

## Contribution to the Study of Some Phytochemicals and Biological Aspects of *Artemisia absinthium* L

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**Abstract :** Our study is based on chemical and phytochemical characterization of *Artemisia absinthium* L and in vitro tests to demonstrate the biological activities of essential oil and natural extract. A qualitative and quantitative comparison of the essential oil extracted by two extraction procedures was performed by analysis of CG/SM and the yield calculation. The method of hydrodistillation has a chemical composition and provides oil content than the best training water vapor. These oils are composed mainly of thujone followed chamazulene and  $\rho$ -cymene. The antimicrobial activity of wormwood oil was tested in vitro by two methods (agar diffusion and microdilution) on four plant pathogenic fungi (*Aspergillus* sp, *Botrytis cinerea*, *Fusarium culmorum* and *Helminthosporium* sp). The study of the antifungal effect showed that this oil has an inhibitory effect counterpart the microorganisms tested in particular the strain *Botrytis cinerea*. Otherwise, this activity depends on the nature of the oil and the germ itself. The antioxidant activity in vitro was studied with the DPPH method. The activity test shows that the oil and extract of *Artemisia absinthium* have a very low antioxidant capacity compared to the antioxidants used as a reference. The extract has a potentially high antiradical power not from its oil. The quantitative determinations of phenolic compounds by the Folin-Ciocalteu revealed that absinthe is low in total polyphenols and tannins.

**Keywords :** artemisia absinthium, biological activities, essential oil, extraction processes

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