APPENDIX IX

PROPOSED DRAFT REVISION TO THE *STANDARD FOR OLIVE OILS AND OLIVE POMACE OILS* (CXS 33-1981)

(Adoption at Step 5/8)

1. SCOPE

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

2. DESCRIPTION

Olive oil is the oil obtained solely from the fruit of the olive tree (*Olea europaea* L.) to the exclusion of oils obtained using solvents or re-esterification processes and of any mixture with oils of other kinds.

Virgin *olive oils* are the oils obtained from the fruit of the olive tree solely by mechanical or other physical means under conditions, particularly thermal conditions, that do not lead to alterations in the oil, and which have not undergone any treatment other than washing, decanting, centrifuging, and filtration.

Olive-pomace oil is the oil obtained by treating olive pomace with solvents other than halogenated solvents or by other physical treatments, to the exclusion of oils obtained by re-esterification processes and of any mixture with oils of other kinds.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Designations and definitions

Extra virgin olive oil*:* virgin olive oil with a free acidity, expressed as oleic acid, of not more than 0.8 grams per 100 grams and whose other **physicochemical and organoleptic** characteristics correspond to those laid down for this category.

Virgin olive oil*:* virgin olive oil with a free acidity, expressed as oleic acid, of not more than 2.0 grams per 100 grams and whose other **physicochemical and organoleptic** characteristics correspond to those laid down for this category.

Ordinary virgin olive oil: virgin olive oil with a free acidity, expressed as oleic acid, of not more than 3.3 grams per 100 grams and whose other characteristics correspond to those laid down for this category[1].

Refined olive oil: olive oil obtained from virgin olive oils by refining methods **(including methods aiming to the complete or partial removal of chemical compounds responsible for organoleptic descriptors) that** do not lead to alterations in the initial glyceridic structure. It has a free acidity, expressed as oleic acid, of not more than 0.3 grams per 100 grams and its other physicochemical characteristics correspond to those laid down for this category[1].

Olive oil **composed of refined olive oil and virgin olive oils: olive** oil consisting of a blend of refined olive oil and **extra virgin olive oil and/or** virgin olive oil. It has a free acidity, expressed as oleic acid, of not more than 1 gram per 100 grams and its other **physicochemical** characteristics correspond to those laid down for this category.

Refined *olive-pomace oil**:* **Olive-pomace** oil obtained from crude olive-pomace oil by refining methods that do not lead to alterations in the initial glyceridic structure. It has a free acidity, expressed as oleic acid, of not more than 0.3 grams per 100 grams and its other **physicochemical** characteristics correspond to those laid down for this category[1].

Olive-pomace oil composed of refined olive-pomace oil and virgin olive oils: olive-pomace oil consisting of a blend of refined olive-pomace oil and **extra virgin olive oil and/or** virgin olive oil. It has a free acidity, expressed as oleic acid, of not more than 1 gram per 100 grams and its other **physicochemical** characteristics correspond to those laid down for this category. **In no case shall this blend be called olive oil.**

Note: Genuine virgin olive oil that does not meet one or more of the virgin olive oil's quality criteria of this standard is referred to as LAMPANTE OLIVE OIL. It is considered unfit for human consumption either as it stands or blended with other oils.

[1] This product may only be sold direct to the consumer if permitted in the country of retail sale (RETAINED UNTIL CCFO30 FOR ORDINARY OLIVE OIL)

3.2 COMPOSITION FACTORS

3.2.1 GLC ranges of fatty acid composition (expressed as percentages of total fatty acids)

The fatty acid values in this table apply to the oils described in Section 3.1 presented in a state for human consumption. However, to provide clarity in the trade of lampante olive oil and crude olive-pomace oil, the values of the table, trans isomers excluded, may also be applied.

