named Vegetable Oils**~~	~~Acidity~~	~~ISO 660; or AOCS Cd 3d-63~~	~~Titrimetry~~	~~I~~
Named Vegetable Oils	Acidity: acid value	ISO 660 / AOCS Cd 3d-63 / AOCS Ca 5a-40	Titrimetry	I
~~**Named Vegetable Oils**~~	~~Apparent density~~	~~ISO 6883, with the appropriate conversion factor; or AOCS Cc 10c-95~~	~~Pycnometry~~	~~I~~
Named Vegetable Oils	Apparent density	ISO 6883, ~~with the appropriate conversion factor~~ / AOCS Cc 10c-95	Pycnometry	I
Named Vegetable Oils	Baudouin test (modified Villavecchia or sesame seed oil test)	AOCS Cb 2-40	Colour reaction	I
~~**Named Vegetable Oils**~~	~~Carotenoids, total~~	~~BS 684 Section 2.20~~	~~Spectrophotometry~~	~~II~~
Named Vegetable Oils	Carotenoids, total	BS684-2.20	Spectrophotometry	II
~~**Named Vegetable Oils**~~	~~Copper and Iron~~	~~ISO 8294; or AOAC 990.05; or AOCS Ca 18b-91~~	~~AAS~~	~~II~~
Named Animal Fats	Copper and Iron	AOAC 990.05 / ISO 8294 / AOCS Ca 18b-91	Atomic absorption Spectrophotometry (direct graphite furnace)	II
~~**Named Vegetable Oils**~~	~~GLC ranges of fatty acid composition~~	~~ISO 5508 and ISO 12966-2; or AOCS Ce 2-66 and Ce 1—62 or Ce~~	~~Gas chromatography of methyl esters~~	~~II~~

Commodity	Provision	Method	Principle	Type
		~~1h-05~~		
Named Vegetable Oils	Fatty acid composition	ISO 12966-2 and ISO 12966-4 / AOCS Ce 2-66 and AOCS Ce 1h-05	Gas Chromatography of methyl esters	II
Named Vegetable Oils	Free fatty acids	ISO 660 / AOCS Cd 3d-63 / AOCS Ca 5a-40	Titrimetry	I
~~**Named Vegetable Oils**~~	~~Insoluble impurities~~	~~ISO 663~~	~~Gravimetry~~	~~I~~
Named Vegetable Oils	Insoluble impurities	ISO 663	Calculation from total insoluble content in *n*-hexane or light petroleum. Gravimetry, drying at 103 °C	I
~~**Named Vegetable Oils**~~	~~Iodine value (IV)~~	~~ISO 3961; or AOAC 993.20; or AOCS Cd 1d-92; or NMKL 39~~	~~Wijs-Titrimetry~~	~~I~~
Named Vegetable Oils	Iodine value	ISO 3961 / AOAC 993.20 / AOCS Cd 1d-92 / NMKL 39	Titrimetry (Wijs)	I
~~**Named Vegetable Oils**~~	~~Lead~~	~~AOAC 994.02; or ISO 12193; or AOCS Ca 18c-91~~	~~Atomic Absorption~~	~~II~~
Named Vegetable Oils	Lead	AOAC 994.02 / ISO 12193 / AOCS Ca 18c-91	Atomic absorption spectrophotometry (direct graphite furnace)	II
~~**Named Vegetable Oils**~~	~~Moisture & volatile matter at 105°C~~	~~ISO 662~~	~~Gravimetry~~	~~I~~
Named Vegetable Oils	Moisture and volatile matter	ISO 662	Gravimetry, drying at 103 °C	I
~~**Named Vegetable Oils**~~	~~Peroxide value (PV)~~	~~AOCS Cd 8b-90; or ISO 3960~~	~~Titrimetry~~	~~I~~
Named Vegetable Oils	Peroxide value	AOCS Cd 8b-90 / ISO 3960 / NMKL 158	Titrimetry (Colorimetric)	I
~~**Named Vegetable Oils**~~	~~Refractive index~~	~~ISO 6320; or AOCS Cc 7-25~~	~~Refractometry~~	~~II~~
Named Vegetable Oils	Refractive index	ISO 6320 / AOCS Cc 7-25	Refractometry	II
~~**Named Vegetable Oils**~~	~~Reichert value and Polenske value~~	~~AOCS Cd 5-40~~	~~Titrimetry~~	~~I~~
Named Vegetable Oils	Reichert-Meissl value and Polenske value	AOCS Cd 5-40	Calculation from soluble and insoluble volatile fatty acids.	I

