

Laboratório de Estudos Técnicos ANALYTICAL REPORT





ANALYTICAL REPORT №: 871.00/22/LET

The results refer exclusively to the sample tested under the conditions in which it was received

Customer: KIWA SATIVA UNIPESSOAL LDA Tel: 217991100 Address: RUA ROBALO GOUVEIA Nº 1 - 1º A, 1900 - 392 LISBOA Information provided by the Sample: Extra Virgin Sampling is the customer's responsibility customer and of its **Olive Oil** (The sampling is not included in the scope of accreditation) responsibility Sample's reference: 270DOP03OAD22 - Data de colheita da amostra: 2022/02/07 Other information: State of the sample: Suitable Full bottle? ⊠ Yes □ No Received by: 10/02/2022 - 15:10 Beginning of the analysis: 11/02/2022 Conclusion of the analysis: 25/02/2022

Analysis		Method	Limits	Results	Date
Determination of Free Fatty Acids, Cold method - Volumetric analysis (% Oleic acid)		Regulation (EEC) nº 2568/91, Annex II and Implementing Regulation (EU) 2016/1227	≤ 0,80 ¹)	0,12 ± 0,01	16/02/2022
Determination of Peroxide Index - Volumetric analysis (meq O ₂ /Kg)		Regulation (EEC) nº 2568/91, Annex III and Implementing Regulation (EU) 2016/1784	≤ 20,0 ¹)	6,5 ± 1,5	16/02/2022
Determination of the Composition of Sterols and Triterpenes Dialcohols (%)	Cholesterol	**** PTME004_01 (Internal Procedure) Equivalent to Regulation (EEC) nº 2568/91, Annex XIX and Implementing Regulation (UE) 2019/1604	≤ 0,5 ¹)	0,1 ± 0,1	21/02/2022
	Brassicasterol		≤ 0,1 ¹)	<0,03 (LQ)	
	Campesterol		≤ 4,0 ¹)	2,3 ± 0,3	
	Stigmasterol		<campesterol 1)<="" td=""><td>0,5 ± 0,1</td></campesterol>	0,5 ± 0,1	
	β-sitosterol (apparent)		≥ 93,0 ¹)	96,3 ± 0,8	
	Δ-7-stigmastenol		≤ 0,5 ¹)	0,1 ± 0,1	
Total Sterols (mg/Kg)			≥ 1000 ¹⁾	1310 ± 66	
Erythrodiol + Uvaol (%)			≤ 4,5 ¹)	1,5 ± 0,4	

The reported uncertainty is an expanded uncertainty calculated using a coverage factor K = 2, which gives a level of confidence of approximately 95%.

The tests were carried out in the laboratory permanent facilities.

The reissue of test reports MUST be limited to the correction of errors and the inclusion of missing data available at the time of the test.

The test report shall not be reproduced, except in full, without a written authorization from the laboratory.

^{*} Analysis not included in the scope of accreditation of the Laboratório de Estudos Técnicos;

^{**} Testing service provided by an Accredited laboratory;

*** Testing service provided by a Non-Accredited laboratory;

**** Equivalent internal method is one that has the same application area and that fulfils the performance characteristics, obtaining results comparable to the standard method indicated;

LOQ – Limit of Quantification; 1) Regulation (EEC) nº 2568/91 and subsequent amendments;

²⁾ NP 972:1989:

³⁾ Regulation (EEC) nº 835/2011 and subsequent amendments;

⁴⁾ Decree nº1135/95:

⁵⁾ Codex Stan 33-1981;

⁶⁾ Decree nº 1198/1991; 7) Regulation (UE) 2019/1870 from 7th of November 2019; 8) Diário da República 1ª série – Nº 191 - Decree nº 103 from 4th of October 2011.



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	C14:0	Regulation (EEC) nº 2568/91, Annex X and your changes	≤ 0,03 ¹)	<0,013 (LQ)	24/02/2022		
	C16:0		7,50 – 20,00 ¹⁾	10,58 ± 0,51			
	C16:1		0,30 – 3,50 1)	0,66 ± 0,09			
	C17:0		≤ 0,40 ¹)	0,13 ± 0,02			
	C17:1		≤ 0,60 ¹)	0,22 ± 0,04			
	C18:0		0,50 - 5,00 1)	3,09 ± 0,43			
	C18:1		55,00 - 83,00 ¹⁾	75,54 ± 3,63			
Determination of	C18:2		2,50 - 21,00 ¹⁾	8,28 ± 1,32			
Fatty Acids Methyl Esters (%) * and **	C18:3		≤ 1,00 ¹)	0,72 ± 0,08			
LSters (70)	C20:0		≤ 0,60 ¹)	0,38 ± 0,05			
	C20:1		≤ 0,50 ¹)	0,23 ± 0,03			
	C22:0		≤ 0,20 ¹)	0,11 ± 0,03			
	C22:1		-	<0,012 (LQ)			
	C24:0		≤ 0,20 ¹)	0,05 ± 0,02			
	C18:1 Trans		≤ 0,05 ¹)	<0,029 (LQ)			
	C18:2 e C18:3 Trans		≤ 0,05 ¹⁾	<0,029 (LQ)			
Organoleptic Characteristics *	Median Fruity (Mf) and Median defect (Md)	Annex XII ¹⁾	$Mf > 0.0$ and $Md = 0.0^{-1}$	Extra Virgin Classification: 7,50	11/02/2022		
	Median Fruity (Mf)		$Mf > 0.0^{-1}$	4,5 (Ripe)			
	Median Bitter		-	3,0			
	Median Pungent		-	2,9			
	Median Defect (Md)		Md = 0,0 1)	0,0			
	Defect		-	_			
Spectrophotometric investigation in the Ultraviolet	K232	Regulation (EEC) nº 2568/91, Annex IX and Implementing Regulation (EU) 2015/1833	≤ 2,50 ¹)	1,58 ± 0,13	- 16/02/2022		
	K268		≤ 0,22 ¹)	0,11 ± 0,01			
	K270 *		≤ 0,22 ¹)	0,11 ± 0,01			
	ΔΚ		≤ 0,01 ¹)	0,00 ± 0,00			
Total Polyphenols (ppm caffeic acid) *		IT065 (Internal Procedure)	-	405,4	24/02/2022		

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Triglycerides (%) *	LLL	Annex XVIII 1)	-	0,1	- 25/02/2022
	OLLn		-	0,2	
	PLLn		-	0,1	
	OLL		-	2,7	
	PLL		-	0,5	
	POLn		-	0,4	
	POL		-	4,1	
	PPL		-	0,2	
	000		-	46,8	
	POO		-	20,2	
	PPO		-	1,7	
	StOO		-	5,5	
	PStO		-	0,9	
	PPSt		-	0,8	

Observations (Outside the scope of accreditation for non-accredit tests):

According to the presented specifications and for the tests performed, the sample presents characteristics of Extra Virgin Olive Oil.

Report issued by:

Technical Supervisor

Date: 28/02/2022 Hour: 11:10

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