

# CODEX ALIMENTARIUS COMMISSION



Food and Agriculture  
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Agenda Item 3

CX/FO 19/26/3 Add. 1  
Original Language Only

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON FATS AND OILS

Twenty-Sixth Session

Kuala Lumpur, Malaysia, 25 February- 01 March 2019

#### DRAFT REVISION OF CODEX STANDARD FOR NAMED VEGETABLE OILS (CODEX STAN 210-1999)

##### Addition of Palm Oil with high Oleic Acid (OXG)

(Comments of Brazil)

### Brazil

#### **GENERAL COMMENTS**

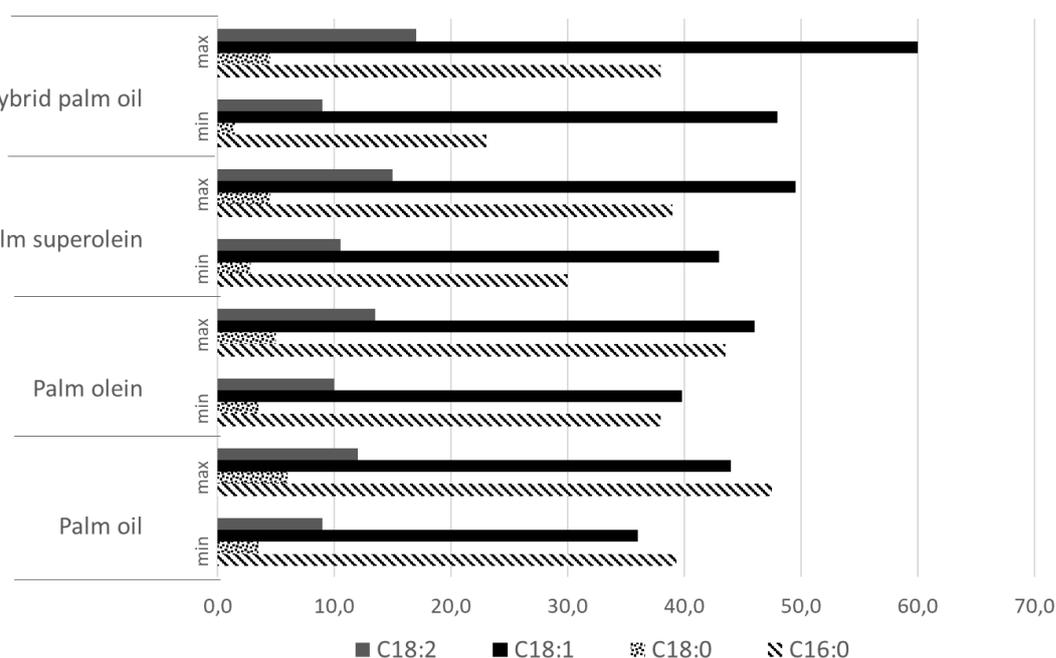
Brazil continues to support the amendment to CODEX STAN 210-1999 to include a standard for high oleic palm oil. This type of oil is becoming an important oil specially because of its characteristics such as lower levels of saturated fatty acids and improved oxidative stability when compared to conventional palm oil.

Regarding product definition (item 2.1), Brazil believes that the expression “high oleic palm oil” is more appropriate to this product because this expression is already used in the market to designate this type of oil. In addition, Brazil believes that the name “high oleic palm oil” cannot be considered misleading in the market. First because this type of oil is mostly used as ingredient for industry use. In this case, there is a technical specification in which the client can find the information about fatty acid composition. Even for consumers, nutritional labelling helps to understand fat composition in the product.

It is important to emphasize that there are no rules established by CCFO to define composition and naming of fatty acid modified vegetable oils. A new work on this subject was proposed in 2007 but in 2009 the Committee agreed, considering the lack of support to pursue the work and concerns expressed, to discontinue the consideration of a system for naming vegetable oils that have a modified fatty acid composition (paragraph 105, ALINORM 09/32/17).

On CCFO22 report (2011) there are some paragraphs mentioning that the Chair proposed that CCFO maintains the tradition that had been adopted in providing for naming of fatty acid modified oils on a case-by-case basis (paragraphs 19 to 24, REP 11/ FO).

