

REPORT OF THE U.S. DELEGATE, 27TH SESSION, CODEX COMMITTEE ON FATS AND OILS

VIRTUAL SESSION, OCTOBER 18 – 22 AND 26, 2021

The 27th Session of the Codex Committee on Fats and Oils (CCFO27) met virtually on October 18 – 22 and 26, 2021. The meeting was chaired by Ms. Norrani Eksan, Director for Compliance and Industry Development, in the Food Safety and Quality Division of the Ministry of Health, Malaysia. The Session was attended by participants from 66 member countries, one member organization (the European Union), and 10 observer organizations.

The United States Delegation was led by Dr. Paul South (Head of Delegation) from the U.S. Food and Drug Administration (FDA), Center for Food Safety and Applied Nutrition, and Dr. Jill Moser (Alternate Delegate) from the Agricultural Research Service (ARS) of the U.S. Department of Agriculture (USDA), assisted by three government advisors from USDA and FDA.

The 27th Session was very productive, resulting in several items being forwarded to the Codex Alimentarius Commission (CAC) for adoption at its 45th Session (CAC45) (2022), including the following:

- Amendment to the range of fatty acid composition (oleic and linoleic acid) and chemical and physical characteristics (refractive index, saponification value, iodine values and relative density) of sunflower seed oil in the *Standard for Named Vegetable Oils* (forwarded for final adoption at Step 5/8)
- Addition of avocado oil to the *Standard for Named Vegetable Oils*, (forwarded for interim adoption at Step 5, allowing for further consideration at the next session of the committee)

CCFO also recommended that CAC45 approve new work on the following:

- Inclusion of camellia seed oil, sacha inchi oil, and high oleic acid soya bean oil in the *Standard for Named Vegetable Oils*, and inclusion of calanus oil in the *Standard for Fish Oils*. The project document for new work on high oleic acid soya bean oil was proposed by the United States.

Further, the Committee made progress on the revision to the *Standard for Olive Oils and Olive Pomace Oils* and provisions relating to reduction of *trans*-fatty acids, methods of analysis for fats and oils, and use of mono- and diglycerides of fatty acids as antifoaming agents.

The official report of the 27th Session of the CCFO can be found in document REP22/FO, posted on the Codex website at: <https://www.fao.org/fao-who-codexalimentarius/committees/committee/related-meetings/en/?committee=CCFO>

MEETING SUMMARY

The following is a summary of notable issues raised during the meeting.

MATTERS REFERRED BY THE CAC AND ITS SUBSIDIARY BODIES (AGENDA ITEM 2)

Matters for Action from the Codex Committee on Nutrition and Special Dietary Uses (2020) (CCNFSDU41) and the Codex Committee on Food Labeling (2020) (CCFL46) – Trans-Fatty Acids

The Representative of the World Health Organization (WHO) requested CCFO to consider the matters for action referred by CCNFSDU (2020) and CCFL (2021) on possible ways to reduce *trans*-fatty acids and eliminate industrially produced partially hydrogenated oils from foods. Canada, the United States, Malaysia, Brazil, the Russian Federation, Uganda, Saudi Arabia, South Africa, India, Turkey, and the European Margarine Association (IMACE) generally supported this work, and Canada agreed to prepare a discussion paper for the next session. The United States, the European Union, Saudi Arabia, Uganda, Egypt, India, and WHO expressed interest in collaborating with Canada in drafting the discussion paper.

Matters for Action from the Codex Committee on Methods and Sampling (CCMAS41)

CCMAS41(2021) recommended amendments to the methods of analysis for fats and oils in the *Recommended Methods of Analysis and Sampling* (CXS 234-1999) and referred the matter to CCFO for consideration and consultation on the trade implications of retyping the methods. The CCMAS delegates from the United States and the Netherlands presented a document (CRD02) with the recommended amendments to CCFO27.

The Committee agreed to the editorial amendments proposed by CCMAS and addressed the questions referred to by CCMAS. CCFO concluded that there were no trade implications relating to methods retyping and proposed performance criteria for total arsenic in edible fats and oils and inorganic arsenic in fish oil. The United States confirmed the use of methods for the *Crismar* value and *Halphen* test in response to the question from CCMAS on their active use, and CCFO agreed to request CCMAS to retain those methods. Norway supported establishing method performance criteria for total arsenic in edible fats and oils and inorganic arsenic in fish oils, and the United States supported the intervention by Norway. CCFO agreed to forward the proposed performance criteria to CCMAS.