Commodity	Provision	Method	Principle	Type
			Titrimetry (Colorimetric).	
~~**Named Vegetable Oils**~~	~~Relative density~~	~~ISO 6883, with the appropriate conversion factor; or AOCS Cc 10c-95~~	~~Pycnometry~~	~~I~~
Named Vegetable Oils	Relative density	ISO 6883~~, with the appropriate conversion factor~~ / AOCS Cc 10c-95	Pycnometry	I
~~**Named Vegetable Oils**~~	~~Saponification value (SV)~~	~~ISO 3657; or AOCS Cd 3-25~~	~~Titrimetry~~	~~I~~
Named Vegetable Oils	Saponification value	ISO 3657 / AOCS Cd 3-25	Titrimetry (Colorimetric)	I
~~**Named Vegetable Oils**~~	~~Slip point~~	~~ISO 6321 for all oils; AOCS Cc 3b-92 for all oils except palm oils; AOCS Cc 3-25 for palm oils only~~	~~Open ended capillary tube~~	~~I~~
Named Vegetable Oils	Slip point	ISO 6321 / AOCS Cc 3b-92 for all oils except palm oils or AOCS Cc 3-25 for palm oils only	Open ended capillary tube	I
~~**Named Vegetable Oils**~~	~~Soap content~~	~~BS 684 Section 2.5 withdrawn for BS EN ISO 10539 or AOCS Cc 17-95~~	~~Gravimetry~~	~~I~~
~~**Named Vegetable Oils**~~	~~Sterol content~~	~~ISO 12228; or AOCS Ch 6-91~~	~~Gas chromatography~~	~~II~~
Named Vegetable Oils	Sterol composition and total sterols	ISO 12228-1 / AOCS Ch 6-91	Thin-layer chromatography and gas chromatography	II
~~**Named Vegetable Oils**~~	~~Tocopherol content~~	~~ISO 9936; or AOCS Ce 8-89~~	~~HPLC~~	~~II~~
Named Vegetable Oils	Tocopherol content	ISO 9936 / AOCS Ce 8-89	Liquid chromatography with fluorescence detection	II

Part 4.4 Referral to CCFO: For consideration and reply by CCFO

Commodity	Provision	Method	Principle	Type
~~**Fats and oils**~~	~~Butylhydroxyanisole, butylhydroxytoluene, tert-butylhydroquinone, & propyl gallate~~	~~AOAC 983.15; or AOCS Ce 6-86~~	~~Liquid chromatography~~	~~II~~
Fats and oils	Synthetic antioxidants	AOAC 983.15	Liquid chromatography	**II / III**
Fats and oils	Synthetic antioxidants	AOCS Ce 6-86	Liquid chromatography	**II / III**

- *What would be the impact for trade of retyping one of the proposed methods to Type II?*

