



Agenda item 3

NE12/CRD04
September 2025

JOINT FAO/WHO FOOD STANDARDS PROGRAMME FAO/WHO COORDINATING COMMITTEE FOR THE NEAR EAST

Twelfth Session

Muscat, Oman

28 September - 2 October 2025

COMMENTS ON A PATH FORWARD FOR DATA COLLECTION RELATED TO THE APPLICABILITY OF SECTION 3.2.3 FOOTNOTE (C) OF THE STANDARD FOR OLIVE OILS AND OLIVE-POMACE OILS (CXS 33-1981) TO ALL AUTHENTIC OLIVE OILS

(Prepared by the Syrian Arab Republic)

1. Objective

This discussion paper, submitted by the Syrian Arab Republic, aims to outline a proposed path forward for the collection and analysis of scientific data to assess the applicability of footnote (c) in Section 3.2.3 of the Codex Standard for Olive Oils and Olive-Pomace Oils (CXS 33-1981), with a focus on authenticity parameters such as sterol composition. The objective is to ensure that current revisions to the standard adequately reflect regional variability and to prevent the misclassification of authentic olive oils, particularly those from Syria and similar agroclimatic zones, as documented in the concerns raised by Syria in Conference Room Document (CRD) 10 tabled at the 47th Session of the Codex Alimentarius Commission (CAC47) and supported by other delegations. The paper proposes a coordinated initiative among CCNE member countries to generate representative data and ensure that future Codex decisions are based on sound and inclusive scientific evidence.

2. Background

Syria is one of the key producers and exporters of virgin olive oil in the Near East. The olive oil sector represents a significant component of the national economy and rural livelihoods. However, it is feared that recent revisions proposed to the Codex Standard for Olive Oils and Olive-Pomace Oils (CXS 33-1981), particularly Section 3.2.3 and its associated footnote (c), present major compliance challenges for a significant portion (up to 40%) of authentic Syrian virgin olive oil.

At the 28th Session of the Codex Committee on Fats and Oils (CCFO28), Syria expressed reservations concerning the revised provisions. Specifically, the required upper limit for Δ^7 -stigmastenol ($<0.5\%$) and the restrictive application of the Δ ECN42 value (≤ 0.1) under footnote (c) were found to be inconsistent with the natural composition of oils produced from some Syrian olive cultivars. These concerns were reiterated in Syria's CRD submitted to CAC47 which underlined that more than 40% of Syrian virgin olive oil production could be deemed non-authentic under the current provisions, despite being genuine and unadulterated.

Although the CCFO Chair noted the need for further data and a possible EWG to study sterol variability, the final conclusions from CCFO28 focused solely on parameters such as campesterol levels in footnote (b), Pyropheophytins (PPP) and Diacylglycerols (1,2-DAG), overlooking the Δ^7 -stigmastenol and Δ ECN42 issue.

During CAC47, the Syrian Arab Republic reiterated its concerns, raised in CRD10 and in the report of CCFO28 (REP24/FO), regarding footnote (c) in the Codex Standard for Olive Oils (CXS 33-1981), arguing that the decision tree it references, based on the International Olive Council (IOC) criteria, does not reflect the characteristics of Syrian olive oils and could misclassify their authentic oils as non-authentic, presenting risks to over 40% of the country's exports. Several Members and Observers shared similar concerns, emphasizing the need to consider inter-regional variability and climate-related differences. While some Members supported delaying the adoption of the revised standard pending data collection, others proposed adopting the standard at Step 5/8 with a parallel effort to collect data that could underpin the revision of footnote (c). CAC47 ultimately adopted the revised CXS 33-1981 at Step 5/8, while also launching a framework for data collection on the applicability of footnote (c), involving a Circular Letter (CL), FAO-led expert analysis, and broad Member engagement. Syria and Algeria expressed reservations to the adoption while supporting the data collection process.

