



## Investigation of chemical composition of *Achillea wilhelmsii* C. Koch

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### Abstract

In recent years, reports have been presented on the chemical properties of some species of *Achillea* species. The aim of the present study is to evaluate the phytochemical and antioxidant activity of the essential oil (EO) of *Achillea wilhelmsii* C. Koch by GC–MS and DPPH radical sequestering methods, respectively. Essential oils were obtained by a Clevenger-type. The major grouped compounds identified as oxygenated monoterpenes (68.68%), oxygenated sesquiterpenes (14.78%), monoterpene hydrocarbons (10.15%), sesquiterpene hydrocarbons (1.20%), phenyl propanoides (0.20%) and miscellaneous (0.58%), respectively. In total, 81 compounds were recognized, accounting for 95.59 % of the EO. Also, the IC<sub>50</sub> value of the EO was 131 mg/mL for the DPPH-scavenging ability. In conclusion, these results support the use of the essential oil and its main compounds for their antioxidant properties.

**Keywords:** *Achillea wilhelmsii* C. Koch, essential oil, GC–MS, antioxidant, DPPH.