

Chemical Profiling of Volatile Compounds with Therapeutic Properties in Fractions of *Deverra Scoparia* (Apiaceae) Plant

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Abstract:

The endemic Algerian plant *Deverra scoparia* Coss. & Dur (*D. scoparia*) (Apiaceae) is well known for its rich profile of bioactive compounds, which explains its diverse traditional therapeutic applications. The present research aimed to identify and evaluate the chemical constituents (volatile compounds) of the non-polar fractions of *D. scoparia*. The non-polar fractions were obtained from hydrodistillation extraction, V1 and V2, and solvent extraction, E1, E2, and E3, of *D. scoparia*'s aerial parts. The characterization analysis by GC-MS showed that the study fraction contained several volatile compounds, including volatile nitrogen compounds, with the highest percentage in the E2 fraction, at 4% of the total. Given the importance of volatile compounds demonstrated by the work, the presence of a large proportion of nitrogen compounds is associated with pharmaceutical potential, which makes extracts of this plant a fundamental pillar in the pharmaceutical industry for treating multiple diseases. This will be confirmed by future studies that will focus on isolating alkaloid compounds, studying their pharmacological properties in the living body, and determining appropriate pharmaceutical formulations.