Food and Agriculture Organization of the United Nations

World Health Organization

CODEX ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

CCFO
Codex Committee on Fats and Oils

CXS 33
REVISION SUMMARY

CXS 33 PROPOSED REVISIONS		
SECTION 3		
DEFINITIONS		
Revised topic (Topics highlighted in blue were agreed upon at the 26th CCFO plenary session in 2019)		**Reason** (proposed changes agreed on have green highlights; those without consensus/ for discussion have blue highlights)
1	***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.	The words "physicochemical and organoleptic" were added to specify which characteristics are referred to in the previous definitions. Agreed on at the CCFO plenary in 2019 (REP 19/FO para 25).
2	~~***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[2].~~	The deletion was agreed by the CCFO plenary session in 2019 (REP 19/FO para 28), to remove it from section 3 because: • It is an extremely low-quality oil. • Protection of the consumer is considered. • Does not meet the acidity criteria set by CXS 210 for virgin oils, and • The deletion harmonizes CXS 33 with the national standards of the main producing and importing countries. (EU, Turkey, US, Australia...).

3	***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)** ~~which~~**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]* [1] This product may only be sold direct to the consumer if permitted in the country of retail sale,	The sentence "including methods aiming to the complete or partial removal of chemical compounds responsible for organoleptic descriptors" was added to avoid the partial and low-temperature deodorization presumed to carry out in some refineries. It pretends to correct organoleptic defects from defective virgin oils and pass them off as defect-free virgin oils. The term "physicochemical" was included to emphasize the organoleptic characteristics in refined oils are untaken into account. Agreed on at the CCFO Plenary (REP 19/FO para 30). It is also proposed to remove the associated footnote 1, "This product may only be sold direct to the consumer if permitted in the country of retail sale" because it is a trade restriction on refined olive and olive-pomace oils, which the Codex considers edible. This note is in the IOC standard as recognition of protectionist practices carried out by some of its members. Codex should be uninvolved in this type of practice. It is not agreed on.
4	***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** ~~virgin olive oils suitable for human consumption~~. 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.~~1~~	The product designation was updated, harmonizing it with the rest of the national and IOC standards. It is now pointed out that only virgin and extra virgin olive oils can be blended with refined oil. On the other hand, it is specified that the characteristics referred to are solely the physicochemical ones, specifying the organoleptic characteristics are not taken into consideration (one outstanding issue at the last session). The footnote "The country of retail sale may require a more specific designation" has been removed as it is unnecessary since the product designation is harmonized. Most of the changes have been agreed on at the last session (REP 19/FO para 35).
5	**Refined *olive-pomace oil***: **Olive-pomace** oil obtained from crude olive-pomace oil by refining methods ~~which~~**that** do not lead to alterations in the initial glyceridic structure. It has a free acidity,	The same explanation as for refined olive oil must be considered. Agreed on.

	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. ~~*[Errore. Il segnalibro non è definito.]*~~.	
6	***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 ~~virgin olive oils~~ **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».**~~3~~	Same explanation as for ***Olive oil*** **composed of refined olive oil and virgin olive oils**. Agreed on. The sentence "In no case shall this blend be called «olive oil" was added to highlight olive-pomace oil is a quite different product than olive oil.
7	**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.**	This note is included referring to a product not covered by section 3 but of which significant quantities are traded internationally. Agreed on.

COMPOSITION FACTORS

(For a better understanding, the analytical determinations have been divided into two main groups, on the one hand, "Composition factors" and on the other hand, "Quality factors" in the same way as in CXS 210.)		
8	**GLC ranges of** ~~**F**~~**fatty acid composition** ~~**as determined by gas chromatography**~~ **(%expressed as percentages of total fatty acids)**	The name of the analytical determination has been harmonized. Agreed on.
9	*[Samples falling within the appropriate fatty acid ranges specified below are in compliance with this Standard. Supplementary criteria, for example national geographical and/or climatic*	It is proposed to include the statement appearing in CXS 210 about the anomalies existing with fatty acids. It is not agreed on. A decision scheme developed by the IOC for linolenic acid is expected to arrive

