



JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FATS AND OILS
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PROPOSED DRAFT REVISION OF THE STANDARD FOR NAMED VEGETABLE OILS (CODEX STAN 210-1999): ADDITION OF PALM OIL WITH HIGH OLEIC ACID (OXG)

Comments at Step 3 (Replies to CL 2016/44-FO)

Comments of Canada, Ecuador, Peru, USA

Background

1. This document compiles comments received through the Codex Online Commenting System (OCS) in response to CL 2016/44-FO issued in November 2016 (**Annex I**). Under the OCS, comments are compiled in the following order: general comments are listed first, followed by comments on specific paragraphs.

Guidance for interpreting Reconciliation report

2. The comments submitted through the OCS have been compiled in the Reconciliation report, hereby attached as **Annex I**.

3. Under the OCS, each paragraph of the **draft standard** is assigned a number (i.e. the title, section, subsections, texts, footnotes and in case of tables each grid).

4. For ease of reference, the draft standard¹ has been reproduced with automatic paragraph numbers as assigned by the OCS and is hereby attached as **Annex II**.

5. Columns under **Annex I** are headed as follows:

- "**Para**" refers to the paragraph number assigned to the draft standard by the OCS (the paragraph number can be found in Annex II).
- "**Text**" refers to the text of the paragraph on which a proposed change or comment has been made. This text can be either the original text (if only a comment has been made), or the proposed text (if a textual modification has also been suggested).
- "**T**" refers to the comments classification. **C** is when users provide only a comment, while **P** is when they also suggest a proposed change. In the first case, the original text with an explanation has been inserted in the system; in the second case, the revised text with or without an explanation has been inserted.
- "**Comment**" includes the comment category, the author and the full text of the comment.

6. It is recommended that the Reconciliation report (Annex I) is read side by side or in conjunction with Annex II.

¹ REP15/FO

Annex I

Reconciliation report for Comments at Step 3 on the proposed draft revision of the Standard for Named Vegetable Oils (CODEX STAN 210-1999): Addition of Palm Oil with High Oleic Acid (OxG)

| Para | Text | T | Comment |
|------|---|---|--|
| G | (General Comment) | C | <p>Comment by Canada</p> <p>Canada would like to thank Colombia and Ecuador as chair and co-chair respectively of the EWG, for their work on the proposed addition of Palm Oil with High Oleic Acid (OxG) in the Standard for Named Vegetable Oils (CODEX STAN 210-1999). Canada has considered the proposed draft revision in CX/FO 17/25/6 and offers the following comments.</p> |
| G | (General Comment) | C | <p>Comment by Canada</p> <p><i>Category :SUBSTANTIVE</i></p> <p>Canada supports the addition of the interspecific hybrid palm oil (OxG) to the current Codex Standard for Named Vegetable Oils (CODEX STAN 210-1999). Including this oil in the standard will establish the oil's identity and purity and contribute to fair practices in food trade.</p> <p>Regarding the naming of this oil as "palm oil – high oleic acid" Canada notes that the oleic acid content of this oil is reported to be between 48.0 to 58.0 %. When looking at similar oils in the CODEX STAN 210-1999, we note that high oleic acid containing vegetable oils (e.g. sunflower seed oil – high oleic acid and safflower seed oil – high oleic acid) typically have oleic acid contents greater than 70%. We believe this oil is more within the mid-oleic acid range. Canada believes that the current name used for this oil, i.e. Palm Oil – High Oleic Acid, could create inconsistency in the standard for named vegetable oils. Therefore Canada would like to suggest changing the name of this oil to "Palm Oil – Mid Oleic Acid".</p> |
| G | (General Comment) | C | <p>Comment by Peru</p> <p><i>Category :EDITORIAL</i></p> <p>Perú no tiene comentarios al documento revisado.</p> |
| 11 | <u>Palm oil – high oleic acid (high oleic acid palm oil) is derived from the fleshy mesocarp of hybrid palm fruit OxG (<i>Elaeis oleifera</i> x <i>Elaeis guineensis</i>).</u> | C | <p>Comment by USA</p> <p><i>Category :SUBSTANTIVE</i></p> <p>The current proposal is to amend the Standard for Named Vegetable Oils (CODEX STAN 210-1999) to include a new category named "Palm Oil – High Oleic Acid" containing 48-58 % oleic acid. The United States notes that ranges for percent oleic acid (C18:1) in mid and high oleic acid oils contained in the Standard for Named Vegetable Oils (CODEX STAN 210-1999) are as follows:</p> <p>Mid Oleic Acid Name C18:1 – Oleic Acid % Sunflower Seed Oil – Mid Oleic Acid 43.1 - 71.8</p> <p>High Oleic Acid Name C18:1 – Oleic Acid % Sunflower Seed Oil – High Oleic Acid 75 - 90.7 Safflowerseed Oil – High Oleic Acid 70.0 - 83.7</p> <p>Therefore, the United States supports the addition of a new category for palm oil to address "higher" oleic acid content. However, to be consistent with ranges for percent oleic acid (C18:1) in mid and high oleic acid oil categories currently found in the Standard for Named Vegetable Oils (CODEX</p> |

