CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 4.1

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING

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REVIEW OF METHODS OF ANALYSIS IN CXS 234 FATS AND OILS WORKABLE PACKAGE

Comments in reply to CL 2022/60/OCS-MAS

Comments of Brazil, Canada, Chile, Colombia, Egypt, European Union, Iraq, Kenya, Norway, Peru, Philippines, Thailand, AOCS - American Oil Chemists' Society and ICUMSA

Background

1. This document compiles comments received through the Codex Online Commenting System (OCS) in response to CL 2022/60/OCS-MAS issued in September 2022. Under the OCS, comments are compiled in the following order: general comments are listed first, followed by comments on specific sections.

Explanatory notes on the Annex

2. The comments submitted through the OCS are hereby attached as **Annex I** and presented in table format.

Annex I

GENERAL COMMENTS	MEMBER / OBSERVER
Brazil thanks the opportunity to present just a few comments on the Review of methods in CXS 234 - 1999: Request for comments on the fats and oils workable package, as described below: • adjust the use of the connector for method AOCS Ce 2b-11 and AOCS Ce 1i-07 or/AOCS Ce 1j-07. The “or” connector must be replaced by “/ ”. • for methods based on the “Liquid chromatography” principle, we suggest including the description of the detector, similarly to that described for “Triglycerides”, to standardize. Brazil will continue to follow the discussion to send comments when relevant.	**Brazil**
Chile tiene las siguientes observaciones para que sean consideradas como parte del documento: - Nota 1: En relación a los métodos que se proponen ser, eliminados o cambiados en su tipificación, se debería entregar antecedentes respecto de la justificación de dicha propuesta. - Nota 2: Se debe armonizar la descripción de los principios del método para fines del CX-234, es decir, la utilización de siglas o texto. En nuestra opinión es recomendable la utilización de siglas (acrónimos) internacionalmente reconocidos.	**Chile**
Egypt agrees on the suggested changes with no comments	**Egypt**
The European Union and its Member States (EUMS) congratulate the Electronic Working Group (EWG) led by The Netherlands for their great work in reviewing the remaining fats and oils method and the clarification of certain questions in exchange with CCFO related to: • fats and oils (AOCS Ce 6-86 for synthetic antioxidants as Type II, AOAC 983.15 as Type III) • fish oils (AOCS Ce 2-66 and AOCS Ce 1i-07 for fatty acid composition as Type II, ISO 12966-2 and ISO 12966-4 to Type III) • named animal fats (AOCS Ce 2-66 and AOCS Ce 1j-07 methods for fatty acid composition as Type II, ISO 12966-2 and ISO 12966-4 method as Type III.) • named animal fats (ISO 935 for Titre as Type I, AOCS Cc 12-59 as Type IV.) • named vegetable oils (ISO 18609 for unsaponifiable matter as Type IV) . The EUMS are aware that CSX33-1981 Standard for Olive Oils and Olive Pomace Oils is under revision and that related methods of analysis were not fully included in the current review. However, the EUMS wish to highlight that the methods of analysis of olive and olive-pomace oils in CXS 234 shall include, to the greatest extent possible, the methods of the International Olive Council (IOC), because these are the reference methods for the analysis of these products in the majority of producer countries (members of the IOC), as well as in the EUMS where the IOC methods are used for official control. For two provisions, a Type I and a Type IV method were proposed (see below). In principle, this is possible as set out in the Information Document: Guidance on Process for Submission, Consideration and Endorsement of Methods (Table 2.2: Guidance on Method Listing in CXS 234), stating that Type IV methods can be listed as alternative to Type I/II/III if deemed useful by CCMAS. Nevertheless, having a Type IV method next to a Type I seems to be counterintuitive in particular when considering the definition of a Type I method (‘A method which determines a value that can only be arrived at in terms of the method per se and serves by definition as the only method for establishing the accepted value of the item measured’). So far, the option of endorsing a Type IV method next to a Type I method for the same provision has not been used by CCMS. The EUMS are afraid that this co-existence may lead to confusion and conflicting results, even if CCFO27 noted that no trade implications on retyping of those methods had been reported by any Codex member and agreed with the proposed revisions to the typing of the methods.	**European Union**

