

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS



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Agenda Item 3

CX/FO 01/3

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON FATS AND OILS

#### Seventeenth Session

London, United Kingdom, 19 – 23 February 2001

### DRAFT REVISED STANDARD FOR OLIVE OILS AND OLIVE-POMACE OILS GOVERNMENT COMMENTS AT STEP 6

The following comments have been received from Canada, Japan, Poland, Portugal and Spain and from the International Olive Oil Council in response to CL 2000/32-FO.

#### CANADA

##### 1. Scope

The scope indicates that the standard does not include olive oils and olive-pomace oils which must be subjected to further processing “render them fit for human consumption”. Canada would suggest a minor rewording of the Scope to make it consistent with the Scope statements contained in other Fats and Oils Standards:

*This standard applies to the olive oils and olive-pomace oils described in Section 2 presented in a state for human consumption.*

##### 3. Essential composition and quality factors

Sections 3.5, 3.6 and 3.7 make reference to olive oils, virgin olive oils, etc. which are “fit for human consumption”. Given the “Scope” of the document, the text, “...fit for human consumption.” is really redundant. Canada would suggest that this text can either be omitted or replaced with, “...refined olive oil and virgin olive oil as identified in Section 2 - Definitions and meeting the requirements identified in Sections 3.1, 3.2 and 3.3.”

Section 3.9 specifies the linolenic acid (C18:3) content for virgin olive oil, olive oil/refined olive oil and olive-pomace oil at 0 - 0.9%. IOOC revised their limit in 1998 to reflect a fatty acid C18:3 content of 0 - 1.0%. Canada suggests that CCFO give consideration to revising this Section to be consistent with the IOOC requirement.

##### 7. Labelling

Section 7.2 states that the “Free Acidity of the Oil” shall be declared on the label and expressed in terms of oleic acid. The actual free acidity will differ with each lot and may possibly change on storage. Therefore, this statement should be revised to reflect this variability. A suggested revision of this section is as follows:

*The limit of the Free Acidity of the Oil shall be declared on the label, e.g. Acidity 0 - 1.0% or Maximum acidity 1.0%, corresponding to the grade of oil as identified in Sections 3.1 to 3.7.*

## Appendix to the standard

Section 2.1 of the Appendix specifies the maximum level of saturated fatty acids at the 2-position in the triglyceride (sum of palmitic and stearic acids). The level for “olive-pomace oil” is listed as “*not specified*”. Canada would suggest that if a maximum level was not going to be specified for this oil then there is no need to include it on the list. If CCFO wished to retain it on the list, then Canada would suggest that the limit of 2.2% would be appropriate. This level is the same as that specified for “Refined olive-pomace oil”. By definition (Section 3.7), olive-pomace oil is a blend of edible virgin olive oil and refined olive-pomace oil, the value for “olive-pomace” oil would never exceed that for “Refined olive-pomace oil”. Therefore, a level of 2.2% would appear to be an appropriate maximum level for saturated fatty acids at the 2-position in the triglyceride (sum of palmitic and stearic acids).

The criteria established in Section 2.1 of the Appendix can be used to detect the adulteration of any grade of olive oil with re-esterified olive oil - which would not meet the olive oil standard as defined in Section 2.1. However, the Appendix is prefixed with a statement that, “*The Appendix to this standard contains provisions which are intended for voluntary application by commercial partners and not for application by governments*”. This would result in the criteria identified in 2.1 not be available for use by governments to detect adulteration with re-esterified olive oil and remove a useful fraud fighting tool. Canada would suggest that Section 2.1 should be relocated under Section 3 and the corresponding analytical methods identified in Section 4.6 be relocated to Section 8 of the Standard.

In Section 3.6 it states that “...*After passage of the sample through activated alumina, absorbency at 20nm. shall be equal or less than 0.11.*” For absorbency in ultra-violet, 20nm. should be 270nm.

## **JAPAN**

### 3.9 Fatty acid composition as determined by gas liquid chromatography (% total fatty acids)

Regarding refined olive oils, compositions of *trans* fatty acids should be changed as follows.

C18:1 T	0.0 - 0.40
C18:2 T + C18:3 T	0.0 - 0.60

Reason: Japan believes ranges of compositions regarding *trans* fatty acids should be set wider in order to respond to various conditions in refining process because the level of *trans* fatty acids (C18:1 T, C18:2 T, C18:3 T) differ depending on heating conditions in refining (deodorizing) process.