Taking this into consideration, Brazil supports the use of “high oleic palm oil” to define the oil in discussion. Considering that the amounts of oleic acid are already higher in palm oil than in sunflower oil, it is not reasonable to use the same rationale to name this fatty acid modified oil. If we compare this oil with **palm oil** and **palm olein** (that is obtained from fractionation of palm oil) the amounts of oleic acid are higher, and this justify the use of the expression “high oleic”. In this case, may be a mid-oleic palm oil will not be feasible.



Regarding fatty acid composition, physical and chemical characteristics of the high oleic palm oil, Brazil presents some suggestions considering analysis results of a project developed by the Brazilian Agricultural Research Corporation (Embrapa) to characterize the high oleic palm oil produced in Brazil, considering two different suppliers of the North of the country. Embrapa is an enterprise that is under the aegis of the Brazilian Ministry of Agriculture, Livestock, and Food Supply (MAPA).

## SPECIFIC COMMENTS

Related to description, Brazil supports to maintain the oil named as high oleic palm oil, as following:

### 2. DESCRIPTION

#### 2.1 Product Definitions

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*).

Related to essential composition and quality factors, Brazil proposes to change some values in table 1 to 4, as following:

**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)**

Regarding fatty acids composition (table 1), it was observed that just a small modification in the upper limit of lauric acid (C12:0) and behenic acid (C22:0) would be necessary considering 549 results in total of authentic high oleic palm oil produced in Brazil.

Fatty acid	Proposal in the REP17/FO-Rev Appendix V	Brazil's proposal
C12:0	ND – 0,4	ND – <u>0,6</u>
C22:0	ND	ND – <u>0,3</u>

**Table 2: Chemical and physical characteristics of crude vegetable oils**

Brazil would like to suggest using the temperature of **40°C** in the analysis of **relative density (x°C/water 20°C)** because 40°C is the usual temperature for analysis of relative density of palm olein, that is more similar to the high oleic palm oil (hybrid) considering physical and chemical characteristics. The temperature of 50°C is usually used for palm oil. For this temperature, Brazil would suggest the following range of relative density **0,8942 -0,8987 (40°C/water 20°C)**. Brazil agrees with other parameters proposed in table 2. The proposed range is aligned with results of 83 results of analysis of authentic high oleic palm oil produced in Brazil.

**Table 3: Levels of desmethylsterols in crude vegetable oils from authentic samples as a percentage of total**

Brazil suggests the following changes in the ranges of cholesterol, stigmasterol, beta-sitosterol, delta-5-avenasterol and others:

<b>Sterol</b>	<b>Proposal in the REP17/FO-Rev Appendix V</b>	<b>Brazil's proposal</b>
<b>Cholesterol</b>	2.2-4.7	<b><u>1.7</u></b> -4.7
<b>Stigmasterol</b>	11.5-15.5	<b><u>11.2</u></b> -15.5
<b>Beta-sitosterol</b>	57.2-60.9	57.2- <b><u>67</u></b>
<b>Delta-5-avenasterol</b>	1-1.9	<b><u>ND</u></b> -1.9
<b>Others</b>	ND-1.8	ND- <b><u>3.8</u></b>

The proposed values are based on the total of 40 results of analysis of authentic high oleic palm oil produced in Brazil.

**Table 4: Levels of tocopherols and tocotrienols in crude vegetable oils from authentic samples (mg/kg)**

Brazil suggests the following changes in the ranges of alpha-tocopherol, alpha-tocotrienol, gamma-tocotrienol, delta-tocotrienol and total of tocopherols and tocotrienols considering differences that reflects the results of 714 analysis of authentic high oleic palm oil produced in Brazil.

<b>Tocopherols and tocotrienols</b>	<b>Proposal in the REP17/FO-Rev Appendix V</b>	<b>Brazil's proposal</b>
Alpha-tocopherol	128 - 152	<b><u>49 - 188</u></b>
Alpha-tocotrienol	165 - 179	<b><u>74 - 256</u></b>
Gamma-tocotrienol	475 - 586	<b><u>406 - 887</u></b>
Delta-tocotrienol	35 - 61	<b><u>33 - 86</u></b>
Total (mg/kg)	678 - 956	<b><u>595 - 1292</u></b>