Commodity Provision Method Principle Type Named Animal Fats Titre ISO 935 Thermometry I Named Animal Fats Titre AOCS Cc 12-59 Thermometry IV Named Vegetable Oils Unsaponifiable matter ISO 3596 / AOCS Ca 6b-53 Gravimetry, drying at 103 oC and titrimetry (colorimetry) I Named Vegetable Oils Unsaponifiable matter ISO 18609 Gravimetry, drying at 103 oC and titrimetry (colorimetry) IV The EUMS have no further specific comments at this moment and look forward to the discussions in the physical meeting of the Endorsement Working Group.	
Agree with no comments	**Iraq**
Kenya would like to thank the EWG that was chaired by the Netherlands, for the work well done that addresses the need to review and update CXS 234-1999. Kenya supports the CCMAS proposed editorial amendments as they do not affect trade in any way.	**Kenya**
The Philippines expresses appreciation for the work done by the eWG chaired by the Netherlands to continue the review of all methods related to relevant fats and oils. The Philippines supports the proposed editorial amendments to the methods of analysis (including changes to typing of methods) for fats and oils and to endorse the proposed changes to CXS 234 -1999. <u>Rationale:</u> The proposed changes were mostly editorial and were intended to align the provisions in CXS 234-1999 with those in the CCFO standards. The proposed editorial changes (including retyping) would ensure consistency between the Codex texts. CCFO noted that there were no trade implications related to retyping of methods.	**Philippines**
Thailand wish to express our appreciation for efforts of the Electronic Working Group (chaired by the Netherlands) for preparing the document for Review of methods in CXS 234 - 1999: From our views, Standards Development Organizations (SDO-e.g. ISO and AOCS) related to proposed methods should conduct method validation to cover their extended scope and matrix for specific commodity.	**Thailand**
It would help the readability of the document if all the pages were in portrait rather than landscape. This should be easy to do, once the deletions shown in the table that is in landscape format have been agreed.	**ICUMSA**
SPECIFIC COMMENTS	
Section A – Matters agreed by CCFO27	
Canada agrees with most of the suggestions for Section A, but has provided a few comments below. Canada requests that AOCS Ce 2-66 and AOCS Ce 1a-13 be struck through from Fish oils, Fatty Acid Composition, where it is identified for removal. In addition: For Fish Oil Fatty Acid Composition: Canada would prefer to have AOCS Ce 2-c-66 combined with Ce 1j-07 as Type III, rather than AOCS 2b-11 coupled to Ce 1j-07, which was developed for finished foods and micro-encapsulated oils, so may not be appropriate for fish oils.	**Canada**

Suggest AOCS Ce 1b 89 should be removed since AOCS has surplussed this method.

Suggest AOCS Ce 2-66 and Ce 1f-96 for named animal fats, fatty composition should be removed be-cause Ce 1f-96 has been surplussed by AOCS.

For Titre:

Canada suggests that the AOCS Cc 12-59 method be Type I, and ISO 935 as a Type IV, since the ISO method identified is not applicable <30ºC.

For Named Vegetable Oils, unsaponifiable matter:
Canada suggests removal of ISO 18609, given that we have accepted ISO 3596 / AOCS Ca 6b-53 as Type I and it is known that ISO 18609 results in systematically lower results. A possible way to include it, would be to add a note identifying that results are systemically low but that it may be used when cli-mate, or regulations, do not permit the use of diethyl ether.

Chile

Producto	Disposición	Método	Principio	Tipo	Comentario
Fats and oils	~~Butylhydroxyanisole, butylhydroxytoluene, tert-butylhydroquinone, & propyl gallate~~	~~AOAC 983.15; or AOCS Ce 6-86~~	Liquid chromatography	~~II~~	
Fats and oils	Synthetic Phenolic antioxidants (PG,THBP, TBHQ, NDGA, BHA, BHT)	AOCS Ce 6-86	HPLC-UV-DAD	II	Es importante indicar en la disposición que antioxidantes específicos sintéticos son los del alcance del método
Fats and oils	Synthetic Phenolic antioxidants (PG,THBP,TBHQ, NDGA, BHA, BHT, OG, DG)	AOAC 983.15	HPLC	III	Es importante indicar en la disposición que antioxidantes específicos sintéticos son los del alcance del método
~~Fish oils~~	~~Fatty acid composition~~	~~AOCS Ce 1a-13~~	~~Capillary GLC~~	~~III~~	Sin comentarios (ver nota 1)
~~Fish oils~~	~~Fatty acid composition~~	~~AOCS Ce 2-66~~	~~Preparation of methyl esters by fatty acids~~	~~III~~	Sin comentarios (ver nota 1)
~~Fish oils~~	~~Fatty acid composition~~	~~AOCS Ce 1b-89~~	~~GLC~~	~~III~~	Sin comentarios (ver nota 1)
~~Fish oils~~	~~Fatty acid composition~~	~~AOCS Ce 2b-11~~	~~Alkali hydrolysis~~	~~III~~	Sin comentarios (ver nota 1)
~~Fish oils~~	~~Fatty acid composition~~	~~AOCS Ce 2b-11 and AOCS Ce 1j-07~~	~~Gas Chromatography of methyl esters~~	~~III~~	Sin comentarios (ver nota 1)
~~Fish oils~~	~~Fatty acid composition~~	~~AOCS Ce 1j-07~~	~~Capillary GLC~~	~~III~~	Sin comentarios (ver nota 1)

