Antimicrobial Activity, Essential Oil Composition and Micromorphology of Trichomes of *Satureja laxiflora* C. Koch from Iran

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The antimicrobial activity, essential oil composition and micromorphology of trichomes of *Satureja laxiflora* C. Koch, a native plant from Iran, were studied. The essential oil was obtained from the aerial parts at the flowering stage by hydrodistillation, and analyzed by GC and GC/MS. Thirty-three compounds representing 99.1% of the total oil were characterized. The major compounds were thymol (63.9%) and γ-terpinene (11.9%) followed by carvacrol (4.8%), *p*-cymene (3.9%), geraniol (3.2%) and geranyl acetate (3.1%). Furthermore, the essential oil and its three main components were tested against two bacteria and three fungi. The result of the bioassays has been shown that the oil possesses potent antimicrobial property. Chemical studies confirmed that a major portion of this antimicrobial activity is due to thymol present in the oil. Micromorphological analysis by SEM of both vegetative and reproductive organs revealed the presence of abundant sessile capitate and sparse short-stalked glandular trichomes along with retrorse eglandular hairs, giving useful diagnostic characters for identification of this medicinal plant.

Key words: Satureja laxiflora, Micromorphology, Antimicrobial Activity of Oil