## 5. Contaminants

We propose to add the following:

5.4 Soap - Regarding virgin olive oils and olive oils, soap should not be detected (detection limit of soap should be 5 ppm).

Reason: There is a provision of soap test in the current standard (CODEX STAN 33~1981) and existence of this provision in the present standard indicates the necessity of it. Acidity is used to evaluate quality and it is possible to decrease content of free fatty acid by alkalization process intentionally operated for its reduction. To prevent this intentional alkalization the soap test should be mandatory.

## 7. Labelling

7.2 Free Acidity of the Oil - This should be deleted.

Reason: We believe labelling free acidity on products would create confusion among consumers and therefore it is not necessary. The maximum levels of free acidity in olive oils are provided in "3. Essential Composition And Quality Factors". Flavor is considered important especially regarding virgin olive oils and labelling of only one item of acidity would cause misunderstanding among consumers that acidity is given priority to evaluate the quality of the products, which should be avoided. In other words, we find that

labelling of acidity would indicate to consumers that lower free acidity of the products means better quality even in the same category. The categorization of olive oil such as "extra virgin olive oil, virgin olive oil, refined olive oil" depending on the level of free acidity is already established in section 3 and therefore we believe the labelling of the name based on this categorization is sufficient information for consumers to understand the level of acidity of the labelled olive oil.

#### Appendix – Other Quality and Composition Factors

We propose to add the following:

Matter volatile at 105° (This is a provision in Paragraph 5,1 of the current standard (CODEX STAN 33-1981)) - Regarding virgin olive oils and olive oils, the maximum levels should not be more than 0.1% m/m).

Reason: It is appropriate to set up maximum level within 0.1% because moisture and volatile matter content exceeding 0.1% makes the oil less transparent, which will be considered poor in quality by consumers.

#### **POLAND**

##### Section 3.10.3 – Maximum erythrodiol and uvaol content (% total sterols)

We suggest to change the headline to read: ‘erythrodiol and uvaol content’ and additionally specify the content of erythrodiol and uvaol for the following oils:

Refined olive-pomace oil - min 12

Olive-pomace oil - > 4.5

##### SECTION 3.11 – WAXES

We propose to set up the maximum level of waxes for:

Refined olive-pomace oil – not specified

Olive-pomace oil – > 350

##### 3.12 – Detection of seed oils

We suggest to set up the maximum difference between the actual and theoretical ECN 42 triglyceride contents for:

Refined olive-pomace oil – 0.5

##### APPENDIX, SECTION 1.3 – TRACE METALS

In our opinion the maximum level of iron in refined oil should not be higher than 1.5 mg/kg. We think that is necessary to set up limits of the following heavy metals:

Cd – no more than 0.01 mg/kg

Hg – no more than 0.01 mg/kg

#### **PORTUGAL**

Portugal agrees with the revised draft Standard for Olive Oils and Olive-pomace Oils, subject to the following comments (based on the French version):

##### 3. Essential composition and quality factors

3.4 Refined olive oil - We propose a maximum of 0.5/100 g for free acidity expressed as oleic acid.

3.6 Refined olive-pomace oil - We propose a maximum of 0.5/100 g for free acidity expressed as oleic acid.

3.8 Organoleptic characteristics (odour and taste) of virgin olive oils - This whole section must be in line with the English version, in particular:

"huile d'olive vierge" (virgin olive oil) not "huile d'olive vierge fine" (literally "fine virgin olive oil");

"médiane de l'attribut fruité" (median of the fruity attribute), not "médiane du défaut dans le fruit" (literally "median of the defect in the fruit").

## **SPAIN**

The following comments are raised on the version in Spanish:

### General

In the title for the standard, the word "aceituna" must be replaced with "oliva", so that the Codex and COI names coincide.

### Section 1. Scope of application.

On the 1<sup>st</sup> and 2<sup>nd</sup> lines, where it says: "...de orujo de aceituna...", it should read: "...de orujo de oliva...".

### Section 2. Description.

Section 2.2.: To improve the wording of the Spanish version, we propose replacing the following phrase: "...medios físicos (en particular en determinadas condiciones térmicas) que no produzcan la alteración del aceite, y que no se haya sometido a más tratamiento..." by "...medios físicos en condiciones térmicas especiales que no produzcan alteración del aceite y que no haya tenido más tratamiento...".