~~Fish oils~~	~~Fatty acid composition~~	~~ISO 12966-2~~	~~Gas chromatography~~	~~III~~	Sin comentarios (ver nota 1)
Fish oils	Fatty acid composition	ISO 5508	GC-FID of methyl esters	III	Se solicita no eliminar debido a que la técnica est{a vigente y en uso
Fish oils	Fatty acid composition	AOCS Ce 2-66 and AOCS Ce 1i-07	GC of methyl esters	II	Sin comentarios (ver nota 1)
Fish oils	Fatty acid composition	AOCS Ce 2-66 and AOCS Ce 1a-13	GC of methyl esters	Remove	Sin comentarios (ver nota 1)
Fish oils	Fatty acid composition	AOCS Ce 2b-11 and AOCS Ce 1i-07 or AOCS Ce 1j-07	GC of methyl esters / GLC	III	Se solicita explicar el motivo del por qué estos métodos fueron tachados
Fish oils	Fatty acid composition	ISO 12966-2 and ISO 12966-4	GC of methyl esters	III	Sin comentarios
Fish oils	Fatty acid composition	AOCS Ce 1b 89	GC of methyl esters	III	Sin comentarios
~~Named Animal Fats~~	~~GLC ranges of fatty acid composition~~	~~ISO 5508 and ISO 12966-2; or AOCS Ce 2-66 and Ce 1e-91 or Ce 1f-96~~	~~Gas chromatography of methyl esters~~	~~II~~	Sin comentarios (ver nota 1)
~~Named Animal Fats~~	~~Fatty acid composition~~	~~ISO 12966-2 and ISO 12966-4 / AOCS Ce 2-66 and Ce 1f-96 1j-07~~	~~Gas Chromatography of methyl esters~~	~~II~~	Sin comentarios (ver nota 1)
Named Animal Fats	Fatty acid composition	Ce 2-66 and Ce ~~1f-96~~ 1j-07	GC of methyl esters	II	Sin comentarios
Named Animal Fats	Fatty acid composition	Ce 2-66 and Ce 1f-96	GC of methyl esters	III	Sin comentario
Named Animal Fats	Fatty acid composition	ISO 12966-2 and ISO 12966-4	GC of methyl esters	III	Sin comentario
~~Named Animal Fats~~	~~Titre~~	~~ISO 935; or AOCS Cc 12-59~~	~~Thermometry~~	~~I~~	Sin comentario
Named Animal Fats	Titre	ISO 935	Thermometry (not applied to Titre below 30°C)	I	Verificar la tipificación del método
Named Animal Fats	Titre	AOCS Cc 12-59	Thermometry	IV	Verificar la tipificación del método

Retirar el principio de la primera línea ya que se está retirando los métodos. Tachar: Liquid chromatography.	**Peru**
Please replace AOCS Ce 6-86 with the recently issued AOCS Ce 6a-2021	**AOCS - American Oil Chemists' Society**

Section B – Fish oil - Vitamin A and Vitamin D review

Canada agrees with all proposals associated with Section B.

