Assessment of the Chemical Composition and *in vitro* Antioxidant Activity of *Mentha rotundifolia* (L.) Huds Essential Oil from Algeria

Authors
Brahmi Fatiha, Madani Khodir, Djerrada Nabila, Idir Sabrina, Harfi Fatma, Chibane Mohmed, Brada Moussa

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Description
This study is designed to examine the chemical composition and antioxidant activity of Algerian *Mentha rotundifolia* (L.) Huds essential oil. GC and GC-MS analyses have resulted in the detection of 38 components. The piperitenone oxide (58.7 %) was a major component followed by piperitone oxide (15.9 %), terpinen-4-ol (6.3 %) and pulegone (3.9 %). The antioxidant activities of the essential oil were determined by four different test systems. DPPH, ABTS, reducing power and phosphomolybdenum assays, and showed IC 50s values of 2222.2±25.2, 133.8±4.8, 166.6±1.8, 45.2±1.2 µg/ml, respectively. These various antioxidant activities were compared to BHA, BHT, α-tocopherol and ascorbic acid as reference antioxidant compounds. The study concludes that *M. rotundifolia* leaves contain monoterpenoid rich oil exhibiting antioxidant activity. This may lead to extraction and production of active compounds in …