Matters Referred from the Codex Committee on Food Additives (CCFA52)

The Codex Committee on Food Additives (CCFA52) (2021) requested CCFO to confirm the technical justification for the use of mono-and diglycerides of fatty acids as antifoaming agents, except for virgin and cold pressed oils. The European Union, the United States and Egypt made interventions confirming technical justification, and CCFO agreed to inform CCFA that use was technologically justified at 10,000 milligrams/kilogram in oils for deep frying.

MATTERS OF INTEREST ARISING FROM FAO/WHO AND FROM THE 90TH AND 91ST MEETING OF THE JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES (JECFA) (AGENDA ITEM 3)

JECFA conducted safety evaluations of 23 substances for inclusion in the *List of Acceptable Previous Cargoes* (Appendix II to CXC 36-1987) and concluded that four of the substances (namely montan wax, non-food-grade calcium lignosulfonate, cyclohexane, and acetic anhydride) did not meet the criteria because there was insufficient chemical and toxicological information for their evaluation. The Committee agreed to postpone the discussion to next session of CCFO to allow time to review the results and complete consideration of the JECFA report.

DRAFT AMENDMENT/REVISION TO THE STANDARD FOR NAMED VEGETABLE OILS (CXS 210-1999): SUNFLOWERSEED OIL – GAS LIQUID CHROMATOGRAPHY (GLC) RANGES OF FATTY ACID COMPOSITION AND PHYSICAL AND CHEMICAL PARAMETERS (AGENDA ITEM 4.1 AND 4.2)

At the previous session (CCFO26, 2019), the Committee agreed to the amended ranges of oleic and linoleic acids in sunflower seed oil and established an electronic working group (EWG), chaired by Argentina and co-chaired by Brazil, to collect, review, and analyze available data on the remaining parameters (refractive index, saponification value, iodine values and relative density) and to propose ranges for those parameters for consideration by the next CCFO session.

Following the discussion on the parameters of sunflower seed oil, CCFO agreed to propose the following for final adoption:

- Revision to the ranges of oleic and linoleic acid (expressed as percentage of fatty acids): 14.0 – 43.0 for C18:1 and 45.4 – 74.0 for C18:2
- Revision of the upper limit of the range from 1.468 to 1.475 for the refractive index (ND 40°C). The United States and other member countries (including India, Germany, Egypt, Brazil, Canada, and Iran) supported the increase in the upper limit, while Uganda, the Russian Federation, Burundi and Kenya did not support it. The Russian Federation and Uganda expressed their reservations to the CCFO27 decision.
- Revision of the lower limit of the range from 188 to 187 for the saponification value (mg KOH/g oil). Egypt, Uruguay, Canada, Peru, India, Ghana, and Syria supported the proposal to decrease the lower limit, while the Russian Federation and Iran did not support it. The Russian Federation expressed its reservation to this decision.
- Retention of the existing range for iodine values.
- Revision of the lower limit of the range from 0.918 to 0.916 for the relative density ($x^{\circ}\text{C}/\text{water at } 20^{\circ}\text{C}$; $x=20^{\circ}\text{C}$ for sunflower seed oil). Egypt, India, and Canada expressed their support for the revision. The Russian Federation expressed a reservation to this revision.

The United States supported the revisions agreed upon by the Committee.

DRAFT AMENDMENT/REVISION TO THE STANDARD FOR NAMED VEGETABLE OILS (CXS 210-1999): INCLUSION OF AVOCADO OIL (AGENDA ITEM 4.3)

At CCFO26 (2019), the Committee agreed to establish an EWG, chaired by Mexico and co-chaired by the United States, to review all available data on the characteristics and origins of avocado oil and prepare a report for CCFO27(2021). Following the discussion of this agenda item relating to various parameters of avocado oil, the Committee agreed to propose the following provisions for interim adoption at Step 5 by CAC45(2022), which would allow for further consideration at the next session of the committee.