| | | | |
|----|---|---|---|
| | | | STAN 210-1999), the United States recommends that palm oil containing 48-58% oleic acid be called "Palm Oil - Mid Oleic Acid " not "Palm Oil - High Oleic Acid." |
| 11 | <u>Palm oil - high oleic acid content (palm oil with high oleic acid content) is obtained from the fleshy mesocarp of hybrid palm fruit OxG (Elaeis oleifera x Elaeis guineensis)</u> | C | <p>Comment by Ecuador <i>Category : TECHNICAL</i></p> <p>We suggest to define a common name for this type of oil so that it can be recognised all over the world and distinguish this oil from palm oil without high oleic acid content .</p> |
| 15 | Table 1: Fatty acid composition ranges for vegetable oils determined by gas liquid chromatography (GLC) in authentic samples ¹ (expressed in percentage of total fatty acid content) (see Section 3.1 in the Standard): Peanut oil | C | <p>Comment by Ecuador <i>Category :EDITORIAL</i></p> <p>To include source as reference to Table 1: Source: Data obtained from electronic working group eWG</p> |
| 39 | <u>48.0 – 58.0</u> | P | <p>Proposed Change by Ecuador <i>Category : TECHNICAL</i></p> <p><u>4850.0 – 58.0</u></p> <p>In line with data given by ecuadorean industry, for the C18:1 (oleic acid) we suggest to increase the minimum of 48 % to 50 % for the purpose of distinguishing it from other types of oils.</p> |
| 79 | <u>60-72</u> | P | <p>Proposed Change by Ecuador <i>Category : TECHNICAL</i></p> <p><u>60-7264-72</u></p> <p>In line with data given by ecuadorean industry, we suggest to increase the minimum limit from 60 to 64.</p> |

[1]Proposed revision to the *Standard for Named Vegetable Oils (CODEX STAN 210-1999)*,
[2]Addition of Palm Oil with High Oleic Acid (OxG)

[3](At Step 3)

[4]New texts added are shown in **bold/underlined** Font. Deletions are shown in ~~strikethrough~~ Font

[5]2. DESCRIPTION

[6]

[7]2.1 Product definitions

[8]

[9](Note: synonyms are in brackets immediately following the name of the oil)

[10]

[11]**Palm oil – high oleic acid (high oleic acid palm oil) is derived from the fleshy mesocarp of hybrid palm fruit OxG (*Elaeis oleifera* x *Elaeis guineensis*).**

[12]

[13]3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

[14]3.1 GLC ranges of fatty acid composition (expressed as percentages)

[15]Table 1: Fatty acid composition of vegetable oils as determined by gas liquid chromatography from authentic samples ¹ (expressed as percentage of total fatty acids) (see Section 3.1 of the Standard)

| [16]Fatty acid | [17] Palm oil high oleic acid |
|----------------|--------------------------------|
| [18]C6:0 | [19]ND |
| [20]C8:0 | [21]ND |
| [22]C10:0 | [23]ND |
| [24]C12:0 | [25]ND – 0.4 |
| [26]C14:0 | [27]ND – 0.7 |
| [28]C16:0 | [29] <u>25.0– 34.0</u> |
| [30]C16:1 | [31]ND – 0.8 |
| [32]C17:0 | [33]ND |
| [34]C17:1 | [35]ND |
| [36]C18:0 | [37] <u>2.0 – 3.8</u> |
| [38]C18:1 | [39] <u>48.0 – 58.0</u> |
| [40]C18:2 | [41] <u>10.0 – 14.0</u> |
| [42]C18:3 | [43]ND – 0.6 |
| [44]C20:0 | [45]ND – 0.4 |
| [46]C20:1 | [47]ND |
| [48]C20:2 | [49]ND |
| [50]C22:0 | [51]ND |
| [52]C22:1 | [53]ND |
| [54]C22:2 | [55]ND |
| [56]C24:0 | [57]ND |
| [58]C24:1 | [59]ND |

[60]ND - non detectable, defined as $\leq 0.05\%$

[61]¹ Data taken from species listed in Section 2.