Canada

Chile

Producto	Disposición	Método	Principio	Tipo	Comentario
~~Fish Oil~~	~~Vitamin A~~	~~European Parharmcopeia Monograph on Cod Liver Oil (Type A), monograph 01/2005:1192, with LC end-point 2.2.29~~	~~LC~~	~~III~~	Sin comentario
~~Fish Oil~~	~~Vitamin A~~	~~EN 12823-1 (Determination of vitamin A by high performance liquid chromatograph – Part 1: Measurement of all-E-retinol and 13- Z-retinol)~~	~~LC~~	~~III~~	Sin comentario
Fish Oil	Vitamin A[a]	EN 12823-1	HPLC	II	Mejorar la descripción del principio del método
Fish Oil	Vitamin A[a]	European Pharmacopeia Monograph on Cod Liver Oil (Type A), monograph 01/2020:1192, with LC end-point 2.2.29	HPLC	III	Mejorar la descripción del principio del método
~~Fish oil~~	~~Vitamin D~~	~~EN 12821 (Determination of vitamin D by high performance liquid chromatography – Measurement of cholecalciferol (D3) or ergocalciferol (D2))~~	~~LC~~	~~III~~	Sin comentario
~~Fish oil~~	~~Vitamin D~~	~~NMKL 167 (Cholecalciferol (vitamin D3) and Ergocalciferol (vitamin D2). Determination by HPLC in foodstuffs~~	~~LC~~	~~III~~	Sin comentario
Fish oil	Vitamin D (D2 and D3)	EN 12821	HPLC	II	Mejorar la descripción de la disposición del método
Fish oil	Vitamin D (D2 and D3)	NMKL 167	HPLC-UV (internal standard)	III	Mejorar la descripción de la disposición del método y su principio

Commodity	Provision	Method	Principle	Type	
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	Sin Comentarios
Named Vegetable Oils	Halphen test	AOCS Cb 1-25	Colorimetry	I	sin Comentarios
~~Named Vegetable Oils~~	~~Unsaponifiable matter~~	~~ISO 3596; or ISO 18609; or AOCS Ca 6b-53~~	~~Gravimetry~~	~~I~~	
Named Vegetable Oils	Unsaponifiable matter	ISO 3596 / AOCS Ca 6b-53	diethyl ether extraction and gravimetry, drying at 103 °C [and correction for free fatty acids titrimetry (colorimetry)]	I	Cambiar el principio la técnica de acuerdo a ISO es gravimétrica la corrección por titulación y colorimetría es solo cuando es necesario corregir para acidos grasos libres.

Named Vegetable Oils	Unsaponifiable matter	ISO 18609	Hexane extraction and Gravimetry, drying at 103 °C [and correction for free fatty acids titrimetry (colorimetry)]	IV	Cambiar el principio la técnica de acuerdo a ISO es gravimétrica la corrección por titulación y colorimetría es solo cuando es necesario corregir para acidos grasos libres.	
[a] **Nota al pie sugerida:** La norma respectiva sobre aceites de pescado CXS 329-2017 establece que la vitamina A se expresa como «equivalentes de retinol» (ER), donde ER tiene en cuenta el hecho de que los diferentes vitámeros de vitamina A difieren en su actividad. ISO/TR 23304:2021 «Productos alimenticios: orientación sobre cómo expresar las vitaminas y sus vitámeros» puede aclarar este asunto, por ejemplo, en cuanto a las actividades relevantes de los niveles de todo-E-retinol y los niveles de 13-Z-retinol.						
Fish oil - Vitamin D – EN 12821 and NMKL 167 have the same method principle, using similar columns, mobile phase, reagents and standards, having the same validation data and hence both methods should be typed as Type II methods.						**Norway**

Section C – Review of Olive oil and Olive Pomace Oils methods	
Canada reminds the EWG that the methods and typing in CXS 234 are to be consistent with the current version of CXS 33, therefore comparisons should be restricted to CXS 33 (2021), not considering pro-posed/future changes in CXS 33 since users cannot be aware of those changes. As a result, Canada's comments are prepared with this aspect in mind. In addition, IOC, ISO and AOCS methods were iden-tical at one time by design and agreement. The revision cycles of the three organizations are vastly different, with IOC being quicker to make improvements, and the other two updating the methods when alerted to the need for updating, or during a revision cycle, which means that AOCS and ISO may not have the most recent methods. As a result, for this activity, Canada is recommending that the IOC methods be held as Type II and that the other methods be retained as Type III, where they are not identi-fied as Type I. Revision numbers are not necessary as analysts are required to use the latest published version of analytical methods. For absorbance in ultra-violet: Canada recommends COI/T.20/Doc. No. 19 (updated in 2019) as Type II and ISO 3656 as Type III since it was last updated in 2011. Canada suggests that the first appearance of Organolepic characteristics, with panel test identified for removal, be struck through in the document The current version of CXS 33 does not identify 4α-desmethylsterol and total sterol content, but rather Desmethylsterol composition (% total sterols). All three methods identify Desmethyl Sterols as the analyte. Canada requests the addition of Olive oil: Fatty acid composition, Method: COI/T.20/Doc. no. 33, Prin-ciple: Determination of fatty acid methyl esters by gas chromatography, Type II. In CXS 33 (2021) the method is listed as COI/T.20/Doc. no. 24; however, this method has been replaced by COI/T.20/Doc. no.33.	**Canada**

Canada agrees that the method for Difference between the actual and theoretical ECN 42 triglyceride content should be: COI/T.20/Doc. no. 20 and COI/T.20/Doc. no. 33, {Principle text as proposed}, Type I.

