



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FATS AND OILS

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PROPOSED DRAFT REVISION TO THE *STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS (CXS 33-1981): REVISION OF SECTIONS 3, 8 AND APPENDIX*

(Comments of Burundi, Ghana, India, Russian Federation, United Arab Emirates, United Republic of Tanzania and MoniQA Association)

Burundi

Comment: Burundi thanks the Electronic Working Group (EWG) chaired by Spain and co-chaired by Argentina for the work well done.

However, Burundi would like to seek clarification of the deletions of values in the trans-fatty acid profiling alongside the minimum or maximum signs and the setting of limits to exact figures.

Ghana

Position: Ghana supports the revisions to the standard for olive oils and olive pomace oils.

Rationale: It would reflect the latest technological knowledge and scientific progress to promote fair trade, consumer health protection and encourage greater harmonization.

India

India appreciates and supports the work done by the EWG Chair, Spain and co-chair, Argentina in revising the standards for olive oils and olive pomace oils. India would like to seek clarification on the amendment of the section 3.3.4 to increase the values under Absorbance in the ultraviolet region at 270/or 268 nm for the following:

- i. Refined olive oil ≤ 1.10
- ii. Olive oil composed of refined olive oil and virgin olive oils ≤ 0.90

Russian Federation

The Russian Federation considers it appropriate to approve the draft revision to the Standard for Olive Oils and Olive Pomace Oils (CXS 33-1981) and supports the adoption of the proposed draft revision at CCFO28.

United Arab Emirates

3- CL 2023/61/OCS-FO: request for Comments (at Step 3) on proposed draft revision to the Standard for Olive Oils and Olive Pomace Oils (CXS 33-1981): Revision of Sections 3, 8 and Appendix 25/12/2023 concerning the paragraph: 3.2.1 GLC ranges of fatty acid composition (expressed as percentages of total fatty acids):

United Arab Emirates agrees with the modification of the range of fatty acid C18:1 % in both (Extra virgin olive oil, Virgin olive oil, Refined olive oil and Refined olive-pomace oil (to be 55-85% instead of 53-85 %).

Regarding the following proposed statements: % of fatty acid C18:3 % in both (Extra virgin olive oil, Virgin olive oil, Refined olive oil and Refined olive-pomace oil) to be $\leq 1.0^*$.

*In cases where an edible virgin olive oil exhibits $1.0 < \text{linolenic acid \%} \leq 1.4$, then this oil is authentic provided that apparent β -sitosterol/Campesterol ≥ 24 and all other composition factors lie within the official limits.

United Arab Emirates, indicates that, It is very rare that the % of Linolenic acid C18:3, (a polyunsaturated fatty acid. α -linolenic acid (ALA) which is called also as "Omega-3 fatty acid"), reaches more than 1 % (Normally) in all types of olive oil, and in case it will reach more than 1 %, it may primarily indicate the mixing of olive oil with some other low price vegetable oils. Therefore, UAE propose to accept the following statement: (Fatty acid C18:3 % in both (Extra virgin olive oil, Virgin olive oil, Refined olive oil and Refined olive-pomace oil) to be ≤ 1.0), and to delete the exceptional subsequent statement: (*In cases where an edible virgin olive oil exhibits $1.0 < \text{linolenic acid \%} \leq 1.4$, then this oil is authentic provided that apparent β -sitosterol/ Campesterol ≥ 24 and all other composition factors lie within the official limits).

United Arab Emirates agrees with the modification of Trans fatty acids ($\Sigma(t\text{-C18:1})$ to be ≤ 0.05 , ≤ 0.20 and ≤ 0.40 in Extra virgin olive oil, Virgin olive oil, Refined olive oil and Refined olive-pomace oil respectively, instead of ≤ 0.1 , ≤ 0.20 and ≤ 0.40 respectively.

United Arab Emirates agrees with modification of Trans fatty acids $\Sigma(t\text{-C18:2}) + \Sigma(t\text{-C18:3})$ to be ≤ 0.05 , instead of ≤ 0.1 in Extra virgin olive oil and Virgin olive oil, and to be without changes in ≤ 0.30 and ≤ 0.40 in Refined olive oil and Refined olive-pomace oil.

United Arab Emirates do not agree with the deletion of the statement: ([Virgin olive oil's authenticity is not compromised if one sterol, or their minimum content, does not fall within the ranges provided for if all other sterols and parameters tested referred to in this standard fall within the stated ranges.].

United Arab Emirates agrees with deletion of the limit (> 35) of 1,2 diglycerides (% total diglycerides) in Extra virgin olive oil.

United Arab Emirates agrees with deletion of the limit (> 17) of Pyropheophytin "a" (% total chlorophyll pigments) in Extra virgin olive oil.

United Republic of Tanzania

Comment: Tanzania thanks the Electronic Working Group (EWG) chaired by Spain and co-chaired by Argentina for the work well done. However, Tanzania would like to seek clarification of the deletions of values in the trans-fatty acid profiling alongside the minimum or maximum signs and the setting of limits to exact figures.