As adopted by CAC47, footnote (c) in paragraph 3.2.3 of the revised standard CXS 33-1981, related to **$\Delta 7$ -stigmastenol levels**, reads as follows:

(c) For virgin olive oils, if the value is > 0.5 and $\leq 0.8\%$, campesterol must be ≤ 3.3 , apparent β sitosterol/(campesterol+ $\Delta 7$ -stigmastenol) ≥ 25 , stigmasterol ≤ 1.4 and $\Delta ECN42 \leq [0.1]$. For refined olive-pomace oils values > 0.5 and $\leq 0.7\%$ then stigmasterol $\leq 1.4\%$ and $\Delta ECN42 \leq [0.4]$.

As such, Syria considers that current provisions fail to reflect regional and varietal differences, largely due to a lack of Syrian input during the earlier stages of standard development, as the country's participation in the International Olive Council (IOC) was suspended at the time.

3. Explanatory Views on Syria's Position

Scientific studies conducted by the General Commission for Scientific Agricultural Research in Syria, in cooperation with CIHEAM-Bari and the University of Perugia (Italy)¹, have shown that $\Delta 7$ -stigmastenol levels in Syrian oils can exceed 0.5%, for the Khodeiri, Doebl and even the Insassy cultivar, taking into consideration the standard deviation of the replicates (**Annex 1**). These findings were corroborated by recent analysis of export-grade oils from major Syrian filtration and packaging companies, with $\Delta 7$ -stigmastenol levels exceeding 0.5%, and $\Delta ECN42$ values above 0.1 (**Annex 2**).

The issue arises from the structure of the decision tree adopted under footnote (c), which ties compliance to a $\Delta ECN42$ value that does not reflect the natural profile of Syrian olive varieties such as Sorani, Zeiti, Qaisi, Khodairi, and others.

Based on existing data, for Syrian Olive Oil to be compliant with the requirements of this decision tree, the value attributed to the $\Delta ECN42$ parameter (as expressed in footnote c) needs to be 0.2, similar to what was listed in section 3.2.2 of the standard for virgin olive oil (a general provision for the value to be attributed to $\Delta ECN42$ for Virgin Olive Oil set at 0.2 or lower).

Moreover, Syria noted the incongruity of linking a parameter related to specific sterol levels with one associated with Triacylglycerols ($\Delta ECN42$) and which is based on analytical protocols that would benefit from being updated, considering the progress in associated analytical techniques.

Consequently, and because of current provisions, Syrian virgin olive oils are at risk of being wrongly classified as adulterated, potentially barring them from international markets. This could have devastating economic implications, reducing export income and undermining the livelihoods of farmers and businesses that rely heavily on this sector. Moreover, the removal of an earlier footnote in CXS33 that recognized natural deviations in sterol composition further limits flexibility.

4. Path Forward

Syria proposes a structured plan for data collection to support potential revisions to footnote (c) and its associated decision tree mechanism, as per the decision of CAC47. The plan involves generating new data through a representative sampling strategy that captures the characteristics of Syrian olive cultivars at various maturity stages, with the possibility of including samples from neighboring countries and CCNE producing countries to reflect broader regional variability:

- **Targeted cultivars and regions in Syria:** Sampling from key cultivars such as Sorani (Idlib), Zeiti (Aleppo), Qaisi (Aleppo), Khodairi (Latakia), Daaibli (Tartous), and Nabali (Homs/Hama).
- **Sampling method:** Olive fruits will be collected over two seasons (2025 and 2026) from marked trees in three ripening stages (early, mid, late), based on the Jaén index. Extraction will be done using centrifuge systems under laboratory conditions.
- **Analysis:** Samples will be classified for quality and stored appropriately (3 × 500 mL) before being sent to accredited laboratories for analysis². Parameters tested include fatty acid profile, sterol composition (including $\Delta 7$ -stigmastenol), $\Delta ECN42$, free acidity, peroxide value, and UV absorbance, using IOC-approved methods (**Annex 3**).
- **Stakeholder inclusion:** Large export companies can also be sampled, as commercial oils often represent blended varieties due to national production and marketing practices.