Fatty acid	**Extra virgin olive oil** Virgin olive oils	Olive oil **composed of refined olive oil and virgin olive oils** Refined olive oil	Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils** Refined olive-pomace oil
C14:0	**≤ 0.03**	**≤ 0.03**	**≤ 0.03**
C16:0	**7.0**– 20.0	**7.0** – 20.0	**7.0** – 20.0
C16:1	0.3 – 3.5	0.3 – 3.5	0.3 – 3.5
C17:0	**≤ 0.4**	**≤ 0.4**	**≤ 0.4**
C17:1	**≤ 0.6**	**≤ 0.6**	**≤ 0.6**
C18:0	0.5 -5.0	0.5 - 5.0	0.5 – 5.0
C18:1	**53.0 – 85.0**	**53.0 – 85.0**	**53.0 – 85.0**
C18:2	**2.5**– 21.0	**2.5** – 21.0	**2.5** – 21.0
C18:3	**≤ 1.0[a]**	**≤ 1.0[a]**	**≤ 1.0[a]**
C20:0	≤ 0.6	≤ 0.6	≤ 0.6
C20:1	**≤ 0.5**	**≤ 0.5**	**≤ 0.5**
C22:0	≤ 0.2	≤ 0.2	≤ 0.3
C24:0	≤ 0.2	≤ 0.2	≤ 0.2
Trans fatty acids			
Σ(t-C18:1)	≤ 0.05	≤ 0.20	≤ 0.40
Σ(t-C18:2) + Σ(t-C18:3)	≤ 0.05	≤ 0.30	≤ 0.35
(a) In cases where an edible virgin olive oil exhibits 1.0 < linolenic acid % ≤ 1.4, then this oil is authentic provided that apparent β-sitosterol/campesterol ≥ 24 and all other composition factors lie within the official limits.			

3.2.2 ΔECN42 (Difference between the actual and theoretical ECN 42 triglyceride content)	
Extra virgin olive oil **Virgin olive oils**	**≤ |0.20|**
Refined olive oil **Olive oil composed of refined olive oil and virgin olive oils**	**≤ |0.30|**
Refined olive-pomace oil **Olive-pomace oil composed of refined olive-pomace oil and virgin olive oils**	**≤ |0.50|**

3.2.3 4α-Desmethylsterols composition (% total 4α-desmethylsterols)	
Cholesterol	≤ 0.5
Brassicasterol	**≤ 0.1 for olive oils** ≤ 0.2 for olive-pomace oils

Campesterol	≤ 4.0[b]
Stigmasterol	< campesterol
Δ7-stigmastenol	≤ 0.5[c]
Apparent β-sitosterol[d]	≥ 93.0

[b] When **a virgin or extra virgin olive oil** naturally has a campesterol level > 4.0% and ≤ **4.8%**, it **may be** considered **authentic** if the stigmasterol level is ≤ 1.4% and the delta-7-stigmastenol level is ≤ 0.3%. The other parameters shall meet the limits set out in the standard.

[c] **For virgin olive oils If the value is > 0.5 and ≤ 0.8%, campesterol must be ≤ 3.3, apparent β-sitosterol/(campesterol+Δ7-stigmastenol) ≥ 25, stigmasterol ≤ 1.4 and ΔECN42 ≤ |0.1|. For refined olive pomace oils values > 0.5 and ≤ 0.7% then stigmasterol ≤ 1.4% and ΔECN42 ≤ |0.4|.**

[d] **Chromatographic peak composed by Δ5,23-stigmastadienol+clerosterol+β-sitosterol+sitostanol+Δ5-avenasterol+Δ5,24-stigmastadienol peaks.**

3.2.4 Total 4α-desmethylsterols content (mg/kg)	
Virgin olive oils Refined olive oil Olive oil **composed of refined olive oil and virgin olive oils**	**≥** 1,000
Refined olive-pomace oil	**≥** 1,800
Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	**≥** 1,600

3.2.5 Erythrodiol and uvaol (% total 4α-desmethylsterols + erythrodiol and uvaol)	
Extra virgin olive oil Virgin olive oils Olive oil **composed of refined olive oil and virgin olive oils** Refined olive oil	≤ 4.5
Olive-pomace oil composed of refined olive oil and virgin olive oils **Refined olive-pomace oil**	> 4.5

3.2.6 Waxes content (mg/kg)	
Extra virgin olive oil Virgin olive oils	≤ **150[e]**
Refined olive oil **Olive oil composed of refined olive oil and virgin olive oils**	≤ 350[f]
Refined olive-pomace oil Olive-pomace oil **composed of refined olive-pomace oil and virgin olive o**ils	> 350[f]