Section 2.3.: In the 1<sup>st</sup> line, where it says: "...de orujo de aceituna se entiende el aceite obtenido mediante tratamiento con disolventes del orujo de aceituna, con exclusión de los aceites obtenidos mediante procedimientos...", it should read: "...de orujo de oliva se entiende el aceite obtenido mediante tratamiento con disolventes del orujo de oliva, con exclusión de los aceites obtenidos por procedimientos...".

### Section 3. Essential composition and quality factors.

Sub-section 3.4.: In the 1<sup>st</sup> line, where it says: "...técnicas de refinación que no provocan modificaciones en la...", it should read: "...técnicas de refinado que no provoquen modificación de la...".

We suggest replacing the free acidity figure, expressed in oleic acid, of 0.3 grams per 100 grams, with: 0.5 grams per 100 grams.

Sub-section 3.6.: In the 1<sup>st</sup> line, where it says: "Aceite de orujo de aceituna refinado: Aceite obtenido a partir del aceite de orujo de aceituna sin refinar, mediante técnicas de refinación que no provocan modificación...", it should read: "Aceite de orujo de oliva refinado: Aceite obtenido a partir del aceite de orujo de oliva crudo, mediante técnicas de refinado que no provoque modificación...".

We suggest replacing the free acidity figure, expressed in oleic acid, of 0.3 grams per 100 grams, by: 0.5 grams per 100 grams.

Sub-section 3.7.: In the 1<sup>st</sup> line, where it says: "Aceite de orujo de aceituna: mezcla de aceite de orujo de aceituna refinado...", it should read: "Aceite de orujo de oliva: mezcla de aceite de orujo de oliva refinado...".

Sub-section 3.8.: For the heading of the 3<sup>rd</sup> column: “Mediana del atributo frutoso”, this should be replaced with “Mediana del atributo frutado”.

Against the asterisk, where it says: “...mediana del atributo frutoso es igual...”, it should read: “...mediana del atributo frutado sea igual...”.

Sub-section 3.9.: The Heading: “Composición de ácidos grasos determinada mediante cromatografía gas líquido (%...”, should be replaced with: “Composición en ácidos grasos por cromatografía en fase gaseosa (%...”.

On the line starting with C18:3 where it says: “C18:3 – 0.0-0.9, 0.0-0.9, 0.0-0.9”, this should be replaced with: “C18:3 – 0.0-1.0, 0.0-1.0, 0.0-1.0”.

Sub-section 3.10. In the heading where it says: “Composición de esteroides y alcohol triterpeno”, this should read: “Composición en esteroides y alcoholes triterpénicos”.

Sub-section 3.10.1.: In the column relating to sterols, we suggest adding sitosterol, so where it says: “...+ clerosterol + sitostanol...”, it should read: “...+ clerosterol + sitosterol + sitostanol...”.

Sub-section 3.10.2.: The sub-section heading: “Valor mínimo del contenido total de esteroides”, should be replaced with: “Contenido mínimo en esteroides totales”.

In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”, as there are two classes of virgin olive oil.

In the 4<sup>th</sup> line, where it says: “Aceite de orujo de aceituna...”, it should read: “Aceite de orujo de oliva...”.

In the 5<sup>th</sup> line, where it says: “Aceite de orujo de aceituna”, it should read: “Aceite de orujo de oliva”.

Sub-section 3.10.3.: In the heading, where it says: “Contenido máximo de eritrodiol...”, it should read: “Contenido máximo en eritrodiol...”.

In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

Sub-section 3.11.: In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

Sub-section 3.12.: The heading for the column “Diferencia máxima entre el contenido teórico de Triglicérido ECN 42”, should be replaced with: “Diferencia máxima entre el contenido real y el contenido teórico en Triglicéridos de los ECN 42”.

In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says: “Aceite de orujo de aceituna”, it should read: “Aceites de orujo de oliva”.

Sub-section 3.13.: The heading of the second column: “Relación mínima R1: estereno”, should be replaced with: “Relación mínima R1 de estereno”.

In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says: “Aceite de orujo de aceituna”, it should read: “Aceites de orujo de oliva”.