The same protocol can be extended to other CCNE member countries sharing similar pedological and climatic conditions (e.g. Lebanon, Palestine, Jordan, Iraq, Tunisia, Algeria and even Türkiye), in a coordinated regional effort to build a representative and scientifically robust database on regional olive oil characteristics.

¹ Jbara, G., Jawhar, A., Bido, Z., Cardone, G., Dragotta, A., & Famiani, F. (2010). Fruit and Oil Characteristics of the Main Syrian Olive Cultivars. *Italian Journal of Food Science*, 22(4), 395.

² Accredited laboratories will be selected from within the CCNE region, with a focus on neighboring countries such as Lebanon and Jordan, given the current lack of accredited laboratory facilities in Syria.

5. Recommendations

To facilitate the implementation of this data collection plan and ensure that all authentic olive oils are fairly assessed under Codex provisions, Syria invites CCNE12 to consider the following recommendations:

- Build upon FAO's expressed willingness to support the consultative process with Codex partners to operationalize the data collection framework on footnote (c), including expert analysis, laboratory capacity building, and regional collaboration to reflect inter-regional variability.
- Explore the possibility of establishing a regional initiative, coordinated through a CCNE-led working group, to encourage the active participation of other olive oil-producing countries in data collection efforts, enabling a better characterization of quality and authenticity parameters set by the Codex Standard. This group could include representation from the Arab Olive Bureau, as well as the Arab Industrial Development, Standardization and Mining Organization (AIDSMO) and the GCC Standardization Organization (GSO), key standardization organizations of the region and Codex observers.
- Support capacity-building programs, including targeted financial and technical assistance for regional laboratories to perform sterol and ECN42 analyses using IOC-approved methods. These efforts should also include training workshops and knowledge exchange forums.
- Expand the data collection plan to include previous datasets from 2010–2011 onward, in order to establish a scientific baseline and assess trends over time. Conducting a meta-analysis of these data could also support future revisions of the decision tree related to footnote (c), especially concerning Δ ECN42 and Δ 7-stigmastenol.
- Establish a regional olive oil composition database under the auspices of the Arab Olive Bureau, in collaboration with AIDSMO and GSO, to consolidate both historical and newly generated data from regional producers. This initiative will support evidence-based policymaking and ensure authentic oils are not excluded due to non-representative global standards.
- Re-engage with the IOC to implement the retained plan of action collaboratively and to benefit from the expertise available from IOC member countries where relevant. Such engagement will also help ensure that regional olive oil profiles, particularly those of non-IOC member countries, are considered in international standard-setting discussions that may impact market access.

ANNEX 1

Sterol Composition of Syrian Olive Oil

Jbara, G., Jawhar, A., Bido, Z., Cardone, G., Dragotta, A., & Famiani, F. (2010). Fruit and Oil Characteristics of the Main Syrian Olive Cultivars. *Italian Journal of Food Science*, 22(4), 395.

Table 4 - Sterol composition and content and erythrodiol + uvaol content in the oils of eleven Syrian olive cultivars. Average values of the three-year period 2004-06±standard error. The IOC trade standard (TS) values for extra virgin olive oils are reported in the last line. Oils were extracted from olive samples collected in November for all the cultivars with the exception of those of the cultivars Khodeiri and Doebl which were extracted from olive samples collected in October.