	variations, may be considered, as necessary, to confirm that a sample is in compliance with the Standard.]	presently, which may help to achieve consensus. An agreement on this topic is expected before the plenary session.
10	**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.**	This note is included with the same aim of the similar note in CXS 210 but concerning lampante olive oil and crude pomace oil, which are uncovered by section 3, to facilitate trade for the operators concerned. Agreed on.
11	C14:0 ~~0.0 – 0.05~~ **≤ 0.03** C16:0 **7.0** ~~7.5~~ – 20.0 C17:0 ~~0.0 – 0.3~~ **≤ 0.4** C17:1 ~~0.0 – 0.3~~ **≤ 0.6** C18:1 *[53.0]* 55.0 – ~~83.0~~ **85.0** C18:2 **2.5** ~~3.5~~ – 21.0 C18:3 Not agreed so far. C20:0 ~~0.0 – 0.6~~ **≤** 0.6 C20:1 ~~0.0 – 0.4~~ **≤ 0.5** C22:0 ~~0.0 – 0.2~~ **≤** 0.2 C24:0 ~~0.0 – 0.2~~ **≤** 0.2 Ranges from 0.0 to have changed by **≤** Σ(t-C18:1) to one decimal place Σ(t-C18:2) + Σ(t-C18:3) to one decimal place.	Changes in the fatty acids ranges highlighted have been agreed upon by the working group. Regarding the number of decimal places for the trans isomers, the change is due the precision values of the method do not allow the use of two decimal places.

12	**ΔECN_{42} (~~Maximum~~ ~~d~~Difference between the actual and theoretical ECN 42 triglyceride content)**	The name of the analytical determination has been agreed on.
	~~Virgin olive oils~~ **Extra virgin olive oil** **Virgin olive oil**	**≤** [0.2]
	Refined olive oil Olive oil **composed of refined olive oil and virgin olive oils**	**≤** [0.3]
	Refined olive-pomace oil Olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	**≤** [0.5]
13	c) Chromatographic peak composed by Δ5,23-stigmastadienol+clerosterol+β-sitosterol+sitostanol+Δ5-avenasterol+Δ5,24-stigmastadienol peaks.	Explanatory note agreed on and approved in 2019. (REP 19/FO para 45)
14	*[Virgin olive oil's authenticity is not compromised if one sterol, or their minimum content, does not fall within the ranges provided for if all other sterols and parameters tested referred to in this standard fall within the stated ranges.]*	This statement is not agreed on and most likely not considered.
15	~~**Minimum value for total sterol**~~ **Total 4α-desmethylsterols content (mg/kg)**	The name of the analytical determination has been agreed on.
16	~~**Maximum**~~ **eErythrodiol and uvaol** ~~[content]~~ **(% total ~~sterols~~4α-desmethylsterols + erythrodiol and uvaol)**	The name of the analytical determination has been agreed on.
17	Wax**es** content **(mg/kg)**	The name of the analytical determination has been agreed on. The units were included. Agreed on.
18	Waxes content from 250 mg/kg to 150 mg/kg	Agreed on. (REP 19/FO para 47).

19	[d] Sum of C_{42} esters+C_{44} esters+C_{46} ester [e] Sum of C_{40} esters+C_{42} esters+C_{44} esters+C_{46} ester	Explanatory notes for quantitative calculations. Agreed on. (REP 19/FO para 47).
20	**Stigmastadienes content (mg/kg)**	The name of the analytical determination has been agreed on.
21	Stigmastadienes content from 0.15 mg/kg to 0.05 mg/kg	It is harmonized with national and IOC standards. Agreed on. (REP 19/FO para 49).
22	**Percentage of 2-glyceryl monopalmitate (2P) (% total monoacylglycerol)**	This new composition factor is included in section 3. Agreed on. (REP 19/FO para 43).
23	~~Delta K~~ *[$\Delta K^{(f,g)}$]*	The name of the analytical determination has been agreed on. It is included as a composition factor of virgin and extra virgin oils because it is an indicator of the presence of refined oils.
24	**(f) Defined as** $\Delta K_{270} = K_{270} - \frac{1}{2}(K_{266} + K_{274})$ $\Delta K_{268} = K_{268} - \frac{1}{2}(K_{264} + K_{272})$	How to calculate ΔK is included. Agreed on. (~~REP 19/FO para 51?~~).