#### Section 4. Food Additives:

Sub-section 4.2.: In the heading, where it says “...de orujo de aceituna refinado y aceite de orujo de aceituna.”, it should read: “...de orujo de oliva refinado y aceite de orujo de oliva.”.

## Section 6. Hygiene

Sub-section 6.2.: In the 2<sup>nd</sup> line, where it says: "...exentos de materias objetables", it should read: "...exentos de materias extrañas".

Sub-section 6.3.: The drafting of this sub-section should be specified and developed in more detail, with reference to the presence and concentration of toxins, micro-organisms and/or parasites, which might represent a health hazard, and not just a general reference to these pollutants.

## Section 7. Labelling

Sub-section 7.1.: In the 3<sup>d</sup> line, where it says: "...de orujo de aceituna...", it should read: "...de orujo de oliva...".

Sub-section 7.2.: In the 1<sup>st</sup> line, where it says: "...expresada en términos de ácido...", it should read: "...expresada en ácido...".

## Section 8. Methods of analysis and sampling.

Sub-section 8.4.: In the heading, where it says: "...contenido de ácidos...", it should read: "...contenido en ácidos...".

Sub-section 8.5.: In the heading, where it says: "...contenido de cera...", it should read: "...contenido en cera...".

Sub-section 8.6.: In the heading, where it says: "...contenido efectivo y el contenido teórico de triglicérido ECN.... it should read: "...contenido real y el contenido teórico en triglicéridos de los ECN...".

Instead of the methods included in this sub-section, we suggest replacing them by the following method: "COI/T. 20/Doc. n° 20".

Sub-section 8.7.: In the heading, where it says: "...composición y el contenido de esteroides.", it should read: "...composición del contenido en esteroides..".

Sub-section 8.8.: In the heading, where it says: "...contenido de eritrodioleol .", it should read: "...contenido en eritrodioleol..".

Sub-section 8.9.: In the heading, where it says: "Determinación de los aceites ...", it should read: "Detección de aceites...".

Sub-section 8.11.: In the heading, where it says: "...contenido de arsénico.", it should read: "...contenido en arsénico..".

Sub-section 8.12.: In the heading, where it says: "...contenido de plomo.", it should read: "...contenido en plomo..".

## Appendix

### Section 1. Quality characteristics.

Sub-section 1.1.: In the heading, where it says: "Contenido de agua...", it should read: "Contenido en agua...".

In the 1<sup>st</sup> line , where it says: "Aceite de oliva virgen", it should read: "Aceites de oliva vírgenes".

In the 4<sup>th</sup> line, where it says: "Aceite de orujo de aceituna...", it should read: "Aceite de orujo de oliva...".

In the 5<sup>th</sup> line, where it says: "Aceite de orujo de aceituna", it should read: "Aceite de orujo de oliva".

Sub-section 1.2.: In the 1<sup>st</sup> line, where it says: "Aceite de oliva virgen", it should read: "Aceites de oliva

vírgenes”.

In the 4<sup>th</sup> line, where it says: “Aceite de orujo de aceituna...”, it should read: “Aceite de orujo de oliva...”.

In the 5<sup>th</sup> line, where it says: “Aceite de orujo de aceituna”, it should read: “Aceite de orujo de oliva”.

Sub-section 1.4.: In the heading, where it says: “Índice de peróxido”, it should read: “Índice de peróxidos”.

In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says: “Aceite de orujo de aceituna...”, it should read: “Aceite de orujo de oliva...”.

In the 6<sup>th</sup> line, where it says: “Aceite de orujo de aceituna”, it should read: “Aceite de orujo de oliva”.

Sub-section 1.5.: In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

Sub-section 1.5.1.: In the 3<sup>rd</sup> line, where it says: “Aceite de orujo de aceituna...”, it should read: “Aceite de orujo de oliva...”.

In the 5<sup>th</sup> line, where it says: “Aceite de orujo de aceituna”, it should read: “Aceite de orujo de oliva”.

## Section 2. Composition characteristics.

Sub-section 2.1.: In the heading, where it says: “Contenido de ácidos...”, it should read: “Contenido en ácidos...”.

In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says “Aceite de orujo de aceituna...”, it should read: “Aceite de orujo de oliva...”.

In the 5<sup>th</sup> line, where it says “Aceite de orujo de aceituna”, it should read: “Aceite de orujo de oliva”.