Area	Cultivar	Cholesterol (%)	Brassicasterol (%)	Campesterol (%)	Stigmasterol (%)	β-sitosterol (%)	Δ-7-Stigmasterol (%)	Apparent β-sitosterol (%)	Total sterol (mg/kg oil)	Erythrodiol + Uvaol (% total sterols)
Aleppo	Kaissy	0.05±0.03	0.00±0.00	3.48±0.30	0.67±0.13	86.7±0.4	0.32±0.01	95.0±0.2	1,361±45	1.20±0.10
	Zaity	0.05±0.02	0.00±0.00	3.66±0.31	0.72±0.12	86.4±0.8	0.25±0.03	93.9±0.3	1,270±62	1.38±0.28
Damascus	Dan	0.04±0.02	0.00±0.00	2.76±0.31	0.88±0.16	89.4±0.2	0.30±0.12	95.5±0.3	1,398±132	1.80±0.16
	Hemplasi	0.04±0.02	0.01±0.00	3.28±0.22	0.44±0.11	89.2±0.4	0.28±0.10	95.0±0.4	1,704±161	1.69±0.15
	Souri	0.02±0.01	0.00±0.00	2.30±0.12	0.70±0.10	88.8±0.3	0.37±0.06	95.7±0.3	1,105±82.2	1.10±0.15
Idleb	Insassy	0.05±0.02	0.00±0.00	3.55±0.45	0.78±0.02	88.8±1.1	0.50±0.02	93.3±0.3	1,382±55	1.90±0.15
	Karamani	0.05±0.02	0.00±0.00	2.61±0.28	0.72±0.15	85.8±0.2	0.30±0.02	95.6±0.2	1,219±85	1.78±0.16
	Sorani	0.05±0.02	0.00±0.00	3.67±0.22	0.71±0.08	88.6±0.3	0.46±0.02	94.4±0.2	1,363±105	1.90±0.50
Lattakia	Khodeiri	0.01±0.01	0.00±0.00	2.55±0.23	0.80±0.19	87.0±0.8	0.57±0.03	95.2±0.2	1,126±60	2.08±0.20
Mousiaf	Safrawi	0.05±0.02	0.00±0.00	3.45±0.2	0.72±0.06	90.1±0.2	0.28±0.06	94.6±0.2	1,770±111	1.70±0.70
Tartous	Doebli	0.04±0.01	0.00±0.00	2.60±0.25	0.84±0.31	88.7±0.2	0.57±0.05	94.3±0.2	1,449±182	1.08±0.30
IOC-TS		≤0.5	≤0.1	≤4.0	<campesterol		≤0.5	≥93.0	≥1,000	≤4.5

ANNEX 2

Recent Analysis of Syrian Export-Grade Oils

Near East Olive Produc			Date : 18/11/2020		
Hama - Syria			Analysis		
Analyzer			NASRI		
Classification			IDLIB		
No.certificate			22		
			Value	unit	Percentage of Reference
Characteristic	Acid value		0.55	%	≤ 0.8
	Peroxide		10.00	meq/02/kg	≤ 20
	Impurities			%	≤ 0.2
	Humidity			%	≤ 0.3
spect	K 232		1.516		≤ 2.6
	K 270		0.145		≤ 0.25
	Delta K		-0.003		≤ 0.01
Fatty acid	Myristic	C14:0	0.014	%	0.03
	Palmitic	C16:0	12.29	%	7.5-20
	Palmitoleic	C16:1	0.59	%	0.3-3.5
	Heptadecanoic	C17:0	0.10	%	0.3
	Heptadecenoic	C17:1	0.15	%	0.3
	Stearic	C18:0	3.17	%	0.5-5
	Oleic	C18:1	71.57	%	55-83
	Linoleic	C18:2	10.85	%	2.5-21
	Linolenic	C18:3	0.48	%	<=1.0
	Arshidic	C20:0	0.402	%	<=0.6
	Gadoleic	C20:1	0.22	%	<=0.4
	Behenic	C22:0	0.10	%	<=0.2
	Trans Oliec		0.003		<= 0.1
	Trans Linoleic+Linolenic		0.036		<= 0.1
Stigma Stadien		0.019	%	<=0.05	
	D-ECN 42	0.14		<=0.2	
sterols	Cholesterol		0.28	%	<=0.5
	Campsterol		2.43	%	<=4
	Campstanol		0.10	%	
	Stigmasterol		0.66	%	<Cam
	Clerosterol		1.02	%	
	Betasitosterol		87.21		
	Sitostanol		0.88		
	D5avenasterol		4.51	%	
	Delta 5-24 stigmadienol		0.68	%	
	D7stigmasterol		0.57	%	≤ 0.8
	D7avenasterol		1.25	%	
	Erythiditol+Uvaol		2.53	%	<=4.5
	Betasitosterol		94.30		≥ 93
	Total Sterol		1243		≥1000
	Laboratory Manager				