- Revise the Product Definition to read “avocado oil may be derived from either the mesocarp of avocado fruit (*Persea americana*) or obtained by processing the whole avocado fruit.” and delete the note “Extra virgin and Virgin oils are derived using the mesocarp only.” The United States and other member countries (including Kenya, Egypt, Burundi, Uganda, Tanzania, Colombia, Jordan, and Saudi Arabia) supported this definition. Chile expressed a reservation.
- Express fatty acid composition values to one decimal place and propose the following changes to the values for fatty acids (expressed as percentage of fatty acids):
 - Revise the value for C16:1 from 4.0 – 17.05 to 4.0 – 17.1

- Revise the value for C18:1 from 42.0 – 70.0 to 42.0 – 75.0, as proposed by New Zealand and supported by the United States, Colombia and Peru.
- Revise the value for C20:0 from No Detection (ND) – 0.3 to ND – 0.7, as proposed by Colombia.
- Delete the apparent density (g/ml) parameter from the section on Chemical and Physical Characteristics, since avocado oil is liquid at room temperature, and propose the following ranges for other parameters:
 - Maintain relative density ($x^{\circ}\text{C}/\text{water}$ at 20°C) range of 0.910 – 0.920
 - Revise refractive index (ND 40°C) range from 1.460 – 1.470 to 1.458 – 1.470, as proposed by Chile
 - Revise saponification value (mg KOH/g oil) range from 170 – 198 to 170 – 202, as proposed by Colombia
 - Revise iodine value range from 80 – 90 to 78 – 95; minimum of 78, as proposed by Colombia, maximum of 95 supported by Chile
 - Maintain unsaponifiable matter (g/kg) value of 19.0 maximum
- Modify the provisions for the levels of desmethylsterols (percentage of total sterols) in crude avocado oil as follows:
 - Maintain the range of ND – 0.5, 4.0 – 8.3, and 2.0 – 8.0 for cholesterol, campesterol, and delta-5-avenasterol, respectively, as recommended in the EWG report
 - Revise the brassicasterol range from ND – 0.2 to ND – 0.5 (proposed by Canada)
 - Revise the stigmasterol range from ND – 2.0 to 0.3 – 2.0 (proposed by Canada)
 - Set the lower limit for beta-sitosterol in square brackets as 71.0 and 79.0 and establish the upper limit as 93.4. Chile proposed the lower limit of 71.0. The United States Pharmacopeial Convention (USPC) and Canada cautioned that beta-sitosterol may be overreported if apparent beta-sitosterol instead of actual beta-sitosterol is reported.
 - Set the upper limit for delta-7-stigmastenol in square brackets as 1.0 and 3.5, for further consideration. The lower limit was agreed as ND. Canada proposed the maximum value of 3.5. Chile also supported the maximum value, while Mexico strongly objected.
 - Revise the delta-7-avenasterol range from ND – 1.0 to ND – 1.5 as proposed by Canada and agreed upon by CCFO. Mexico objected to this value, and proposed that if the delta-7-avenasterol maximum limit were set at 1.5, then the delta-7-stigmastenol limit should also be set to 1.5. CCFO did not accept Mexico's alternative proposal.
 - Set the lower limit for total sterols in square brackets as 3000 and 3500 for further consideration. The upper limit was agreed as 6500. The lower limit of 3000 was proposed by Canada.
 - Include a footnote to Table 3 in square brackets for clerosterol range as this parameter only applies to avocado oil in the *Standard for Named Vegetable Oils* (CXS 210-1999). The values for clerosterol were also placed in square brackets for further consideration. The footnote was proposed by Canada and supported by the United States and others. Other members, notably Libya, preferred that clerosterol either be added to Table 3, or that the clerosterol ranges be added to the ranges of "Others" in Table 3. Chile suggested 0.6 as a lower limit.
 - Place the range for "Others" in square brackets for further consideration as there is strong linkage with clerosterol.

- Place the levels of tocopherols and tocotrienols proposed at CCFO26 (2019) in square brackets for further consideration, as proposed by United States and supported by Canada. No values for these parameters were proposed by the EWG.

CCFO27 (agreed to re-establish an EWG, chaired by Mexico and co-chaired by the United States, to consider the values/texts noted in square brackets and comments submitted, and to prepare a report for consideration at the next session. The EWG report should be submitted at least three months prior to the session.

The United States supported the approach agreed upon by the Committee. As a co-chair of the EWG, the United States will work with Mexico to continue progress on the avocado oil standard.