(e) Sum of C_{42} esters+C_{44} esters+C_{46} ester

(f) Sum of C_{40} esters+C_{42} esters+C_{44} esters+C_{46} ester

3.2.7 Stigmastadienes content (mg/kg)	
Extra virgin olive oil Virgin olive oils	**≤ 0.05**

3.2.8 Percentage of 2-glyceryl monopalmitate (2P) (% total monoacylglycerol)	
Extra virgin olive oil **Virgin olive oil** **Olive oil composed of refined olive oil and virgin olive oils**	**If C16:0 ≤ 14.0 %; 2P ≤ 0.9 %** **If C16:0 > 14.0 %, 2P ≤ 1.0 %**
Refined olive oil	**If C16:0 ≤ 14.0 %; 2P ≤ 0.9 %** **If C16:0 > 14.0 %, 2P ≤ 1.1 %**
Refined olive-pomace oil	**2P ≤1.4 %**
Olive-pomace oil composed of refined olive pomace oil and virgin olive oils	**2P ≤1.2 %**

3.2.9 ΔK (g, h)	
Extra virgin olive oil Virgin olive oil Ordinary virgin olive oil	≤ 0.01

(g) Defined as:

$$\Delta K_{270} = K_{270} - \frac{K_{266} + K_{274}}{2}$$

$$\Delta K_{268} = K_{268} - \frac{K_{264} + K_{272}}{2}$$

(h): 270 nm when using cyclohexane; 268 nm when using iso-octane.

3.3 QUALITY FACTORS

3.3.1 Organoleptic characteristics of virgin olive oils		
	Median of the most perceived defect	**Median of the fruity attribute**
Extra virgin olive oil	0.0	> 0.0
Virgin olive oil	≤ 2.5[i]	> 0.0
Ordinary virgin olive oil[j]	2.5 < Me ≤ 6.0[k]	

(i) Does not include the uncertainty of the measure calculated by IOC method.

(j) Retained until CCFO30

(k) or when the median of the defect is less than or equal to 2.5 and the median of the fruity attribute is equal to 0.

3.3.2 Free fatty acids (g/100 g, expressed as oleic acid)	
Extra virgin olive oil	**≤ 0.8**
Virgin olive oil	**≤ 2.0**
Refined olive oil	**≤ 0.3**
Olive oil composed of refined olive oil and virgin olive oils	**≤ 1.0**
Refined olive-pomace oil	**≤ 0.3**
Olive-pomace oil composed of refined olive-pomace oil and virgin olive oils	**≤ 1.0**

3.3.3 Peroxide value (milliequivalents of active oxygen/kg oil)	
Extra virgin olive oil	≤ 20

Virgin olive oil	≤ 20
Refined olive oil	≤ 5
Olive oil **composed of refined olive oil and virgin olive oils**	≤ 15
Refined olive-pomace oil	≤ 5
Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	≤ 15

3.3.4 Absorbancy **in the** ultraviolet **region** (K270) **at 270/or 268 nm[l] (expressed as K_{270}/or K_{268})**	
Extra virgin olive oil	≤ 0.22
Virgin olive oil	≤ 0.25
Ordinary virgin olive oil[j]	≤ 0.30 (*)
Refined olive oil	≤ **1.25**
Olive oil **composed of refined olive oil and virgin olive oils**	≤ **1.15**
Refined olive-pomace oil	≤ 2.00
Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	≤ 1.70
(l): 270 nm when using cyclohexane; 268 nm when using iso-octane. * After passage of the sample through activated alumina, absorbency at 270 nm shall be equal to or less than 0.11. **(j) Retained until CCFO30**	

3.3.5 ΔK [g, h]

Refined olive oil	≤ 0.16
Olive oil composed of refined olive oil and virgin olive oils	≤ 0.15
Refined olive-pomace oil	≤ 0.20
Olive-pomace oil composed of refined olive-pomace oil and virgin olive oils	≤ 0.18

(g) Defined as

$$\Delta K_{270} = K_{270} - \frac{K_{266} + K_{274}}{2}$$

$$\Delta K_{268} = K_{268} - \frac{K_{264} + K_{272}}{2}$$

(h): 270 nm when using cyclohexane; 268 nm when using iso-octane.

3.3.6 Fatty acid ethyl esters (mg/kg)	
Extra virgin olive oil	**≤ 35**

4. FOOD ADDITIVES

Antioxidants used in accordance with Tables 1 and 2 of the *General Standard for Food Additives* (CXS 192-1995) in food category 02.1.2 (Vegetable oils and fats) are acceptable for use in foods conforming to this Standard.

No additives are permitted in virgin olive oils covered by this Standard.

5. CONTAMINANTS

5.1 The products covered by this Standard shall comply with the Maximum Levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

5.2 Pesticide residues

The products covered by the provisions of this standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for these commodities.

