

## Content of fixed and volatile oils of pollen grains of five male cultivar of date palm *Phoenix dactylifera* L.

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### Abstract

This study was conducted on the pollen of five male date palm cultivars to determine their content of fixed and volatile oils. Male cultivars were selected: Ghanamy Akhder, Ghanamy Ahmar, khukri, Wardi and Smesmi. Mature pollens were taken before their covers were cracked and the pollen extraction process was performed. The volatile oils were extracted using the Clevenger device, and the fixed oils were extracted using the Soxhlet device. The results of the study showed that the male variety of , Ghanamy Ahmar was significantly superior to the rest of the varieties in the content of fixed oils, while the male variety of Wardi recorded the lowest rate, and the varieties of Ghanamy Akhder, khukri, and Smesmi did not differ in their content of fixed oils.

As for volatile oils, the results of the study showed that the male variety, Ghanami Akhdar, was significantly superior to the rest of the male varieties, and recorded the highest rate . While the male variety, Wardi, recorded the lowest rate of pollen content of essential oils, The other male varieties did not differ among themselves in terms of the essential oil content of their pollen grains. The results of the study also showed the difference between the male varieties in terms of the qualitative characteristics of the oils in terms of density and refractive index.

**Keywords:** fixed-volatile- oils - pollen grains - *Phoenix dactylifera*