MoniQA Association

In response to **CL 2023/61/OCS-FO: Request for Comments (at Step 3) on proposed draft revision to the Standard for Olive Oils & Olive Pomace Oils (CXS 33-1981): Revision of Sections 3, 8 and Appendix, and CX/FO 24/28/8**, the MoniQA Association would like to make the following comments and suggestions.

The MoniQA Association acknowledges the work of the EWG Chair (Spain), co-chair (Argentina) and participants for their work in preparing the report of the EWG. The MoniQA Association would like to bring to the attention of the Working Group and CCFO the following comments:

1. General comments on the report of the EWG on olive oil

The report of the EWG on olive oil (fo28_08e.pdf) was released on 22 December prior to the major year end holiday for many nations and as such restricted the comment period and expert assessment to less than six weeks. This shortened review period may have compromised a thorough examination of the report.

It is noteworthy that the report appears to have ignored the initial mandate of this work in CCFO26 REP17/FO to "...take into account the needs of Codex members, the latest technological knowledge and scientific progress of the sector in order to facilitate trade, promote consumer protection and facilitate the harmonization of national legislation with Codex." Whereas the current output seems to be an attempt to align the Codex standard solely with the IOC standard and EU standard, and not with other national and regional standards. In addition, although the mandate of the current EWG included instructions to review the comments received at CCFO27 (REP22/FO), this does not appear to have

occurred or been commented upon. The progress report of the EWG also revokes many of the advances made during its previous sessions.

Although mention is made in the report that national adoption of a Codex standard is voluntary and therefore national standards can vary from it, the point of developing a Codex standard may be foundational. Therefore, a Codex standard can be adopted and implemented by any nation having need for a baseline document on which to build its own (stricter) standards. Taken this way, CXS 33 should provide such a baseline and not be a more restrictive trade-based standard. CXS 33 should provide guidance as outlined on the Codex Alimentarius homepage: <https://www.fao.org/fao-who-codexalimentarius/about-codex/en/>

The proposed version of CXS 33 does not meet the basic ethos of Codex Alimentarius as stated in the above link (See: International Food Standards; Protecting Consumer Health; Removing Barriers to Trade; General Principles of Codex Alimentarius).

2. Comments on information in square brackets from CCFO27

a. Minimum value of oleic acid (C18:1) of [53%] versus [55%]

Climatic, genetic and growing conditions may lead to authentic olive oil having oleic acid values (and other fatty acid values) outside the ranges proposed in this standard. There are such data previously made available to CCFO. Recent climatic events may also skew the normal sources of oils and lead to a preponderance of oil from locations not normally covered by the current fatty acid ranges, therefore increasing the percentage of product outside the current standard. **This value should have a range consistent with real world samples and not be restrictive or a potential barrier to trade.**

b. Whether or not to maintain value of linolenic acid of 1.0%

Climatic, genetic and growing conditions may lead to authentic olive oil having oleic acid values (and other fatty acid values) outside the ranges proposed in this standard. There are such data previously made available to CCFO. Recent climatic events may also skew the normal sources of oils and lead to a preponderance of oil from locations not normally covered by the current fatty acid ranges, therefore increasing the percentage of product outside the current standard.

Using the statement such as: "Virgin olive oil's authenticity is not compromised if one ~~sterol~~ fatty acid, or ~~the minimum~~ its content, does not fall within the ranges provided for if all other ~~sterols~~ fatty acids and parameters tested referred to in this standard fall within the stated ranges" makes it possible to determine a products authenticity via traceability and other means. **All fatty acids should have a range consistent with real world samples and not be restrictive or a potential barrier to trade.**

c. For values of linolenic acid from 1.0 to 1.4%, whether or not to use the IOC proposed decisional tree

In cases where an edible virgin olive oil exhibits $1.0 < \text{linolenic acid } \% \leq 1.4$, then this oil is authentic provided that apparent β -sitosterol/campesterol ≥ 24 and all other composition factors lie within the official limits.

While decision trees based on specific experience could provide useful guidance, this decision tree assumes more knowledge of the intricacies of time-based enzymatic control of fatty acid, triglyceride and sterol synthesis across all regularly cultivated varieties of olive in multiple locations and under different climatic conditions than is available. Although limited data may suggest a linear relationship between certain sterols and a specific fatty acid over a limited range of values, the question remains whether it is true for all concentrations of said fatty acid and sterols in every situation, climatic, genetic and maturity. Without details of carbon flux within the fatty acid and sterol metabolic pathways, it is hard to conceive that the concentration of a certain minor fatty acid in a triglyceride storage form at approximately 10g/kg (where the total is almost 1000g/kg) is related to individual component sterols present at best in mg/kg quantities. To complicate this relationship is the continued use of "apparent beta-sitosterol" when the individual components of this sum may also be in flux and vary according to climate, genetics and maturity. This relationship relating two metabolic pathways where the only common substance is the precursor substrate is presumptive at best and **the decisional [sic] tree should not be adopted. Any other decision trees should be carefully examined for global applicability before being considered by this committee.**

d. Uncertainty measurements for *trans* fatty acid - Whether or not to use two decimal places

