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MICROMERIC ACID FROM *SALVIA HORMINUM*

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INTRODUCTION

The presence of triterpenes in some *Salvia* species has long been known. Ursolic and oleanolic acids were isolated from *S. officinalis* [1–5], *S. triloba* [6–8] and *S. apiana* [9]. Other triterpenes were obtained from *S. officinalis* [10–12] and *S. apiana* [9] and a new triterpene, anagadiol, was found in *S. broussonetti* [13].

*S. horminum**, which grows in Turkey, has not been previously investigated. From the upper ground parts of the plant ursolic, oleanolic and micromeric acids were isolated. Although micromeric, ursolic and oleanolic acids have been found together in other plants of the Labiatae, micromeric acid is reported for the first time in *Salvia*. The acid was first isolated from *Micromeria bentham* [14] and later, was found in the leaves of *Rosmarinus officinalis* [15].

EXPERIMENTAL

Salvia horminum was collected from the Mediterranean coast of Turkey. The dried and powdered plant was extracted successively with light petrol and CHCl_3 . The petrol extract was fractioned on neutral Al_2O_3 (activity III) giving five triterpenoid and steroidal compounds one of which was sitosterol (m.p., IR).

The CHCl_3 extract gave a main mixed band (R_f 0.62) by preparative TLC (silica gel G with CHCl_3 :EtOH, 9:1) not separ-

able by crystallization or argentized TLC. NMR and MS indicated that the band was a mixture. Separation of the mixed acetylated methyl esters by GLC (2% XE60, on WHP (Aw-DMCS) with 30 ml/min N_2 at 250°) gave three peaks R_t equivalent to the derivatives of oleanolic, ursolic and micromeric acids.

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* The plant was identified by Prof. Dr. A. Baytop (Istanbul). A voucher sample ISTE 8032 is deposited in the Herbarium of Faculty of Pharmacy, University of Istanbul.