Chemiservice S.r.l. • Via Vecchia Ospedale, Str. Priv. 11 • 70043, Monopoli (BA)
Tel +39 080 742777 • Fax +39 080 748486 • email info@chemiservice.com
PEC chemiservice@pec.chemiservice.com • www.chemiservice.com
P. IVA 0704262080726 • C. Sociale € 89.000,00 i.v. • C.F. e R.I. C.C.I.A.A. BA 04262080726



LAB N° 0254 L

Page 1 di 3

TEST REPORT No. 2230049

Monopoli, 13/12/2022

Sample reception 07/12/2022

Analysis starting date 07/12/2022

CUSTOMER
Agrioil DMCC
Platinum Tower
Dubai

Sample description

Delivered by: dhl 3405607004

Sample description: Sample 1 - Virgin Olive Oil

Sampling procedure: By the Customer

Quantity of sample: 125 ml

Return of sample: No

TEST NAME	RESULT	U	U.M.	LOD	LOQ	R %	METHOD	LIMIT VALUE	LEGE NO	FINISHING DATE OF ANALYSIS	SEAT
FREE FATTY ACIDS	1,23	±0,14	% Oleic Acid				21-C	2,0 ⁽¹⁾	M21	07/12/2022	A
FATTY ACIDS METHYL ESTERS											
C12:0 - Lauric acid	ND		%				07B-C			13/12/2022	A
C14:0 - Myristic acid	0,02	±0,01	%				07B-C	0,03 ⁽¹⁾		13/12/2022	A
C16:0 - Palmitic acid	13,81	±0,74	%				07B-C	7,00;20,00 ⁽¹⁾		13/12/2022	A
C16:1 - Palmitoleic acid	0,89	±0,07	%				07B-C	0,30;3,50 ⁽¹⁾		13/12/2022	A
C17:0 - Heptadecanoic acid	0,12	±0,01	%				07B-C	0,40 ⁽¹⁾		13/12/2022	A
C17:1 - Heptadecenoic acid	0,16	±0,02	%				07B-C	0,60 ⁽¹⁾		13/12/2022	A
C18:0 - Stearic acid	3,52	±0,23	%				07B-C	0,50;5,00 ⁽¹⁾		13/12/2022	A
C18:1 - Oleic acid	68,54	±2,90	%				07B-C	55,00;85,00 ⁽¹⁾		13/12/2022	A
C18:2 - Linoleic acid	11,15	±0,62	%				07B-C	2,50;21,00 ⁽¹⁾		13/12/2022	A
C20:0 - Arachidic acid	0,54	±0,05	%				07B-C	0,60 ⁽¹⁾		13/12/2022	A
C18:3 - Linolenic acid	0,73	±0,06	%				07B-C	1,00 ⁽¹⁾		13/12/2022	A
C20:1 - Eicosenoic acid	0,30	±0,03	%				07B-C	0,50 ⁽¹⁾		13/12/2022	A
C22:0 - Behenic acid	0,14	±0,02	%				07B-C	0,20 ⁽¹⁾		13/12/2022	A
C22:1 - Erucic acid	ND		%				07B-C			13/12/2022	A
C24:0 - Lignoceric acid	0,08	±0,01	%				07B-C	0,20 ⁽¹⁾		13/12/2022	A
TRANS FATTY ACIDS CONTENT											
C18:1 - (Elaidinic)	0,02	±0,01	%				07B-C	0,05 ⁽¹⁾		13/12/2022	A
C18:2 + C18:3	0,02	±0,01	%				07B-C	0,05 ⁽¹⁾		13/12/2022	A
TRIGLYCERIDES WITH ECN42, in %											
L.L.L.	0,30		%				09B-C			13/12/2022	A
O.L.Ln	0,34		%				09B-C			13/12/2022	A
P.L.Ln	0,08		%				09B-C			13/12/2022	A
Sum ECN-42 HPLC	0,72		%				09B-C			13/12/2022	A
Theoretical ECN-42	0,62		%				09B-C			13/12/2022	A
Difference	0,15	±0,02	%				09B-C	0,20 ⁽¹⁾		13/12/2022	A
STEROLS AND TRITERPENE ALCOHOLS											
Cholesterol	0,1	±0,1	%		0,1		04/05-C	0,5 ⁽¹⁾		12/12/2022	A
Brassicasterol	ND		%		0,1		04/05-C	0,1 ⁽¹⁾		12/12/2022	A
24-Methylenecholesterol	0,1	±0,1	%		0,1		04/05-C			12/12/2022	A
Campesterol	2,8	±0,1	%		0,1		04/05-C	4,0 ⁽¹⁾		12/12/2022	A
Campestanol	0,1	±0,1	%		0,1		04/05-C			12/12/2022	A
Stigmasterol	1,2	±0,1	%		0,1		04/05-C			12/12/2022	A
Delta-7-Campesterol	ND		%		0,1		04/05-C			12/12/2022	A