**DRAFT REVISION TO THE STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS (CXS 33-1981)
(AGENDA ITEM 5)**

CCFO26 (2019) established an EWG led by Spain and co-chaired by Canada and Argentina to revise Sections 3 and 8 and the Appendix to the *Standard for Olive Oils and Olive Pomace Oils*. These sections were further discussed by CCFO27, which reached the following conclusions:

- Retain the footnote in Section 3 (Designations and Definitions) that states that refined olive oil and refined olive-pomace oil “*may only be sold direct to the consumer if permitted in the country of retail sale.*”
- Retain the definition of ordinary virgin olive oil and any related parameters for six years, for further consideration by CCFO30, due to the concerns expressed by members that removal of ordinary virgin olive oil from the definition could have a negative impact on international trade of this product.
- Delete the footnote that states “*samples falling within the appropriate fatty acid ranges specified below are in compliance with this Standard. Supplementary criteria, for example national geographical and/or climatic variations, may be considered, as necessary, to confirm that a sample is in compliance with the Standard*” in Section 3.
- Retain the lower limit for oleic acid (percentage of total fatty acids) as 53.0 and 55.0 in square brackets for further consideration as there were differing views among the delegations.
- Adopt the decision tree proposed by International Olive Council (IOC) for linolenic acid values deviating from the standard.
- Retain the values for *trans*-fatty acids (percentage of total fatty acids) in square brackets as there was no agreement on whether to express them to one or two decimal places.
- Adopt the decision tree footnote for delta-7-stigmastenol, which was previously in square brackets. Australia expressed a reservation to this decision because in their view it could exclude some authentic olive oils.
- Retain the general statement on sterols in virgin olive oil in square brackets for further consideration due to lack of consensus among delegations.
- Move the delta K and related footnotes from quality factors (Section 3.3.5) to the composition factors (Section 3.2.9).
- Retain the median values for organoleptic characteristics of virgin olive oil in square brackets for further consideration.

- Include the fatty acid ethyl esters (mg/kg) for extra virgin olive oil with value of ≤ 35 in quality factors (Section 3.3.6).
- Keep the 1,2-diglycerides (% total diglycerides) and pyropheophytin 'a' (% total chlorophyll pigments) for extra virgin olive oil in square brackets in the Appendix for further consideration.
- Retain the total 4 α -desmethylsterols content (mg/kg) of the virgin olive oils in the main body of the standard (Section 3.2.4).
- Defer consideration of Conference Room Document (CRD) 24 on methods of analysis and sampling.

On the issue of whether to include the footnote on the definitions of refined olive oil and refined olive-pomace oil in Section 3 (Designations and Definitions), a number of member countries (including Libya, Canada, Brazil, Jordan, the United States, and Spain) argued for deleting this footnote as it did not serve to highlight any technical specifications or health risks known to be associated with these oils; since these products exist in international trade, they should be included in an international Codex standard. The European Union, Tunisia, Syria, and Kenya supported retaining the footnote to reflect the differences in national legislation regarding treatment of refined oils and did not view including this footnote as a barrier to trade. After much debate, CCFO ultimately agreed to retain this footnote.

Several Member countries, including Syria, Tunisia, Libya, Egypt, Jordan, Lebanon, Uruguay, and Morocco, wanted to retain ordinary virgin olive oil in the standard because its exclusion would have a negative impact on their consumers and producers. The European Union, Canada and Australia stated that they were open to seeking a compromise solution. Canada proposed to keep ordinary virgin olive oil in brackets to give time for further review. After much debate, CCFO agreed to retain ordinary virgin olive oil in the standard and to revisit this issue in approximately six years at CCFO30.

Regarding the note on *“samples falling within the appropriate fatty acid ranges specified below are in compliance with this Standard. Supplementary criteria, for example national geographical and/or climatic variations, may be considered, as necessary, to confirm that a sample is in compliance with the Standard”* in Section 3, the European Union opposed this note because of the terms of supplemental criteria for fatty acids were too ambiguous to implement. Kenya, Brazil, Turkey, Libya, the Russian Federation, Greece, Italy, and Uruguay, also agreed with its removal due to its lack of specifications for the supplemental criteria that may be considered. Syria, Tunisia, Canada, and Australia supported retaining this note, since it was consistent with parts of the *Standard for Named Vegetable Oils (CXS 210-1999)*. After much debate, CCFO decided to delete this note in Section 3.2.1.

Regarding the decision tree for linolenic acid, the United States, Australia, Canada, and Peru expressed reservations to the decision to adopt the decision tree proposed by International Olive Council (IOC), stating that the decision tree could exclude olive oils that are considered authentic, such as those from non-Mediterranean countries.

CCFO re-established an EWG, chaired by Spain and co-chaired by Argentina, to review and revise the remaining items and prepare a report for consideration by CCFO28. Consistent with standing practice in Codex, the EWG report should be submitted to the Codex Secretariat at least three months before the session. The United States will participate in the EWG and work with other members to continue progress on this standard.

