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**Comparative essential oil analysis of Geranium sylvaticum extracted by hydrodistillation and microwave distillation**

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**Abstract:** The essential oil of *Geranium sylvaticum* L. (Geraniaceae) was isolated by hydrodistillation (HD) and microwave distillation (MD). The composition of the volatile oils was characterized by GC-FID and GC-MS. A total of 73 and 70 compounds were identified, constituting over 90.3% and 98.7% of oil composition of *G. sylvaticum*, respectively. Sesquiterpene hydrocarbons were shown to be the main group of constituents (HD: 31.7% and MD: 39.8%). The major component of the oils of *G. sylvaticum* was  $\gamma$ -muurolene (HD: 10.9% and MD: 19.6%). The comparative study showed that the amount of total volatiles (98.7%) and the major constituent (39.8%) were better in the MD of *G. sylvaticum*.

**Key Words:** *Geranium sylvaticum*, Geraniaceae, hydrodistillation, microwave distillation, essential oil, GC-FID, GC-MS

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