QUALITY FACTORS

25	**Organoleptic characteristics ~~(odour and taste)~~ of virgin olive oils**	The reference to odour and taste has been removed as redundant. Agreed on.
26	**Median of the most perceived defect**	The attribute to which the median refers is specified. Agreed on.
27	**Virgin olive oil:** Median of the most perceived defect:	A limit of three, without decimal places, has been proposed as a consensus solution, given that is in the first decimal place the

	[2.5] [3] [3.5]	analytical error and the uncertainty of the measurement are. Legal limits cannot be affected by either. For discussion
28	~~Ordinary virgin olive oil 2.5 < Me ≤ 6.0*~~ ~~* 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.~~	This category and its characteristics were removed in 2019 (REP 19/FO para 39).
29	**Free fatty acids (g/100 g, expressed as oleic acid)**	This subsection is introduced in section 3, which specifies the acidity values of the different categories of oils. Topic agreed on.
30	**Peroxide value (milliequivalents of active oxygen/kg oil)** Values up to one decimal place	The name of the analytical determination has been agreed on. (REP 19/FO para 50).
31	~~**Absorbency**~~ **Absorbance in the** ~~ultra-violet~~ **ultraviolet region** (~~$K^{\%}_{1cm}$~~) **at 270/or 268 nm**(f) (**expressed as K_{270}/or K_{268}**)	The name of the analytical determination has been agreed on.
32	**(f) Defined as** $\Delta K_{270} = K_{270} - \frac{1}{2}(K_{266} + K_{274})$ $\Delta K_{268} = K_{268} - \frac{1}{2}(K_{264} + K_{272})$	The calculation method of ΔK is included. Agreed on (REP 19/FO para 51)
33	**(g): 270 nm when using cyclohexane; 268 nm when using iso-octane.**	It is an explanatory note. Agreed on.
34	Some values were changed. **K270 for refined olive oil** from 1.10 to **1.25** and **Olive oil composed of refined olive oil and virgin olive oils** from 0.9 to **1.15**	Agreed on (REP 19/FO para 51)
35	*[3.3.6 Fatty acid ethyl esters (mg/kg)]*	This parameter is proposed to be included as a quality factor for extra virgin olive oil. Some members want the PPP and the 1, 2 DGAs to

		be included at the same time. This parameter has been contrasted by the IOC and its members for many years. For discussion

SECTION 4

36	**Refined olive oil,** olive oil **composed of refined olive oil and virgin olive oils,** refined olive-pomace oil, **and** olive-pomace oil **composed of refined olive-pomace oil and virgin olive oils**	The product designations have been updated in subsection 4.2, according to the modification agreed on in section 3.

SECTION 8

37	~~**All the methods referenced in this appendix must be applied in its last revision**~~**The most updated version of the methods should be used, in application of ISO/IEC 17025.**	The sentence was updated according to CCMAS. On the other hand, the methods have been also updated and obsolete methods removed. The names of the determinations are harmonized according to the consensus reached in section 3. See row 46 below.

8. METHODS OF ANALYSIS AND SAMPLING

8.1.- Sampling

According to ISO 5555

8.2.- Sample preparation

According to ISO 661

8.3.- Determination of the organoleptic characteristics of virgin olive oils

According to COI/T.20/Doc. nº 15.

8.4.- Determination of free ~~acidity~~ fatty acids

According to ISO 660~~: 1996~~ or ~~AOCS Cd 3d-63~~ ~~(03)~~ or COI/T.20/Doc. n° 34 **or AOCS Ca 5a-40**

8.5.- Determination of peroxide value

According to ISO 3960 or AOCS Cd 8b-90 ~~(03)~~ or COI/T.20/Doc. n° 35.