Based on CXS 33 (2021), the determination of sterol composition and content is to be performed ac-cording to COI/T.20/Doc. no. 10 or ISO 12228:1999 or AOCS Ch 6-91 (97). While Canada recognized that ISO 12228 has been split and it is ISO 12228-2 that is identified for use in olive and olive pomace oils, this no longer matches with what is written in CXS 33.

For Stigmastadienes content, the proposal is to include Col/T.20/Doc. No. 11 / ISO 15788-1 /AOCS Cd 26-96, however, the IOC method was updated in 2021, ISO was updated in 2020 with no changes and AOCS has not been updated. This leads to a suggestion that the IOC method Col/T.20/Doc. No. 11 should be identified as the Type II and the others (ISO and AOCS) fit better as Type III.

Canada suggests, for reasons indicated above, ISO 18609 be removed for unsaponifiable matter deter-mination in olive and olive pomace oils, given that we have accepted ISO 3596 / AOCS Ca 6b-53 as Type I.

As identified for wax content, there are differences in the update timing by the individual SDOs. Since the IOC method was updated in 2021, the ISO method updated in 2020 with no changes from the previ-ous version and AOCS not being updated, Canada suggests that the IOC method be adopted as the Type II method, with the others being identified as Type III.

Chile

Disposición	Método	Principio	Tipo	Comentarios
Absorbency in ultra-violet	~~COI/T.20/Doc. No. 19; or ISO 3656; or AOCS Ch 5-91~~	~~Absorption in ultra violet~~	~~II~~	Sin comentarios
Absorbance in ultra-violet	COI/T.20/Doc. No. 19 / ISO 3656 /	Spectrophotometry UV	II	clarificar el principio del método
Absorbance in ultra-violet	AOCS Ch 5-91	Spectrophotometry UV	III	clarificar el principio del método
Difference between the actual and theoretical ECN 42 triglyceride content	~~COI/T.20/Doc. No. 20; or AOCS Ce 5b-89~~	~~Analysis of triglycerides of HPLC and calculation~~	I	
Difference between the actual and theoretical ECN 42 triglyceride content	COI/T.20/Doc. no. 20 and COI/T.20/Doc. No. 33/Rev.1	Calculation from triglycerides by HPLC and Fatty Acid Methyl Esters by Gas Chromatography	I	De acuerdo
Lead	~~AOAC 994.02; or ISO 12193; or AOCS Ca 18c-91~~	~~AAS~~	II	Sin comentarios
Lead	AOAC 994.02 / ISO 12193 / AOCS Ca 18c-91	GFAAS	II	Sin comentarios
~~Organoleptic characteristics~~	~~COI/T.20/Doc. No. 15~~	~~Panel test~~	I	

Organoleptic characteristics	COI/T.20/Doc. No. 15	Sensory analysis by a panel	I	De acuerdo
~~Refractive index~~ Peroxid value	ISO 3960~~; or AOCS Cd 8b-90~~	~~Refractometry~~ Titrimetric or potenciometric	I	Se debe correjir la disposición y mantener la ISO 3960
Refractive index	ISO 6320 / AOCS Cc 7-25	Refractometry	I	Sin comentarios
~~Relative density~~	~~ISO 6883, with the appropriate conversion factor; or AOCS Cc 10c-95~~	~~Pycnometry~~	I	Sin comentarios
Relative density	ISO 6883, with the appropriate conversion factor / AOCS Cc 10c-95	Pycnometry	I	Sin comentarios
~~Saponification value~~	~~ISO 3657; or AOCS Cd 3-25~~	~~Titrimetry~~	~~I~~	Sin comentarios
Saponification value	ISO 3657 / AOCS Cd 3-25	Titrimetry (Colorimetric)	I	Sin comentarios
~~Sterol composition and total sterols~~	~~COI/T.20/Doc. No. 30; or ISO 12228-2; or AOCS Ch 6-91~~	~~Gas Chromatography~~	~~II~~	Sin comentarios
4α-desmethylsterol and total sterol content	COI/T.20/Doc. No. 26 / ISO 12228-2 / AOCS Ch 6-91	HPLC/TLC	II	Mejorar la descripción del principio
~~Stigmastadienes~~	~~Col/T.20/Doc. No. 11; or ISO 15788-1; or AOCS Cd 26-96~~	~~Gas chromatography~~	II	Sin comentairos
~~Stigmastadienes~~	~~ISO 15788-2~~	~~HPLC~~	III	Sin comentarios
Stigmastadienes content	Col/T.20/Doc. No. 11 / ISO 15788-1 / AOCS Cd 26-96	GC-TLC	II	Mejorar la descripción del principio
Stigmastadienes content	ISO 15788-2	HPLC	III	Mejorar la descripción del principio