Continued...



Laboratory recognised by the International Olive Council (IOC) for the physico-chemical analysis of olive oils and olive-pomace oils (Type A/B/C) (12/01/2021 - 12/30/2022)



Iscrizione nell'Elenco della REGIONE PUGLIA (art. 6 del Reg Regionale 10 gennaio 2006, n. 1) dei Laboratori non annessi alle Industrie Alimentari che effettuano analisi nell'ambito delle procedure di autocontrollo (Numero di Registrazione 10P). - Operante secondo la norma UNI CEI EN ISO/IEC 17025 - Operating in according with ISO/IEC 17025 standard.



Chemiservice S.r.l. - Via Vecchia Ospedale, Str. Priv. 11 - 70043, Monopoli (BA)
Tel +39 080 742777 - Fax +39 080 748486 - email info@chemiservice.com
PEC chemiservice@pec.chemiservice.com - www.chemiservice.com
P. IVA 0262080726 - C. Sociale € 89.000,00 i.v. - C.F. e R.I. C.C.I.A.A. BA 04262080726



LAB N° 0254 L

Page 2 di 3

TEST REPORT No. 2230049

Monopoli, 13/12/2022

Sample reception 07/12/2022

Analysis starting date 07/12/2022

CUSTOMER
Agriol DMCC
Platinum Tower
Dubai

Sample description

Delivered by: dhl 3405607004
Sample description: Sample 1 - Virgin Olive Oil
Sampling procedure: By the Customer
Quantity of sample: 125 ml
Return of sample: No

TEST NAME	RESULT	U	U.M.	LOD	LOQ	R %	METHOD	LIMIT VALUE	LEGE ND	FINISHING DATE OF ANALYSIS	SEAT
Delta-5,23-Stigmastadienol	ND		%		0,1		04/05-C			12/12/2022	A
Clerosterol	1,1	±0,1	%		0,1		04/05-C			12/12/2022	A
Betasitosterol	85,3	±1,0	%		0,1		04/05-C			12/12/2022	A
Sitosterol	0,9	±0,1	%		0,1		04/05-C			12/12/2022	A
Delta-5-Avenasterol	6,0	±0,1	%		0,1		04/05-C			12/12/2022	A
Delta-5,24-Stigmastadienol	0,7	±0,1	%		0,1		04/05-C			12/12/2022	A
Delta-7-Stigmastanol	0,7	±0,1	%		0,1		04/05-C	0,5 ⁽¹⁾	FL	12/12/2022	A
Delta-7-Avenasterol	1,0	±0,2	%		0,1		04/05-C			12/12/2022	A
TOTAL BETASITOSTEROL	94,0	±0,3	%		0,1		04/05-C	≥93,0 ⁽¹⁾		12/12/2022	A
TOTAL STEROLS CONTENT	1538	±64	mg/kg		5		04/05-C	≥1000 ⁽¹⁾		12/12/2022	A
ERYTHRODIOL AND UVAOL	2,5	±0,6	%				04/05-C	4,5 ⁽¹⁾		12/12/2022	A
WAXES (C42+C44+C46)	51,1	±1,8	mg/kg		5		03B-C	150 ⁽¹⁾		09/12/2022	A