Commodity	Provision	Method	Principle	Type
• *AOAC and ISO are collaborating to produce identical methods to replace AOCS Ce 6-86 by 2023.*				
~~**Fish oils**~~	~~Fatty acid composition~~	~~AOCS Ce 1a-13~~	~~Capillary GLC~~	~~III~~
~~**Fish oils**~~	~~Fatty acid composition~~	~~AOCS Ce 2-66~~	~~Preparation of methyl esters by fatty acids~~	~~III~~
Fish oils	Fatty acid composition *Type II from Type III selection suggests either (i) remain Type III, (ii) Type IV or (iii) removal from STAN 234.*	AOCS Ce 2-66 and AOCS Ce 1a-13	Gas Chromatography of methyl esters	**III/~~IV/~~ ~~Remo~~ ~~val~~**
~~**Fish oils**~~	~~Fatty acid composition~~	~~AOCS Ce 1b-89~~	~~GLC~~	~~III~~
Fish oils	Fatty acid composition *Type II from Type III selection comes unanymously to conclusion: Type III*	AOCS Ce 1b 89	Gas Chromatography of methyl esters	III
~~**Fish oils**~~	~~Fatty acid composition~~	~~AOCS Ce 2b-11~~	~~Alkali hydrolysis~~	~~III~~
Fish oils	Fatty acid composition *Type II from Type III selection comes unanymously to conclusion: Type III*	AOCS Ce 2b-11 and AOCS Ce 1i-07 ~~or~~ ~~AOCS Ce 1j-07~~	Gas Chromatography of methyl esters	III
Fish oils	Fatty acid composition	AOCS Ce 2b-11 and AOCS Ce 1j-07	Gas Chromatography of methyl esters	III
~~**Fish oils**~~	~~Fatty acid composition~~	~~AOCS Ce 1~~**~~i~~**~~-07~~	~~Capillary GLC~~	~~III~~
~~**Fish oils**~~	~~Fatty acid composition~~	~~ISO 12966-2~~	~~Gas chromatography~~	~~III~~
~~**Fish oils**~~	~~Fatty acid composition~~	~~ISO 5508~~	~~Gas chromatography~~	~~III~~
Fish oils	Fatty acid composition *Type II from Type III selection comes unanymously to conclusion: Type III*	ISO 12966-2 and ISO 12966-4	Gas Chromatography of methyl esters	III
Fish oils	Fatty acid composition *Type II from Type III selection comes unanymously to conclusion: Type II*	AOCS Ce 2-66 and AOCS Ce 1i-07	Gas Chromatography of methyl esters	~~III~~ **II**
• *What would be the impact for trade when endorsing the AOCS methods for Type II?*				
~~**Named Animal**~~	~~GLC ranges of fatty acid composition~~	~~ISO 5508 and ISO 12966-2; or AOCS~~	~~Gas chromatography of methyl~~	~~II~~

Commodity	Provision	Method	Principle	Type
~~**Fats**~~		~~Ce 2-66 and Ce 1e-91 or Ce 1f-96~~	~~esters~~	
Named Animal Fats	Fatty acid composition **Canada: Replace AOCS Ce 1f-96 with Ce 1j-07. Retype to Type III, including the ISO methods. Suggest AOCS Ce 2-66 and Ce1j-07 as Type II.*	ISO 12966-2 and ISO 12966-4 / AOCS Ce 2-66 and Ce ~~1f-96~~ 1j-07	Gas Chromatography of methyl esters	II
• *What would be the impact for trade when endorsing the AOCS methods for Type II?*				
~~**Named Animal Fats**~~	~~Titre~~	~~ISO 935; or AOCS Cc 12-59~~	~~Thermometry~~	~~I~~
Named Animal Fats	Titre	ISO 935	Thermometry	I
Named Animal Fats	Titre	AOCS Cc 12-59	Thermometry	IV
• *The methods are not identical and can therefore not be endorsed as Type I. Given the review of this EWG, the ISO method is a more fit for purpose method. What would be the impact for trade upon retyping?*				
Named Vegetable Oils	Crismer value	AOCS Cb 4-35 and AOCS Ca 5a-40	Calculation from individual fatty acid composition (gas chromatography of methyl esters) and turbidity	I
Named Vegetable Oils	Halphen test	AOCS Cb 1-25	Colorimetry	I
• *Are the above methods for Crismer value and Halphen test still in active use?*				
~~**Named Vegetable Oils**~~	~~Unsaponifiable matter~~	~~ISO 3596; or ISO 18609; or AOCS Ca 6b-53~~	~~Gravimetry~~	~~I~~
Named Vegetable Oils	Unsaponifiable matter **Canada: solvents differ between methods*	ISO 3596 / ISO 18609 / AOCS Ca 6b-53	Gravimetry, drying at 103 ^{o}C and titrimetry (colorimetry)	I
• *ISO 18609 is not identical to ISO 3596 and AOCS Ca 6b-53. ISO 18609 is a method which produces systematically underestimated results. What would be the impact for trade if ISO 18609 would be retyped to Type IV?*				