

PHYSICO-CHEMICAL CHARACTERIZATION OF *MENTHA PULEGIUM L.* ESSENTIAL OILS FROM THE TIARET REGION

Djamila Mezouar^{1,2,*}, Ali Bensaad¹, Abedelsalem Benzzarouk¹, Rahma Affane¹,
Houria Rebhi¹, Torkia Berrezoug¹

¹*Department of Natural and Life Sciences, Faculty of Natural and Life Sciences,
University of Tiaret 14000, Algeria;

²*Laboratory of Physiology, Pathophysiology and Biochemistry of Nutrition, Department of Biology, Faculty of
Natural and Life Sciences, Earth and Universe Sciences, Abu Bekr Belkaid University of Tlemcen 13000, Algeria;

*Corresponding Author Mezouar Djamila: e-mail: djamila.mezouar@univ-tiaret.dz

Received August 2021; Accepted September 2021; Published October 2021;

DOI: <https://doi.org/10.31407/ijeess11.435>

ABSTRACT

Objectives. The objective of our study aimed to extract and determine some physicochemical characteristics of *Mentha pulegium L.* essential oil. **Materials and methods.** The samples of *Mentha pulegium L.* were collected in May 2021 in the region of Tiaret and identified by a botanist at the Faculty of Natural and Life Sciences, University of Tiaret. The leaves of *Mentha pulegium L.* were washed, sorted and dried in the open air at room temperature (about 23-27 °C) for two weeks, then they were crushed in a mortar. After that, the leaves obtained were stored in sealed glass containers protected from light and moisture. The extraction of *Mentha pulegium L.* essential was realized by hydrodistillation technique. **Results.** Our results showed that the extraction yield is equal to 0.18%. The study of the physicochemical parameters indicated that the pH is equal to 5.22. Regarding the acid number, we noted a value equal to 0.28. Whereas, the refractive index was equal to 1.332. **Conclusion.** These parameters are used to determine the quality of *Mentha pulegium L.* essential oil. According to our results, we can say that the essential oil in our study is of intermediate physicochemical quality.

Key words: *Mentha pulegium L.*, hydrodistillation, essential oils, physicochemical characteristics, Tiaret.