



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FATS AND OILS

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**PROPOSED DRAFT AMENDMENT/REVISION TO THE STANDARD FOR NAMED VEGETABLE OILS
(CXS 210-1999): INCLUSION OF SACHA INCHI OIL**

(Prepared by the Electronic Working Group Chairman)

The Chair of the Electronic Working Group on the Proposed Draft Amendment/Revision of the Standard for Named Vegetable Oils (CXS 210-1999): Inclusion of sacha inchi oil appreciates the comments made to CL 2023/59/OCS-FO.

After the CL 2023/59/OCS-FO period of consultation, comments were received; based on the responses provided, the draft was further revised and improved the following provisions.

1. **Product definition:** The chairman has reviewed the comments on this item, and the proposed changes are accepted to be consistent with current standard.
2. **Statement under section 3.1:** EWG Chair accept the comment and it will be deleting the proposed statement.
3. **Table 1: Fatty acid composition:** EWG Chair proposes to remove C11:0 and C15:0 from Table 1 as these fatty acids are not included in the Table 1 of the current standard, and finally, the values reported are ND.

EWG Chair highlighted proposal from China to adjust value for C18:1, C18:2 and C18:3 as well as proposal from Thailand to revise the values of C18:2 and C18:3.

4. **Table 2: Chemical and physical characteristics:** EWG Chairman highlighted proposal from China to adjust the range of iodine value to 196 – 205 and proposal from Thailand to decrease the minimum values of the saponification value: 185 – 196, so to reflect world production, it is proposed “Saponification value (mg KOH/g oil) 185 – 205 mg KOH/g oil”
5. **Alignment/formatting of standard:** EWG Chairman proposes to adjust the formatting of the draft standard in order to be aligned and consistent with the formatting of the current standard, It will be used point (.) instead of comma for the values with a decimal point, for C24:1, the value should be reported as ND instead of a “-”.

CONCLUSIONS AND RECOMMENDATIONS

6. The EWG Chair submits for consideration by the CCFO 28 the proposed Amendment/Revision of the *Standard for Named Vegetable Oil* (CXS 210-1999) to include Sacha inchi oil., considering that significant progress has been made.
7. The EWG recommends to CCFO28 to consider at Step 5 or 5/8 of the draft amendment/revision of the *Standard for Named Vegetable Oils* (CXS 210-1999) to include Sacha inchi oil as specified in **ANNEX I**.

ANNEX I

**PROPOSED DRAFT AMENDMENT/REVISION OF THE STANDARD FOR NAMED VEGETABLE OILS
(CXS 210-1999): INCLUSION OF SACHA INCHI OIL**

2 DESCRIPTION**2.1 Product definitions**

Sacha inchi oil is obtained by cold pressing derived from the seeds of sacha inchi fruit (*Plukenetia volubilis* L.).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 GLC ranges of fatty acid composition (expressed as percentages)**

Sacha inchi oil shall contain not less than 44% linolenic acid (as a percentage of total fatty acid content) and more than 32% linoleic acid.

TABLE 1: Fatty acid composition of vegetable sacha inchi oil as determined by gas liquid chromatography from authentic samples (expressed as percentage of total fatty acids) (see Section 3.1 of the Standard)

Fatty acid	Sacha Inchi oil
C6:0	<u>ND</u>
C8:0	<u>ND</u>
C10:0	<u>ND</u>
C11:0	ND
C12:0	<u>ND</u>
C14:0	<u>ND</u>
C15:0	ND
C16:0	<u>3.6 – 4.8</u>
C16:1	<u>ND – 0.1</u>
C17:0	<u>ND – 0.1</u>
C17:1	<u>ND</u>
C18:0	<u>2.6 – 4.0</u>
C18:1	<u>6.0 8.4 – 11.7</u>
C18:2	<u>32.0 – [40.0] 43.4</u>
C18:3	<u>36.2[44.0] – 50.0</u>
C20:0	<u>ND – 0.10</u>
C20:1	<u>ND – 0.4</u>
C20:2	<u>ND – 0.1</u>
C22:0	<u>ND – 0.1</u>
C22:1	<u>ND – 0.1</u>
C22:2	<u>ND</u>
C24:0	<u>ND</u>
C24:1	<u>ND</u>

ND - Non detectable, defined as ≤ 0.05 %

APPENDIX

OTHER QUALITY AND COMPOSITION FACTORS

TABLE 2 - Chemical and physical characteristics of crude vegetable sacha inchi oils

	Sacha inchi oil
Relative density (x°C/water at 20 °C)	<u>0.920 – 0.930</u>
	<u>x=20 °C</u>
Refractive index (ND 40 °C)	<u>1.478 – 1.482</u>
Saponification value (mg KOH/g oil)	<u>185 [189] – 196</u>
Iodine value	<u>182 – 199 205</u>
Unsaponifiable matter (g/kg)	<u>≤ 5</u>

TABLE 3 - Levels of desmethylsterols in crude vegetable oils of sacha inchi oil from authentic samples as a percentage of total sterols

	Sacha Inchi oil
Cholesterol	<u>ND – 1.0</u>
Brassicasterol	<u>ND – 0.1</u>
Campesterol	<u>6.6 – 7.8</u>
Stigmasterol	<u>23.4 – 27.0</u>
Beta-sitosterol	<u>51.6 – 56.9</u>
Delta-5avenasterol	<u>4.3 – 8.7</u>
Delta-7stigmastenol	<u>ND – 0.3</u>
Delta-7avenasterol	<u>ND – 0.7</u>
Others	<u>ND</u>
Total sterols (mg/kg)	<u>2080 – 2480</u>

ND - Non-detectable, defined as ≤ 0,05 %

TABLE 4 - Levels of tocopherols and tocotrienols in crude vegetable oils sacha inchi oil from authentic samples (mg/kg)

	Sacha inchi oil
Alpha-tocopherol	<u>3.0 – 7.0</u>
Beta-tocopherol	<u>ND – 3.0</u>
Gamma-tocopherol	<u>1040 – 1370</u>
Delta-tocopherol	<u>640 – 860</u>
Alpha-tocotrienol	<u>ND</u>
Gamma-tocotrienol	<u>ND</u>
Delta-tocotrienol	<u>ND</u>
Total (mg/kg)	<u>1683 – 2240</u>

ND - Non-detectable.