REVIEW OF THE LIST OF ACCEPTABLE PREVIOUS CARGOES– APPENDIX 2 OF CXC 36-1987 (AGENDA ITEM 6)

At CCFO26 (2019), the Committee agreed to retain this item as a standing item on its agenda and established an EWG to consider proposals to include or remove substances from the list of acceptable previous cargoes. JECFA presented a report reviewing the list of Acceptable Previous Cargoes on edible oils transported in containers that had previously transported other chemicals. There was general support for adopting JECFA's recommendations. An observer organization, (the Federation of Fats, Seeds and Oil Association (FOSFA)), proposed to submit a discussion paper on ethylene dichloride and styrene monomer in previous cargoes for CCFO to consider whether there should be restrictions on these substances when transported in organic coated tanks.

The Codex Secretariat will issue a Circular Letter inviting interested members and observers to propose evaluation of new substances or deletions from the list of acceptable previous cargoes. Malaysia will lead an EWG to review the proposals received in response to the Circular Letter.

CONSIDERATION OF THE PROPOSALS FOR NEW WORK AND/OR AMENDMENTS TO EXISTING CODEX STANDARDS (Agenda Item 7)

CCFO27 began the discussion by reviewing the process used to screen and approve new work proposals. The following new work proposals for the development of new standards for edible oils were discussed:

- Amendment/revision to the *Standard for Named Vegetable Oils* (CXS 210-1999) to include:
 - camellia seed oil – submitted by the People's Republic of China
 - mahua seed oil – submitted by India
 - sacha inchi oil – submitted by Peru
- Amendment/revision to the *Standard for Fat Spreads and Blended Spreads* (CXS 256-2007) – submitted by the European Margarine Association (IMACE)
- Amendment/revision to the *Standard for Fish Oils* (CXS 329-2017) – Inclusion of calanus oil – submitted by Norway
- Amendment/revision to the *Standard for Named Vegetable Oils* (CXS 210-1999) – Inclusion of high oleic acid soya bean oil – submitted by the United States

CCFO27 agreed to forward China's proposal for camellia seed oil, Norway's proposal for calanus oil, and Peru's proposal for sacha inchi oil to CAC45 for approval. Also, after failing to garner sufficient support at the previous three CCFO sessions, the proposal from the United States for high oleic acid soya bean oil (HOSO) was forwarded for approval by CCFO27.

India's proposal for mahua oil was not advanced due to the lack of information on trade and production volumes. The European Margarine Association (IMACE) proposal was not supported due to broad opposition to renaming "margarine" as "plant butter." The United States supported updating the *Standard for Fat Spreads and Blended Spreads* except for renaming the product as plant butter.

Proposed information document for CCFO new work proposals

The CCFO Chair informed the committee that the CCFO host Secretariat had prepared a checklist to screen new work proposals, which CCFO agreed to make available as an Information Document. In brief:

the Codex Secretariat will issue a Circular Letter to call for proposals for new work in advance of each session of CCFO; proposals must be submitted by the specified deadline; and an in-session working group will be established at each session of the CCFO to screen all new work proposals and related project documents for completeness against the criteria for the approval of new work found in the *Codex Procedural Manual*.

OTHER BUSINESS (Agenda Item 8)

Discussion paper on the metal content of butter oil (Standard for Milk Fat Products, CXS 280 -1973)

Iran presented a discussion paper (CRD 18) on the maximum levels for copper and iron in ghee (butter oil) in the *Standard for Milk Fat Products (CXS 280-1973)* and the maximum amount of copper and iron reported in the *Standard for Named Vegetable Oils (CXS 210-1999)*. Iran noted that published and laboratory data from different countries showed that the average amount of copper and iron obtained in butter oils from animal sources was higher than the maximum allowed in the (CXS 280-1973), and the amounts of these elements were influenced by factors such as type of livestock and environment.

Since this work would normally fall under the scope of the Codex Committee on Milk and Milk Products (CCMMP), which is adjourned *sine die*, CCFO agreed to request CCEXEC for advice on mechanisms that could be used to consider revisions to the *Standard for Milk Fat Products (CXS 280-1973)* to address the appropriate maximum levels for copper and iron.

DATE AND PLACE OF THE NEXT SESSION (Agenda Item 9)

The Committee was informed that its 28th Session would be held in approximately 24 months. The exact date and venue would be decided between the Malaysian and Codex Secretariats.