5.3 Halogenated solvents

Maximum content of each halogenated solvent:	0.1 mg/kg
Maximum content of the sum of all halogenated solvents:	0.2 mg/kg

6. HYGIENE

It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CXG 21-1997).

7. LABELLING

The products shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CXS 1–1985).

7.1 Name of the food

The name of the product shall be consistent with the descriptions as shown in Section 3 of this standard. In no case shall the designation ‘olive oil’ be used to refer to olive-pomace oils.

7.2 Labelling of Non-Retail Containers

The labelling of non-retail containers should be in accordance with the *General Standard for the Labelling of Non-Retail Containers of Foods* (CXS 346-2021).

8. METHODS OF ANALYSIS AND SAMPLING[2]

Fats and oils and related products	Provision	Method(s)	Principle	Type
Olive oils and olive pomace oils	Absorbency in ultra-violet	COI/T.20/Doc. No. 19 / ISO 3656 / AOCS Ch 5-91	Absorption in ultra-violet	I
Olive oils and olive pomace oils	Acidity, free (acid value)	ISO 660 / AOCS Cd 3d-63 / COI/T.20/Doc. No 34	Titrimetry	I
Olive oils and olive pomace oils	Alpha-tocopherol	ISO 9936	HPLC (UV or fluorescence)	II
		AOCS Ce 8-89		III
Olive oils and olive pomace oils	Difference between the actual and theoretical ECN 42 triglyceride content	COI/T.20/Doc. no. 20 and COI/T.20/Doc. No 33	Analysis of triglycerides by HPLC and fatty acids by GC followed by calculation	I
Olive oils and olive pomace oils	1,2 Diglycerides	COI/T.20/Doc. No 32[3]	Gas chromatography (FID)	II
		ISO 29822[2]		III
Olive oils and olive pomace oils	Erythrodiol + uvaol	COI/T.20/Doc. No 26	Separation and gas chromatography (FID)	II
Olive oils and olive pomace oils	Fatty acid composition	COI/T.20/Doc. No 33	Gas chromatography (FID) of methyl esters	II
		AOCS Ce 2-66 and AOCS Ch 2-91 / Ce 1h-05		III
		ISO 12966-2 and ISO 12966-4		III
Olive oils and olive pomace oils	2-glyceryl monopalmitate percentage	COI/T.20/Doc. No 23	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Fatty acid ethyl ester content	COI/T.20/Doc. No 28	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Halogenated solvents, traces	ISO 16035	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Insoluble impurities in light petroleum	ISO 663	Gravimetry	I
Olive oils and olive pomace oils	Iodine value	ISO 3961 / AOAC 9930.20 / AOCS Cd 1d-92 / NMKL 39	Wijs-Titrimetry	I

[2] The methods of analysis will be included in CXS 234-1999 after endorsement by CCMAS and the following text shall replace the table.
For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CXS 234-1999) relevant to the provisions in this standard, shall be used.

[3] **This method is retained pending review in CCFO29 and CCFO30**

Fats and oils and related products	Provision	Method(s)	Principle	Type
Olive oils and olive pomace oils	Iron and copper	ISO 8294 / AOAC 990.05	AAS	II
Olive oils and olive pomace oils	Lead	Use performance criteria*		
Olive oils and olive pomace oils	Moisture and volatile matter	ISO 662	Gravimetry	I
Olive oils and olive pomace oils	Organoleptic characteristics	COI/T.20/Doc. no. 15	Panel test	I
Olive oils and olive pomace oils	Peroxide value	ISO 3960 / AOCS Cd 8b-90	Titrimetry	I
		COI/T.20/Doc. No 35		IV
Olive oils and olive pomace oils	Pyropheophytin "a"	ISO 29841[2]	HPLC with UV/VIS or fluorescence detection	II
Olive oils and olive pomace oils	Relative density	ISO 6883 / AOCS Cc 10c-95	Pycnometry	I
Olive oils and olive pomace oils	Refractive index	ISO 6320 / AOCS Cc 7-25	Refractometry	II
Olive oils and olive pomace oils	Sampling	ISO 5555 and ISO 661		
Olive oils and olive pomace oils	Saponification value	ISO 3657 / AOCS Cd 3-25	Titrimetry	I
Olive oils and olive pomace oils	4α-desmethylsterol and total sterol content	COI/T.20/Doc. No 26	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Stigmastadienes	COI/T.20/Doc. no. 11	Gas chromatography (FID)	II
		ISO 15788-1		III
		AOCS Cd 26-96		III
		ISO 15788-2	HPLC	III
Olive oils and olive pomace oils	*trans* Fatty acids content	COI/T.20/Doc no. 33	Gas chromatography (FID) of methyl esters	II
		ISO 12966-2 and ISO 12966-4		III
		AOCS Ce 2-66 and AOCS Ce 1h-05		III
Olive oils and olive pomace oils	Unsaponifiable matter	ISO 3596 / AOCS Ca 6b-53	Gravimetry	I
Olive oils and olive pomace oils	Wax content	COI/T.20/Doc. no. 28	Gas chromatography (FID)	II
		AOCS Ch 8-02		III