References for limits

⁽¹⁾ COI/T.15/NC No 3/Rev. 17 November 2021

Analysis performed at:

l: Via Vecchia Ospedale, 11 - 70043 Monopoli BA)

Legend

ND: It indicates that the analyte results as "Not Detected" through the analysis performed with the specified method or "<LOD" where it is indicated

121 = The cold solvent method using indicator has been applied for the free acidity determination except for the hard fats for which the hot ethanol method using indicator method has been used.

*L = Outlier

J: Extended uncertainty, expressed in the same units of measurement as the result, calculated by using a coverage factor K = 2 (unless otherwise specified) for assuring a confidence level close to 95%; otherwise, for microbiological tests and for airborne asbestos fibers tests, a confidence interval at the 95% probability level. For microbiological tests, a result derived from a count on the sample, on the initial suspension or on the first dilution between 4 and 9 (included) is considered "estimated". Food: for quantitative microbiological tests, the expanded measurement uncertainty is reported, estimated according to ISO 19036 as standard uncertainty multiplied by a coverage factor k = 2 and an approximate level of confidence of 95%. The combined standard uncertainty is assumed to be equal to the intra-laboratory reproducibility standard deviation. Water: for quantitative microbiological tests, the confidence interval of the result calculated as indicated in the ISO 8199 standard is reported. LOD: Limit of Detection, defined as the lowest concentration of the analyte in a sample that can be detected, but not quantified, under the specified conditions; expressed in the test report as "ND". LOQ: Limit of Quantitation, the lowest concentration of the analyte in a sample that can be determined, with acceptable precision and accuracy. R%: Average percentage recovery (it is not used to correct the analytical data on pesticides, metals and mycotoxins). En: Revision "n" of the Test Report which identifies the Amendment. The amendment replaces and cancels all previous versions of the Test Report.

Methods:

13B-C = AOCS Ch 8-02:2017

14/05-C = COI/T.20/Doc. No.26 Rev. 5 June 2020

17B-C = AOCS Ce 2-66:2009 + AOCS Ce 1a-13:2017

19B-C = COI/T.20 Doc. n. 20/Rev.4 2017

21-C = ISO 660:2020

Continued...



Laboratory recognised by the International Olive Council (IOC) for the physico-chemical analysis of olive oils and olive-pomace oils (Type A/N/C) (12/03/2021 - 11/30/2023)



Iscrizione nell'Elenco della REGIONE PUGLIA (art. 6 del Reg Regionale 10 gennaio 2006, n. 1) dei Laboratori non annessi alle Industrie Alimentari che effettuano analisi nell'ambito delle procedure di autocontrollo (Numero di Registrazione 10P). - Operante secondo la norma UNI CEI EN ISO/IEC 17025 - Operating in according with ISO/IEC 17025 standard.

ANNEX 3**Analytical Tests and Applicable COI Methods for Olive Oil Characterization**

Test	COI Method Reference	Title of the COI Standard
Fatty acid composition	COI/T.20/Doc. No 33/Rev.1	Determination of fatty acid methyl esters by gas chromatography
Difference between theoretical and actual content of triglycerides with ECN 42	COI/T.20/Doc. No 20/Rev.4	Determination of the difference between actual and theoretical triacylglycerols with ECN 42
Sterol composition	COI/T.20/Doc. No 26/Rev.4	Determination of the sterol composition and content and alcoholic compounds by capillary gas chromatography
Free acidity (percentage)	COI/T.20/Doc. No 34/Rev.1	Determination of free fatty acids, cold method
Peroxide value	COI/T.20/Doc. No 35	Determination of peroxide value
Ultraviolet absorption	COI/T.20/Doc. No 19	Spectrophotometric investigation in the ultraviolet