



AB-0494-T

GT20240115

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**TÜBİTAK
BURSA TEST AND ANALYSIS LABORATORY**

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TEST REPORT

Customer Name/Address : ULU TRADING GIDA LTD.ŞTİ. / Barbaros Mah. İhlamur Bv No:3/15 34750
Ataşehir İstanbul / TÜRKİYE

T/F: (0549 300 42 42) / /

Order Date/No : 08/01/2024

Sample Description : ULU - 2024

Sample Receipt Date : 10/01/2024

Sample Delivered by: Cargo Delivery

Number of Pages: 3

Remarks : Sampling and identification of the sample was done by the customer. By the request of the customer, Turkish version of the same date and numbered report was also created.

*TÜBİTAK Bursa Test and Analysis Laboratory accredited by TÜRKAK under registration number AB-0494-T for General Requirements for the Competence of Testing and Calibration Laboratories TS EN ISO/IEC 17025 as test laboratory.

*Test results, methods measurement uncertainty (if applicable, given in 95% confidence interval) and other information are given on the following pages which are part of this report.

*This report and results can not be used for the purpose of advertising by the requesting client.

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*In case of sampling by customer the results in this report refer only to samples tested

*In case of sampling by customer, the sampling uncertainty were not included to the uncertainty budget.

*Test marked with (A) refers the test within the scope of TS EN ISO / IEC 17025 accreditation and marked with (D) refers the test provided by external sources.

*Testing reports without e-signature are not valid.

Turkish Accreditation Agency (TÜRKAK) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports.

Date
16/01/2024

e-signature

Anıl ÇETİNOĞLU

Person in Charge of Laboratories

e-signature

Sedat AKTAŞ

Director

This document has been signed by e-signature.

Test Date : 10-15.01.2024

Sample Identification : ULU - 2024

Parameters	Unit	Test Method	Test Result Mean \pm sd	Limit Value ²	Conformity ³
				Extra Virgin Oil	
Free Acidity (as oleic acid) ¹	%	(A) TS EN ISO 660	0.35 \pm 0.01	\leq 0.8	Pass
Peroxide value ¹	meqO ₂ /kg	(A)TS EN ISO 27107	5.8 \pm 0.5	\leq 20	Pass
Total Polyphenol (in terms of Tyrosol equivalent)	mg/100g	COI/T.20/Doc.No29	25.2 \pm 0.2	-	-
Absorbency in ultra-violet E (232 nm)		ISO 3656	1.79 \pm 0.01	\leq 2.5	Pass
Absorbency in ultra-violet E (270 nm)		ISO 3656	0.11 \pm 0.01	\leq 0.22	Pass
Absorbency in ultra-violet (Δ E)		ISO 3656	<0.01	\leq 0.01	Pass
Iodine value	Wijs g/100g oil	EN ISO 3961	93 \pm 2	-	-
Antioxidant Capacity (IC50 trolox equivalent)	μ mol/g	DPPH Method	1.93 \pm 0.01	-	-

¹⁾ Test standart deviation is given as U (k=2) measurement uncertainty.

²⁾ Limit values are taken from Turkish Food Codex Communiqué on Olive Oil and Pirina Oil
(Communiqué No: 2017/26)

³⁾ While choosing the decision rule used in conformity assessment, "Guideline on declaration of conformity to ILAC G8 Specification" was taken as reference. The declaration of conformity is based on a 95% coverage probability for the expanded uncertainty of measurement results.

Test Date : 10-15.01.2024
Sample Identification : ULU - 2024

Parameters	Unit	Test Result Mean \pm U (k=2)	Test Method	Limit Value ¹ Extra Virgin Oil	Conformity ²
Butyric Acid (C4:0)	%	<0.38	TS EN ISO 12966-2		
Caproic Acid (C6:0)	%	<0.06			
Caprylic Acid (C8:0)	%	<0.05			
Capric Acid (C10:0)	%	<0.05			
Undecanoic Acid (C11:0)	%	<0.05			
Lauric Acid (C12:0)	%	<0.07			
Tridecanoic Acid (C13:0)	%	<0.11			
Myristic Acid (C14:0)	%	<0.05		<0.03	Pass
Myristoleic Acid (C14:1)	%	<0.05			
Pentadecanoic Acid (C15:0)	%	<0.05			
Pentadecenoic Acid C15:1	%	<0.05			
Palmitic Acid (C16:0)	%	14.2 \pm 1.2		7.5-20	Pass
Palmitoleic Acid (C16:1)	%	0.92 \pm 0.01		0.3-3.5	Pass
Margaric Acid (C17:0)	%	<0.05		\leq 0.4	Pass
Heptadecenoic Acid (C17:1)	%	0.17 \pm 0.01		\leq 0.6	Pass
Stearic Acid (C18:0)	%	2.16 \pm 0.17		0.5-5.0	Pass
trans Elaidic Acid (C18:1t)	%	<0.05	TS EN ISO 12966-4		
Oleic Acid (C18:1c)	%	70.6 \pm 5.4		55.0-83.0	Pass
trans Linolelaidic Acid (C18:2t)	%	<0.05			
Linoleic Acid (C18:2c)	%	9.3 \pm 0.7		2.5-21.0	Pass
trans Linolenic Acid (C18:3t)	%	<0.05			
γ Linolenic Acid (C18:3n6)	%	<0.05			
Arachidic Acid (C20:0)	%	0.39 \pm 0.01		\leq 0.6	Pass
α -Linolenic Acid (C18:3n3)	%	0.66 \pm 0.01		\leq 1.0	Pass
Eicosenoic (C20:1)	%	0.36 \pm 0.01		\leq 0.5	Pass
Henicosanoic Acid (C21:0)	%	<0.05			
Eicosadienoic Acid (C20:2)	%	<0.05			
Eicosatrienoic Acid (C20:3n6)	%	<0.05			
Behenic Acid (C22:0)	%	0.11 \pm 0.01		\leq 0.2	Pass
Eikosatrienoic Acid (C20:3n3)	%	<0.05			
Erucic Acid (C22:1)	%	<0.05			
Arachidonic Acid (C20:4)	%	<0.05			
Tricosanoic Acid C23:0	%	0.79 \pm 0.01			
Docosadienoic Acid (C22:2)	%	<0.05			
Eicosapentaenoic Acid (C20:5)	%	<0.05			
Lignoceric Acid (C24:0)	%	0.07 \pm 0.01		\leq 0.2	Pass
Nervonic Acid (C24:1)	%	<0.05			
Dokocahexaenoic Acid (C22:6)	%	<0.08			
Saturate Fatty Acids	%	17.8 \pm 2.8			
Mono-unsaturate Fatty Acids	%	72.0 \pm 2.2			
Poly-unsaturate Fatty Acids	%	9.9 \pm 0.6			

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