Appendix I

OTHER QUALITY AND COMPOSITION FACTORS

These quality and composition factors are supplementary information to the essential composition and quality factors of the standard. A product which meets the essential quality and composition factors but does not meet these supplementary factors, may still conform to the standard.

1. QUALITY CHARACTERISTICS

1.1 Organoleptic characteristics

Extra virgin and virgin olive oils: See Section 3.**3.1**

Type of oil	**Perceptions**		
	Odour	Taste	Colour
Refined olive oil	Acceptable		light yellow
Olive oil **composed of refined olive oil and virgin olive oils**	Good		light yellow to green
Refined olive-pomace oil	Acceptable		light yellow to brownish-yellow
Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	**Good**		light yellow to green

1.2 Moisture and volatile matter (g/100 g)

Extra virgin olive oil Virgin olive oil~~s~~	≤ 0.2
Refined olive oil	≤ 0.1
Olive oil **composed of refined olive oil and virgin olive oils**	≤ 0.1
Refined olive-pomace oil	≤ 0.1
Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	≤ 0.1

1.3 Insoluble impurities in light petroleum (g/100 g)

Extra virgin olive oil Virgin olive oil~~s~~	≤ 0.1
Refined olive oil Olive oil **composed of refined olive oil and virgin olive oils** Refined olive-pomace oil Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	≤ 0.05

1.4 Absorbance in the ultraviolet region at 232 nm (expressed as K_{232})

Extra virgin olive oil	≤ 2.50[4~~4~~]
Virgin olive oil	≤ 2.60[4~~3~~]

[4 **4**] The country of retail sale may require compliance with these limits when the oil is made available to the end consumer.

1.5 Trace metals (mg/kg)	
All olive oils and olive-pomace oils	
Iron (Fe)	≤ 3.0
Copper (Cu)	≤ 0.1

2. CHEMICAL AND PHYSICAL CHARACTERISTICS	
2.1 Relative density (d_r^{20}) (20 ºC/water at 20 ºC)	
Extra virgin olive oil **Virgin olive oil** **Refined olive oil** **Olive oil composed of refined olive oil and virgin olive oils** **Refined olive-pomace oil** **Olive-pomace oil composed of refined olive-pomace oil and virgin olive oils**	0.910-0.916

2.2 Refractive index (n_D^{20})	
Extra virgin olive oil Virgin olive oil Refined olive oil Olive oil **composed of refined olive oil and virgin olive oils**	1.4677-1.4705
Refined olive-pomace oil Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	1.4680-1.4707

2.3 Saponification value (mg KOH/g)	
Extra virgin olive oil Virgin olive oil Refined olive oil Olive oil composed **of refined olive oil and virgin olive oils**	184-196
Refined olive-pomace oil Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	182-193

2.4 Iodine value (Wijs method)	
Extra virgin olive oil Virgin olive oil Refined olive oil Olive oil **composed of refined olive oil and virgin olive oils**	75-94
Refined olive-pomace oil Olive-pomace oil composed **of refined olive-pomace oil and virgin olive oils**	75-92
2.5 Unsaponifiable matter (g/kg)	

Extra virgin olive oil Virgin olive oil Refined olive oil Olive oil **composed of refined olive oil and virgin olive oils**	≤ 15
Refined olive-pomace oil Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	≤ 30

