

## Seasonal Variation of the Essential Oils of *Foeniculum vulgare* Miller and *Carum carvi* L. Cultivated in Algerian Sahara

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**Abstract :** Many industries are involved by using essential oils such as food, flavour, and beverage, pharmaceutical, cosmetic and fragrance. Apiaceae species are usually herbs, rarely shrubs characterized particularly by its inflorescence typical umbel. Many species of this family have been widely used in folk medicine throughout the world. The most characteristic natural compounds in this family are the essential oils secreted in schizogenous canals in all organs with remarkable variability chemical composition. As a part of our investigation into medicinal plants growing in Algerian Sahara. In this study, we investigate the chemical composition of the essential oils extracted from two Apiaceae species: *Foeniculum vulgare* Miller and *Carum carvi* L cultivated in the Sahara. The plants were selected on the basis of their use by local people to treat infectious diseases as determined in our previous ethnopharmacological study. Wild samples of *Foeniculum vulgare* Miller and *Carum carvi* L cultivated in an experimental field at the university. The harvest was made during the year 2011 according to the growth cycle stage of the plants. The essential oils of different fresh aerial parts, obtained by hydrodistillation were analysed by GC. The results showed that the essential oils yields are not uniform among the different cycle stage. The percentage of components is significantly affected by the harvesting period of the plant material.

**Keywords :** essential oils, Apiaceae, growth cycle, Sahara, GC

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