LABORATORY OF
EBLOKO.GR S.A.

Quality Analysis by the Food Chemistry Laboratory of ebloko.gr S.A.

PASSAVAS ESTATE PREMIUM EXTRA VIRGIN OLIVE OIL

Parameter	Value (EVOO limits)	Importance	Methodology
Acidity (% w/w)	0.41 ± 0.01 (< 0.8)	**The main quality index for olive oil classification. It corresponds to the free fatty acid content.**	In house method BLK315 based on Com. Reg. (EEC) No 2568/91 Annex II
Peroxide Number (mEq O2/kg)	8.78 ± 0.44 (< 20)	**Indicator of the oxidation level. It cumulatively represents the "age" of olive oil, the level of rancidity, as well as whether the product was properly stored.**	In house method BLK317 based on Com. Reg. (EEC) No 2568/91 Annex III
K232	1.92 ± 0.05 (< 2.5)	**It refers to primary oxidation products. In addition to the probability of adultery, it also indicates the degree of improper storage or inappropriate extraction methods.**	In house method BLK322 based on Com. Reg. (EEC) No 2568/91 Annex IX
K268	0.17 ± 0.01 (< 0.22)	**Indicator of the product "age", but also of the deliberate mixing with lower quality olive oil. It refers to secondary oxidation products that usually exist in low quality olive oils.**	In house method BLK323 based on Com. Reg. (EEC) No 2568/91 Annex IX
|ΔK|	0.004 (< 0.01)	**General indicator of adulteration with lower quality olive oils.**	In house method BLK324 based on Com. Reg. (EEC) No 2568/91 Annex IX
Density (g/L)	905.6 (900 – 910)	**Represents the correct proportion of the constituent fatty acid triglycerides and their minimum total content in olive oil (99% w/w). Deviations indicate probable adulteration of the product.**	
Waxes (mg/kg)	**C42 - C46** 6.2 ± 0.5 (< 150) **C40 - C46** 52.6 ± 8.0 (< 250)	**Quantified as the sum of C40, C42, C44, C46 wax esters. They are a natural product in olive skin and are solubilized during extraction, yielding a negative impact on the quality of the olive oil, causing cloudiness upon precipitation.**	International Olive Oil Council. COI/T.20/Doc. no.28/Rev. 2 2017 (GC-FID)
Biophenols (mg/kg, tyrosol equivalent)	676.7 ± 20.8 (> 250)	**Substances with high antioxidant activity and the main bioactive ingredients of olive oil with proven health claims. The minimum recomended daily allowance for biophenols is 5 mg. The suggested minimum daily consumption of olive oil is 20 g, so an olive oil with substantial health benefits should have a minimum of 250 mg polyphenols (Biophenols) per kg to cover the above daily needs.**	In house method BLK405 based on Folin-Ciocalteu assay (tyrosol equivalents)

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Lipid Analysis

Fatty acid esters (% by weight)	PASSAVAS ESTATE Value	Ranges for EVOO
Oleic (C18:1 cis)	72.87 ± 0.10	**55.0 - 83.0**
Palmitic (C16:0)	12.19 ± 0.14	**7.5 - 20.0**
Linoleic (C18:2 cis)	7.12 ± 0.01	**2.5 - 21.0**
Stearic (C18:0)	3.21 ± 0.14	**0.5 - 6.0**
Palmitoleic (C16:1 cis)	0.87 ± 0.01	**0.3 - 3.5**
α-Linolenic (C18:3 n3)	0.80 ± 0.01	**< 1.00**
Arachidic (C20:0)	0.50 ± 0.02	**< 0.80**
cis-10-Heptadecenoic (C17:1 cis)	0.09 ± 0.01	**< 0.60**
Eicosenoic (cis-11) (C20:1 cis)	0.28 ± 0.02	**< 0.50**
Heptadecanoic (C17:0)	0.05 ± 0.01	**< 0.40**
Behenic (C22:0)	0.04 ± 0.01	**< 0.20**
Lignoceric (C24:0)	0.16 ± 0.02	**< 0.20**
Myristic(C14:0)	0.02 ± 0.01	**< 0.05**
Mono-unsaturated trans	0.01 ± 0.01	**< 0.05**
Poly-unsaturated trans	0.01 ± 0.01	**< 0.05**

Methodology: International Olive Oil Council. COI/T.20/Doc. no.33/Rev. 1 2017 (GC-FID)

Specific Biophenol Analysis

Phenol	mg/kg olive oil
3-Hydroxy-tyrosol	9.05 ± 0.29
Tyrosol	6.91 ± 0.22
Oleacein	31.90 ± 0.53
Oleocanthal	92.97 ± 2.23
Oleuropein aglycon	65.39 ± 1.24
Luteolin	2.22 ± 0.07
Apigenin	0.35 ± 0.02

Methodology: International Olive Oil Council. COI/T.20/Doc. no.29/Rev. 1 2017 (HPLC)

Quality assurance declaration: The above results were obtained by applying the corresponding methodology suggested by the International Olive Council guidelines (http://www.internationaloliveoil.org/), as well as in-house developed methods based on the relevant international scientific literature.

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