8.6.- Determination of the ~~absorbency~~ absorbance in the ultraviolet region

According to COI/T.20/Doc. nº 19 or ISO 3656 or AOCS Ch 5-91.

~~**Determination of the content of fatty acid ethyl esters -FAEE.**~~

~~According to COI/T.20/Doc. N° 28~~

8.7.- Determination of the fatty acid composition ~~and its trans isomers~~.

According to COI/T.20/Doc. nº 33 or AOCS Ch2-91 or ISO 12966-2 and ISO 12966-4.

~~**Determination of *trans* fatty acid content**~~

~~According to COI/T.20/Doc.n°17 or ISO 15304:2002 or AOCS Ce 1f-96(02)~~

8.8.- Determination of 4α-desmethylsterol composition and its total content and erythrodiol and uvaol

According to COI/T.20/Doc. nº ~~30~~**26** or ISO 12228-2 or AOCS Ch 6-91 ~~(97)~~.

~~**Determination of erythrodiol content**~~

~~According to COI/T.20/doc. No 30 2011.~~

8.9.- Determination of waxes and ethyl esters content

According to COI/T.20/Doc. nº 28 or AOCS Ch 8-02 ~~(02)~~

~~**Determination of wax content**~~

~~According to COI/T.20/Doc. nº 18 or AOCS Ch 8-02 (02)~~

8.10.- Determination of stigmastadienes content

According to COI/T.20/Doc. nº 11 or ISO 15788-1 ~~or ISO 15788-2~~ or AOCS Cd 26-96

8.11.- ~~Calculation~~ Determination of the difference between the actual and theoretical ECN 42 triglyceride [~~content~~]

According to COI/T.20/Doc. nº 20 or AOCS Ce 5b-89.

8.12.- ~~Determination of 2-glyceryl monopalmitate content~~. Determination of the percentage of 2-glyceryl monopalmitate

According to COI/T.20/Doc. n° 23 **or ISO 12872**

8.13.- Determination of ΔK

According to COI/T.20/Doc. nº 19 or ISO 3656 or AOCS Ch 5-91.

8.14.- Determination of alpha-tocopherol content

According to ISO 9936 **or AOCS Ce 8-89**

8.15.- Detection of traces of halogenated solvents

According to ~~COI/T.20/Doc. N° 8~~ **ISO 16035**

~~**Sampling**~~

~~According to ISO 661:1989 and ISO 5555:2001.~~

APPENDIX

QUALITY CHARACTERISTICS		
(REP 19/FO para 54) The Committee considered the Appendix –"other quality and composition factors" and agreed as follows: - Aligned the names and designations of oils to those in the section on definitions; - Expressed the values i) for Iron (mg/kg) to one decimal place, consistent with other parameters for trace metals; and ii) for "insoluble impurities" of virgin oils to one decimal place, consistent with the other values of this parameter.		
38	**Appearance at 20°C for 24 hour**	This parameter has been removed, because it is not significant concerning quality and fraud control. Agreed on (REP 19/FO para 54)
39	**Moisture and volatile matter (g/100 g)**	Units have been included. Therefore, percent signs after limits are no longer necessary. Agreed on.