From an analytical perspective, the level of the limit requested, should be 5-10 times higher than the LOQ. Precision data included in the IOC method of analysis (below, COI/T.20/Doc. No 33/Rev 1; 2017) indicate that this criterion may not have been met at the stated limit where a 100 % variability is anticipated. The variation in results seen at this level in this trial and in other similar trials carried out on ISO methods, indicates that the sensitivity of the technique in determining trace quantities is highly

variable and should not be relied upon. The low levels of specific analytes and their summation could give rise to large variations depending on technique and equipment used and therefore this parameter **should be restricted to one decimal place not two.**

Table 14 : C18:1 trans - from Ring Test COI 2015

| | A | B | C | D | E |
|----------------------|-------|-------|-------|-------|-------|
| n | 15 | 15 | 15 | 15 | 15 |
| outliers | 1 | 1 | 1 | 1 | 2 |
| mean | 0,01 | 0,01 | 0,01 | 0,01 | 0,12 |
| r | 0,011 | 0,013 | 0,008 | 0,013 | 0,044 |
| S _r | 0,004 | 0,005 | 0,003 | 0,005 | 0,016 |
| RSD _r (%) | 38,0 | 46,0 | 27,0 | 45,0 | 13,2 |
| R | 0,027 | 0,028 | 0,030 | 0,032 | 0,157 |
| S _R | 0,010 | 0,010 | 0,011 | 0,011 | 0,056 |
| RSD _R (%) | 96,0 | 86,0 | 100,0 | 89,0 | 48,0 |

Table 15 : C18:2 trans + C18:3 trans - from Ring Test COI 2015

| | A | B | C | D | E |
|----------------------|-------|-------|-------|-------|-------|
| n | 15 | 15 | 15 | 15 | 15 |
| outliers | 3 | 3 | 4 | 2 | 3 |
| mean | 0,01 | 0,01 | 0,01 | 0,01 | 0,03 |
| r | 0,013 | 0,014 | 0,006 | 0,029 | 0,017 |
| S _r | 0,005 | 0,005 | 0,002 | 0,010 | 0,006 |
| RSD _r (%) | 84,0 | 50,0 | 28,0 | 115,0 | 24,0 |
| R | 0,019 | 0,022 | 0,018 | 0,032 | 0,059 |
| S _R | 0,007 | 0,008 | 0,006 | 0,012 | 0,021 |
| RSD _R (%) | 123,0 | 79,0 | 81,0 | 130,0 | 83,0 |

- e. Whether or not to delete the footnote on the general statement on sterols in virgin olive oil

The footnote or a revision thereof should be retained (not deleted) for reasons argued under (c).

- f. Whether to adopt 3.5 as the median value of the most perceived defect for virgin olive oil

The possible disadvantages of a panel test using human subjects has been the subject of many academic papers as well as being disparaged by sectors of the trade. The method uses a group of trained olive oil sensory panelists, and their individual perceptions obtained under strict conditions are collected. A median value for a fixed number of positive and negative parameters is determined on a linear 10 cm scale. There is a generous margin of error applied with this calculation. It is notable that defects in extra virgin olive oil at 2.5 are barely perceived by the average consumer but may become noticeable at 3.5. It is not uncommon that an oil may have more than one defect and a group of panelists may not be able to agree upon and assign a particular defect; in this case the oil would be deemed acceptable although it is commonly regarded to be defective. Although there is a mechanism to resolve such cases, sensory panels are only able to assess a small percentage of the extra virgin olive oil in trade and such issues put an extra burden on the panels. **The suggestion is to retain the limit at 2.5.**

- g. Whether or not to delete the provisions for 1,2-diglycerides (% total diglycerides) and pyropheophytin "a" (% total chlorophyll pigments) for extra virgin oil and their corresponding analytical methods

These two methods, whether used individually or together provide valuable information on the status of an extra virgin olive oil. Both 1,2-diglycerides (% total diglycerides) and pyropheophytin "a" (% total chlorophyll pigments) have been incorporated into a number of national and regional standards and found to be very instructive when assessing extra virgin olive oil quality and durability.

The report argues that the method for 1,2-diglycerides (% total diglycerides) “*has many variables that might influence the results and there were other methods to evaluate the quality*”. In earlier EWG discussions, this assertion was accompanied by a comment that a less variable method was under consideration at ISO (TC34/SC11). It appears that the development of this improved method has been held up for a while now – obviously an unfortunate circumstance considering its importance to this commodity and to the olive oil community. The report states “*there were other methods to evaluate the quality*”.

In other work (Food Chemicals Codex Appendix XIX), a comparison of such tests indicates that more than one test might be needed since the sensitivity varies among tests and there are different causes of deterioration of olive oil quality over time.

The report also states that the method for pyropheophytin “a” “*has many variables that might influence the results and there were other methods to evaluate the quality*”. In this case no additional explanation is available.

Other claims regarding the appropriateness of their use by trade, but not regulatory agencies, is part of a circular argument that would only be resolved by incorporation of these methods in CXS 33.

These parameters should be retained and again considered for inclusion in the body of the standard.

- h. The need to update the methods of analysis taking into account CRD24

Suggestions for updates to the presentation of methods of analysis have been presented in another CRD.