[62]Table 2: Chemical and physical characteristics of crude vegetable oils (see Appendix of the Standard)

| [63] | [64] Palm oil high oleic acid |
|--|---|
| [65]Relative density [66](x °C/water at 20°C) | [67] <u>0.8957-0.910</u> [68] <u>(50 °C/water a 20 °C)</u> |
| [69]Apparent density [70](g/ml) | [71]ND |
| [72]Refractive index [73](ND 40°C) | [74] <u>1.459-1.462</u> |
| [75]Saponification value [76](mg KOH/g oil) | [77] <u>189-199</u> |
| [78]Iodine value | [79] <u>60-72</u> |
| [80]Unsaponifiable matter (g/kg) | [81] <u>≤12</u> |

| | |
|-----------------------------------|-------|
| | [82] |
| [83]Stable carbon isotope ratio * | [84]- |

[85]* For the method see the following publications:

- [86]Woodbury SP, Evershed RP and Rossell JB (1998). Purity assessments of major vegetable oils based on gamma 13C values of individual fatty acids. JAOCS, 75 (3), 371-379.
- [87]Woodbury SP, Evershed RP and Rossell JB (1998). Gamma 13C analysis of vegetable oil, fatty acid components, determined by gas chromatography-combustion-isotope ratio mass spectrometry, after saponification or regiospecific hydrolysis. Journal of Chromatography A, 805, 249-257.
- [88]Woodbury SP, Evershed RP, Rossell JB, Griffith R and Farnell P (1995). Detection of vegetable oil adulteration using gas chromatography combustion / isotope ratio mass spectrometry. Analytical Chemistry 67 (15), 2685-2690.
- [89]Ministry of Agriculture, Fisheries and Food (1996). Authenticity of single seed vegetable oils. Working Party on Food Authenticity, MAFF, UK.

[90]Table 3: Levels of desmethylsterols in crude vegetable oils from authentic samples¹ as a percentage of total sterols (see Appendix of the Standard)

| | |
|----------------------------|--------------------------------------|
| [91] | [92] Palm oil high oleic acid |
| [93]Cholesterol | [94] <u>2.2-4.7</u> |
| [95]Brassicasterol | [96] <u>ND-0.4</u> |
| [97]Campesterol | [98] <u>16.6-21.9</u> |
| [99]Stigmasterol | [100] <u>11.5-15.5</u> |
| [101]Beta-sitosterol | [102] <u>57.2-60.9</u> |
| [103]Delta-5-avenasterol | [104] <u>1-1.9</u> |
| [105]Delta-7-stigmastenol | [106] <u>ND-0.2</u> |
| [107]Delta-7-avenasterol | [108] <u>ND-1.0</u> |
| [109]Others | [110] <u>ND-1.8</u> |
| [111]Total sterols (mg/kg) | [112] <u>519-1723</u> |

[113]ND - Non-detectable, defined as $\leq 0.05\%$

[114]¹ Data taken from species listed in Section 2.

[115]Table 4: Levels of tocopherols and tocotrienols in crude vegetable oils from authentic samples (mg/kg) (see Appendix of the Standard)

| | |
|------------------------|---------------------------------------|
| [116] | [117] Palm oil high oleic acid |
| [118]Alpha-tocopherol | [119] <u>128 - 152</u> |
| [120]Beta-tocopherol | [121] <u>ND</u> |
| [122]Gamma-tocopherol | [123] <u>4 - 138</u> |
| [124]Delta-tocopherol | [125] <u>0 - 31</u> |
| [126]Alpha-tocotrienol | [127] <u>165 - 179</u> |
| [128]Gamma-tocotrienol | [129] <u>475 - 586</u> |
| [130]Delta-tocotrienol | [131] <u>35 - 61</u> |
| [132]Total (mg/kg) | [133] <u>678 - 956</u> |

[134]ND - Non-detectable

[135]¹ Data taken from species listed in Section 2.