Disposición	**Método**	**Principio**	**Tipo**	**Comentario**
~~Unsaponifiable matter~~	~~ISO 3596; or ISO 18609; or AOCS Ca 6b-53~~	~~Gravimetry~~	~~I~~	Sin comentarios
Unsaponifiable matter	ISO 3596 / AOCS Ca 6b-53	Gravimetry, drying at 103 ºC and titrimetry (colorimetry)	I	Sin comentarios

Unsaponifiable matter	ISO 18609	Gravimetry, drying at 103 °C and titrimetry (colorimetry)	~~IV~~ III	Reevaluar la tipificación del método
~~Wax content~~	~~COI/T.20/Doc. no. 18; or AOCS Ch 8-02~~	~~Gas chromatography~~	~~II~~	De acuerdo
Wax content	COI/T.20/Doc. no. 28 / AOCS Ch 8-02	GC-TLC	II	Sin comentarios

Colombia

La Carta circular propone revisar la pertinencia o no de los cambios realizado por el GTe, para lo cual en su Sección C- Revision de los métodos para aceite de oliva Aceites de orujo de Oliva, Colombia a través de su laboratorio Nacional de Referencia propone incluir en la disposición “Lead”, la siguiente referencia metodológica y principio, a saber:

Método alternativo

AOAC Official Method 2015.01

Heavy Metals in Food ICP-MS

Se fundamenta en que el laboratorio implementó su método de referencia basado en este método alternativo

Sección C – Revisión de los métodos para aceite de oliva y aceites de orujo de oliva				
Disposición	**método**	**principio**	**tipo**	**Comentarios**
Absorbance in ultraviolet	COI/T.20/Doc. No. 19 / ISO 3656 /	Spectrophotometry	II	
Absorbance in ultraviolet	AOCS Ch 5-91	Spectrophotometry	III	
Lead	**AOAC 994.02 /**	**Atomic absorption spectrophotometry (direct graphite furnace) II**	**II**	
Refractive index	ISO 6320 / AOCS Cc 7-25	Refractometry	I	
Relative density	ISO 6883, with the appropriate conversion factor / AOCS Cc 10c-95	Pycnometry I	I	
Saponification value	ISO 3657 / AOCS Cd 3-25	Titrimetry (Colorimetric)	I	

Lead – the specific method should be replaced by method performance criteria, to open up for newer and frequently used techniques such as ICP-MS. Please find our suggestion, which should be tabulated: Provision: Lead ML (mg/kg): 0,08 Minimum applicable range (mg/kg): 0,045 -0,115 LOD (mg/kg): 0,016 LOQ (mg/kg): 0,032 RSDR(%): ≤ 44 Recovery (%): 60-115 Applicable methods: AOAC 994.02 / ISO 12193 / AOCS Ca 18c-91 using AAS (direct graphite furnace) and NMKL 186 / AOAC 2013.06 / EN 15763* using ICP-MS * NMKL 186, AOAC 2013.06 and EN 15763 are identical. Edible oil was not included in the interlaboratory study, however most of the participants used ICP-MS on edible oil in a proficiency testing scheme arranged by FAPAS (FAPAS Report 07242 Metallic contaminants in Edible Oil Sept-Oct 2015) with satisfactory results.	**Norway**
Homogenizar las referencias de los códigos de los métodos COI Para el método tachado (AOAC 994.02; or ISO 12193; or AOCS Ca 18c-91) Falta retirar el tipo II ya que se está retirando los métodos.	**Peru**