40	**Insoluble impurities in light petroleum (g/100 g)**	The solvent to be used is specified as well as the parameter's units. Therefore, percentage signs after the limits are no longer necessary. Agreed on.
41	**~~Absorbency~~ Absorbance in the ~~ultra-violet~~ ultraviolet region at 232 nm (expressed as K_{232}) ~~1~~** ~~1 "The country of retail sale may require compliance with these limits when the oil is made available to the final consumer"~~	The name of the parameter is harmonized and the note "The country of retail sale may require compliance with these limits when the oil is made available to the final consumer" has been removed as unnecessary. Agreed on.
42	*[1.5 1,2-diglycerides (% total diglycerides)]*	This parameter is proposed to be included in the Annex. It is a quality test for extra virgin olive oil. Its value should be greater than 35. Its inclusion is not agreed on.
43	*[1.6 Pyropheophytin "a" (% total chlorophyll pigments)]*	This parameter is a quality test for extra virgin olive oil. It is proposed to include it in the Annex. Its value should be less than 17. Its inclusion is not agreed on.
44	~~**Saturated fatty acids at the 2-position in the triglyceride (sum of palmitic & stearic acids)**~~	This parameter was removed as obsolete. A new method, named glyceryl monopalmitate, has been included as a composition factor in section 3. Agreed on (REP 19/FO para 54)
CHEMICAL AND PHYSICAL CHARACTERISTICS		
45	*[2.6 Total 4α-desmethylsterols content (mg/kg)]* *Extra virgin olive oil* *[> 1,000]* *Virgin olive oil*	This virgin oil's factor is proposed to be transferred to the appendix because it is unconsidered proper to check the genuineness of one oil, for two reasons: 1. It lacks specificity and 2. There are many genuine oils with contents below 1,000 mg/kg. This issue it is not agreed on.

SECTION 3: METHODS OF ANALYSIS	
46	The methods have been updated and obsolete methods have been removed. The analytical determinations' names have also been harmonized following the consensus in section 3.
47	~~All the methods referenced in this appendix must be applied in its last revision~~**The most updated version of the methods should be used, in application of ISO/IEC 17025.**
48	**3.1.- Determination of moisture and volatile matter** According to ISO 662 or **AOCS Ca 2c-25** **3.2.- Determination of insoluble impurities in light petroleum** According to ISO 663 or **AOCS Ca 3a-46** **3.3.- Detection of trace metals (iron, copper)** According to ISO 8294 or ISO 21033 **or AOCS Ca 18b-91** **3.4.- Determination of relative density** According to ISO 6883 or AOCS Cc 10c-95 **3.5.- Determination of refractive index** According to ISO 6320 or AOCS Cc 7-25 **3.6.- Determination of saponification value** According to ISO 3657 or AOCS Cd 3-25 ~~(03)~~. **3.7.- Determination of iodine value** According to ISO 3961 **or AOCS Cd 1d-92** **3.8.- Determination of unsaponifiable matter — Method using diethyl ether extraction.** According to ISO 3596 or AOCS Ca 6b-53 ~~(01)~~.

~~**Determination of the fatty acids in the 2-position of the triglycerides**~~

~~According to ISO 6800:1997 or AOCS Ch 3-91 (97).~~

~~**Determination of the organoleptic characteristics**~~

~~According to COI/T.20/Doc. nº 15.~~

3.9.- Determination of the ~~absorbency~~ absorbance in the ~~ultra-violet~~ultraviolet region – K_{232}

According to COI/T.20/Doc. nº 19 or ISO 3656 or AOCS Ch 5-91 ~~(01)~~

3.10.- *[Determination of pyropheophytin "a"]*

[According to ISO 29841]

3.11.- *[Determination of 1,2-diglycerides]*

[According to ISO 29822]

3.12.- Sampling

According to ISO 5555

3.13.- Sample preparation

According to ISO 661

3.14.- Determination of 4α-desmethylsterol total content

According to COI/T.20/Doc. nº 26 or ISO 12228-2 or AOCS Ch 6-91.

8. METHODS OF ANALYSIS AND SAMPLING

	Provision	***Method***	***Principle***	***Type***
8.1	Organoleptic characteristics of virgin olive oils	COI/T.20/Doc. nº 15	Panel test	I
8.2	Free fatty acids	ISO 660	Titrimetry	I
		COI/T.20/Doc. n° 34	Titrimetry	II
		AOCS Ca 5a-40	Titrimetry	II
8.3	Peroxide value	ISO 3960	Titrimetry	I
		AOCS Cd 8b-90	Titrimetry	II
		COI/T.20/Doc. n° 35	Titrimetry	II
8.4	Absorbance in the ultraviolet region	COI/T.20/Doc. nº 19	Absorption in ultraviolet	II
		ISO 3656	Absorption in ultraviolet	II
		AOCS Ch 5-91.	Absorption in ultraviolet	II
8.5	Fatty acid composition	COI/T.20/Doc. nº33	Gas chromatography	II
		AOCS Ch2-91	Gas chromatography	II
		ISO 12966-2 and ISO 12966-4.	Gas chromatography	II
8.6	4α-desmethylsterol composition and its total content and erythrodiol and uvaol	COI/T.20/Doc. nº26	Gas chromatography	II

