Characterization of Virgin Olive Oil from ‘Ak Delice’ Wild Olives (Olea Europaea L. subsp. Oleaster)

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The purpose of this study was to determine the composition, quality and oxidative stability of virgin olive oils from wild olives (Olea Europaea L. subsp. Oleaster) grown in Turkey. For this purpose 80 kg of ‘Ak Delice’ wild olives were harvested from Balıkesir province, located in Northern Aegean region of Turkey, at December 2009. Olives were processed to oil in an olive oil mill equipped with a pressure system. Olive oil samples were evaluated for their quality and oxidative stability besides fatty acid, triacylglycerol and sterol composition.

Results have shown that free acidity, peroxide index, K₂₃₂, K₂₇₀, ΔK values fell within the limits established for extra virgin olive oil. Chlorophyll and carotenoid contents were 7.06 mg/kg and 5.70 mg/kg respectively. Oil samples presented high oxidative stability (14.6 h, 120°C). Oleic (73.97%), palmitic (11.48%), linoleic (9.25%) were the main fatty acids while OOO (44.85%), OOP (23.21%), OOL (13.59%) and PLO (6.16%) were the major triglycerides. Total sterol content was 2069 ppm and β-sitosterol (81.87%), Δ-5-avenasterol (9.57%) and campesterol (3.32%) were the main sterols.

Key words: Ak delice, olive oil, sterol, triacylglycerol, wild olive