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Extraction of Pistacia lentiscus seeds growing in Algeria and determination of the fatty acid composition

Rym Benremouga, Lynda Lamoudi, Kamel Daoud

Laboratory of Transfer Phenomena, University of Science and Technology Houari Boumediene, Algiers, Algeria.



In Algeria, the fruits oil of Pistacia Lentiscus is used by the population in traditional medicine in many ways, as an anti-burn, antidiarrheal, antifungal, antimicrobial, and antioxidant.

The aim of this work is to learn more about the fatty acid composition of fruits oils of P. lentiscus in order to confirm results of previous works in other countries, and to compare them with ours. This study was performed on oil extracted from mature fruits of Pistacia lentiscus harvested from Northeast Algeria. Extraction was done by the semi-artisanal (pressing) method [1], that was proposed to improve the yield and the quality of oil. The black fruits of P. lentiscus has the yield of 19.38%. Fatty acid composition was determined by gas chromatography-mass spectrometry (GC/MS); It revealed that the three dominant fatty acids found are: Oleic acid C18:1 (44.11%), linoleic C18:2 (22.61%) and palmitic C16:0 (22.13%). Various studies reported that linoleic and oleic acids, which are important constituents of P. lentiscus fixed oil, have potential antibacterial properties and are attributable to its unsaturated long-chain [2].

Further studies are needed for the valorization of unsaponifiable matters in the oil and also to determine composition of the carotenoids, tocopherols and phenolic compounds.

References:

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