3. METHODS OF ANALYSIS AND SAMPLING[5]

Olive oils and olive pomace oils: Methods of analysis for endorsement by CCMAS and placement/replacement in CXS 234				
Fats and oils and related products	**Provision**	**Method(s)**	**Principle**	**Type**
Olive oils and olive pomace oils	Absorbency in ultra-violet	COI/T.20/Doc. No. 19 / ISO 3656 / AOCS Ch 5-91	Absorption in ultra-violet	I
Olive oils and olive pomace oils	Acidity, free (acid value)	ISO 660 / AOCS Cd 3d-63 / COI/T.20/Doc. No 34	Titrimetry	I
Olive oils and olive pomace oils	Alpha-tocopherol	ISO 9936	HPLC (UV or fluorescence)	II
		AOCS Ce 8-89		III
Olive oils and olive pomace oils	Difference between the actual and theoretical ECN 42 triglyceride content	COI/T.20/Doc. no. 20 and COI/T.20/Doc. No 33	Analysis of triglycerides by HPLC and fatty acids by GC followed by calculation	I
Olive oils and olive pomace oils	1,2 Diglycerides	COI /T.20/Doc.No 32[2]	Gas chromatography (FID)	II
		ISO 29822[2]		III
Olive oils and olive pomace oils	Erythrodiol + uvaol	COI/T.20/Doc. No 26	Separation and gas chromatography (FID)	II
Olive oils and olive pomace oils	Fatty acid composition	COI/T.20/Doc. No 33	Gas chromatography (FID) of methyl esters	II
		AOCS Ce 2-66 and AOCS Ch 2-91 / Ce 1h-05		III
		ISO 12966-2 and ISO 12966-4		III
Olive oils and olive pomace oils	2-glyceryl monopalmitate percentage	COI/T.20/Doc. No 23	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Fatty acid ethyl ester content	COI/T.20/Doc. No 28	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Halogenated solvents, traces	ISO 16035	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Insoluble impurities in light petroleum	ISO 663	Gravimetry	I

[5] The methods of analysis will be included in CXS 234-1999 after endorsement by CCMAS and the following text shall replace the table.
For checking the compliance with this standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CXS 234-1999) relevant to the provisions in this standard, shall be used.

Olive oils and olive pomace oils: Methods of analysis for endorsement by CCMAS and placement/replacement in CXS 234				
Fats and oils and related products	**Provision**	**Method(s)**	**Principle**	**Type**
Olive oils and olive pomace oils	Iodine value	ISO 3961 / AOAC 9930.20 / AOCS Cd 1d-92 / NMKL 39	Wijs-Titrimetry	I
Olive oils and olive pomace oils	Iron and copper	ISO 8294 / AOAC 990.05	AAS	II
Olive oils and olive pomace oils	Lead	Use performance criteria*		
Olive oils and olive pomace oils	Moisture and volatile matter	ISO 662	Gravimetry	I
Olive oils and olive pomace oils	Organoleptic characteristics	COI/T.20/Doc. no. 15	Panel test	I
Olive oils and olive pomace oils	Peroxide value	ISO 3960 / AOCS Cd 8b-90	Titrimetry	I
		COI/T.20/Doc. No 35		IV
Olive oils and olive pomace oils	Pyropheophytin "a"[2]	ISO 29841[2]	HPLC with UV/VIS or fluorescence detection	II
Olive oils and olive pomace oils	Relative density	ISO 6883 / AOCS Cc 10c-95	Pycnometry	I
Olive oils and olive pomace oils	Refractive index	ISO 6320 / AOCS Cc 7-25	Refractometry	II
Olive oils and olive pomace oils	Sampling	ISO 5555 and ISO 661		
Olive oils and olive pomace oils	Saponification value	ISO 3657 / AOCS Cd 3-25	Titrimetry	I
Olive oils and olive pomace oils	4α-desmethylsterol and total sterol content	COI/T.20/Doc. No 26	Gas chromatography (FID)	II
Olive oils and olive pomace oils	Stigmastadienes	COI/T.20/Doc. no. 11	Gas chromatography (FID)	II
		ISO 15788-1		III
		AOCS Cd 26-96		III
		ISO 15788-2	HPLC	III
Olive oils and olive pomace oils	*trans* Fatty acids content	COI/T.20/Doc no. 33	Gas chromatography (FID) of methyl esters	II
		ISO 12966-2 and ISO 12966-4		III
		AOCS Ce 2-66 and AOCS Ce 1h-05		III
Olive oils and olive pomace oils	Unsaponifiable matter	ISO 3596 / AOCS Ca 6b-53	Gravimetry	I

Olive oils and olive pomace oils: Methods of analysis for endorsement by CCMAS and placement/replacement in CXS 234				
Fats and oils and related products	**Provision**	**Method(s)**	**Principle**	**Type**
Olive oils and olive pomace oils	**Wax content**	**COI/T.20/Doc. no. 28**	**Gas chromatography (FID)**	**II**
		AOCS Ch 8-02		**III**