

# *Suillus mediterraneensis* from the Algerian coastline: morphological recognition and mycochemical profiling

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## Abstract

*Suillus mediterraneensis* is an ectomycorrhizal mushroom of two-needle pines. The purpose of the present study is initially to determine the morphological characterization of the species and, thereafter, the myco-chemical investigation of the hydro-methanolic extract in order to identify the main chemical classes of their composition in terms of secondary metabolites using simple and rapidly recognized methods and techniques. This survey is being carried out in the coastal region of Ghazaouet within the wilaya of Tlemcen. The morphological determination of the mushroom is based on a range of macroscopic features, including the cap (by its shape, size, color, and surface or its cuticle), the hymenophore, the hymenium (tubes: their color, shape, and the way they are attached), the stipe (thickness and shape), and the flesh. Furthermore, microscopic examination, either fresh or with reagents, especially Melzer's reagent, is needed to determine the shape, ornamentation, and size of the spores. The macro-chemical reaction of the different parts can be useful. This identification allows to determine the species *S. mediterraneensis*, family of Suillaceae, under *Pinus halepensis* with presence of granules on the stipe. The results of the mycochemical screening carried out on the extract showed the presence of substances belonging to the classes of active compounds that include flavonoids, tannins, alkaloids, free quinones, reducing compounds and coumarins. Anthraquinones, terpenoids and saponins, are absent. These preliminary results encourage to characterize other molecules, further studies are needed to evaluate their biological activities.

**Keywords:** Mushrooms; *Suillus mediterraneensis*; bioactive compounds; Mycochemical screening