		ISO 12228-2	Gas chromatography	II
		AOCS Ch 6-91.	Gas chromatography	II
8.7	Waxes and ethyl esters content	COI/T.20/Doc. nº 28	Gas chromatography	II
		AOCS Ch 8-02	Gas Chromatography	II
8.8	Stigmastadienes content	COI/T.20/Doc. nº 11	Gas Chromatography	II
		ISO 15788-1	Gas Chromatography	II
		AOCS Cd 26-96	Gas Chromatography	II
8.9	Difference between the actual and theoretical ECN 42 triglyceride	COI/T.20/Doc. nº 20	HPLC and calculation	II
		AOCS Ce 5b-89.	HPLC and calculation	I
8.10	Percentage of 2-glyceryl monopalmitate	COI/T.20/Doc. n° 23	Gas Chromatography	II
		ISO 12872	Gas Chromatography	II
8.11	Determination of ΔK	COI/T.20/Doc. nº 19	Absorption in ultraviolet	II
		ISO 3656	Absorption in ultraviolet	II
		AOCS Ch 5-91	Absorption in ultraviolet	II
8.12	Alpha-tocopherol content	ISO 9936	HPLC	II
		AOCS Ce 8-89	HPLC	II

8.13	Detection of traces of halogenated solvents	ISO 16035	Static headspace gas chromatography	II

Commodity Category	Method of sampling	Notes
Olive oils and Olive-Pomace Oils	ISO 661 and ISO 5555	

APPENDIX - OTHER QUALITY AND COMPOSITION FACTORS

3. METHODS OF ANALYSIS AND SAMPLING

	Provision	***Method***	***Principle***	***Type***
3.1	Moisture and volatile matter	ISO 662	Gravimetry	I
		AOCS Ca 2c-25	Gravimetry	
3.2	Insoluble impurities in light petroleum	ISO 663	Gravimetry	I
		AOCS Ca 3a-46	Gravimetry	
3.3	Trace metals (iron, copper)	ISO 8294	AAS	II
		ISO 21033	ICP-OES	I
		AOCS Ca 18b-91	AAS	II
3.4	Relative density	ISO 6883	Pycnometry	I
		AOCS Cc 10c-95	Pycnometry	
3.5	Refractive index	ISO 6320	Refractometry	II
		AOCS Cc 7-25	Refractometry	II
3.6	Saponification value	ISO 3657	Titrimetry	I
		AOCS Cd 3-25	Titrimetry	I
3.7	Iodine value	ISO 3961	Wijs-Titrimetry	I
		AOCS Cd 1d-92	Wijs-Titrimetry	I

3.8	Unsaponifiable matter	ISO 3596	Gravimetry	II
		AOCS Ca 6b-53	Gravimetry	I
3.9	Absorbance in the ultraviolet region – K_{232}	COI/T.20/Doc. nº 19	Absorption in ultraviolet	II
		ISO 3656	Absorption in ultraviolet	II
		AOCS Ch 5-91	Absorption in ultraviolet	II
3.10	[Pyropheophytin "a"]	[ISO 29841]	HPLC	I
3.11	[1,2-diglycerides]	[ISO 29822]	Gas chromatography	I
3.12	[4α-desmethylsterol total content]	COI/T.20/Doc. nº 26.	Gas chromatography	II
		ISO 12228-2	Gas chromatography	II
		AOCS Ch 6-91	Gas chromatography	II

Commodity Category	**Method of sampling**	**Notes**
Olive oils and Olive-Pomace Oils	ISO 661 and ISO 5555	