Under the column heading, “Nivel máximo” for the olive-pomace oil, line 5, we suggest replacing the value “no especificado” with “2,2%”.

## Section 3. Chemical and physical characteristics.

Sub-section 3.2.: In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says “Aceite de orujo de aceituna.”, it should read: “Aceites de orujo de oliva.”.

Sub-section 3.3.: In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says “Aceite de orujo de aceituna.”, it should read: “Aceites de orujo de oliva.”.

Sub-section 3.4.: In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says “Aceite de orujo de aceituna.”, it should read: “Aceites de orujo de oliva.”.

Sub-section 3.5.: In the 1<sup>st</sup> line, where it says: “Aceite de oliva virgen”, it should read: “Aceites de oliva vírgenes”.

In the 4<sup>th</sup> line, where it says “Aceite de orujo de aceituna.”, it should read: “Aceites de orujo de oliva.”.

Sub-section 3.6.: In the 2<sup>nd</sup> line, where it says: “Aceite de oliva virgen fino”, it should read: “Aceite de oliva

virgen”.

In the 6<sup>th</sup> line, where it says: “Aceite de orujo de aceituna refinado”, it should read: “Aceites de orujo de oliva refinado”.

In the 7<sup>th</sup> line, where it says: “Aceite de orujo de aceituna.”, it should read: “Aceites de orujo de oliva.”.

#### Section 4. Methods of analysis and sampling.

Sub-section 4.1.: In the heading, where it says: “...contenido de agua...”, it should read: “...contenido en agua...”.

Sub-section 4.2.: In the heading, where it says: “...contenido de impurezas...”, it should read: “...contenido en impurezas...”.

Sub-section 4.6.: In the heading, where it says: “...contenido de ácidos...”, it should read: “...contenido en ácidos...”.

Sub-section 4.7.: In the heading, where it says: “...índice de peróxido.”, it should read: “...índice de peróxidos.”.

### **INTERNATIONAL OLIVE OIL COUNCIL**

#### **General**

Every time the term “virgin olive oil” refers to the three grades of virgin olive oil (3.1, 3.2 and 3.3) and the term “olive-pomace oil” refers to the two grades of olive-pomace oil (3.6 and 3.7), they should be stated in the plural. This is the case in section 3.9, 3.10.1, 3.10.2, 3.10.3, 3.11, 3.12 and 3.13 of the standard and sections 1.1, 1.2, 1.4, 1.5.1, 2.1, 3.2, 3.3, 3.4 and 3.5 of the Appendix.

#### Section 3.9

	Virgin olive oils	Olive oil Refined olive oil	Olive-pomace oils
C18:3	0.0 – <b>1.0</b>	0.0 – <b>1.0</b>	0.0 – <b>1.0</b>

#### Section 3.10.1

Stigmasterol < campesterol (instead of  $\leq$ )

#### SECTION 7.2

The compulsory labelling declaration of the free acidity of the oil should be deleted, in accordance with the decision taken by the IOOC in June 1999 and with the attendant amendment of the IOOC trade standard on 10 June 1999.

#### **Section 8**

The year in which the ISO methods came out should be deleted, as has been done for the IUPAC methods, since they are also regularly updated and chemists have to use the latest update of each method. This applies to section 8.2, 8.3, 8.12, 8.13 and 8.14 of the Standard and sections 4.1, 4.2, 4.3, 4.4, 4.5, 4.7, 4.9, 4.10 and 4.13 of the Appendix.

### Section 8.3

IUPAC method no. 2.302 should be deleted.

### Section 8.6

**According to COI/T.20/Doc. no 20** instead of the methods cited, ie. IUPAC 2.507, IUPAC 2.324 and COI/T.20/Doc. no 9.

### **Section 8.9**

Add **ISO 15788-1**

### Appendix, Section 2.1

Maximum level for olive-pomace oil    **2.2%**

### Appendix, Section 3.6

The following designations should be corrected:

Fine virgin olive oil should read **Virgin olive oil**

Refined olive-residue oil should read **Refined olive-pomace oil**

Olive-residue oil should read **Olive-pomace oil**

The remark \* should be corrected:

After...absorbency at **270nm** shall be...

### Appendix, Section 4.7

Method **ISO 3960** should be added.