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IMPACT OF LOCATION AND MICROWAVE ROASTING ON THE PHYSICOCHEMICAL CHARACTERISTICS AND FATTY ACID PROFILES OF TURPENTINE OILS (*PISTACIA TEREBINTHUS* AND *PISTACIA PALAESTINA*)

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In recent years, different vegetable oil resources have become popular due to their unique characteristics. The omega 3, 6, 9-rich vegetable oils are accepted valuable than the others. Free fatty acid content and peroxide value are accepted as oil quality criterias. In this study, some physicohemical properties and fatty acid profile were determined in oils obtained from the fruits of *Pistacia terebinthus* L. subsp. *terebinthus* and *Pistacia paleastina* Boiss. Samples were obtained from Balikesir, Hatay, Kahramanmaras, Kilis and Siirt in Turkey and also Hatay, Kilis and Siirt samples were microwave roasted. Density, refractive index, free fatty acids, peroxide value, iodine value, unsaponifiable matter contents were determined as physicohemical properties. Fatty acid profile was identified by using Gas Chromatography. Results showed that, Kahramanmaras sample had the lowest free fatty acid as 2.02% as oleic acid. The lowest peroxide value was 2.06 meq/kg oil in microwave roasted Kilis sample. Density and refractive index values were almost the same among all samples where density ranged between 0.9738 and 0.9761 g/mL and refractive index ranged between 1.663 and 1.481. The highest iodine value was 95.3 Wijs in Kahramanmaras sample and unsaponifiable matter ranged between 10.3 and 15.1 g/kg. The major fatty acid was oleic acid (52.46%) in Kahramanmaras while *Pistacia paleastina* Boiss. samples had the lowest olec acid (40.32- 43.25%). Linoleic acid (18.82 -33.60%) and palmitic acid (18.46-28.94%) were the other major fatty acids.

Keywords: Turpentine, physicochemical, fatty acids, location, microwave roasting

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