J. Indian Chem. Soc.,
Vol. 70, September 1993, pp. 783

NOTE

Non-volatile Constituents of *Nepeta leucophylla*

POONAM PANDEY[a], C. S. MATHELA*[a] and A. K. PANT[b]
[a]Department of Chemistry, Kumaun University, Nainital-263 002
[b]G. B. P. University of Agriculture and Technology, Pantnagar-263 145

Manuscript received 16 November 1992, accepted 8 February 1993

New coleons, cyclopentano monoterpene enol acetates and triterpenoids have been reported from *Nepeta leucophylla* Benth. (Lamiaceae) recently[1-3]. In continuation of our work on the isolation of the chemical constituents of *N. leucophylla*, we now report some more constituents from the ethanolic extract of its aerial parts. Column chromatographic workup gave two waxy solids which were found to consist of twelve alkanes and six long-chain esters, respectively. Caryophyllene oxide, β-sitosterol and oleanolic acid in addition of ursolic acid were isolated and identified by spectral analysis.

The aerial parts of *N. leucophylla* were collected from Nainital during June; identification had been confirmed earlier[3]. The plant material (2.1 kg) was finely chopped and extracted with ethanol (5 × 6 dm^3).

The dried extract was dissolved in methanol (250 ml) and diluted with water (500 ml) and the resulting solution was extracted with petroleum ether (5 × 250 ml) followed by chloroform (4 × 250 ml). The petroleum ether extract (20 g) was subjected to column chromatography (300 g SiO_2, petroleum ether–ether) to give two waxy solids **1** and **2** (eluted in petroleum ether and 5% ether-petroleum ether respectively) and a white crystalline compound **3** (10% ether-petroleum ether), m.p. 62–63°. The chloroform extract (25 g) on column chromatography (300 g SiO_2, hexane-chloroform) gave two solid compounds, **4** (40% chloroform-hexane), m.p. 136–7°, and **5** (chloroform), m.p. 304–6° in addition to ursolic acid.

Compounds **1** and **2** were analysed by GC-MS while the ir, mass and nmr spectra of **3–5** were recorded and compared with previous literature reports[4].

Compounds **3**, **4** and **5** were identified as caryophyllene oxide, β-sitosterol and oleanolic acid respectively based on spectral and m.p. data. The solid **1**, examined by GC-MS, was found to be a mixture of hydrocarbons $CH_3(CH_2)_nCH_3$, where n = 14–21, 23, 25, 27 and 29.

The GC-MS screening of **2** revealed the presence of ethyl dodecanoate and methyl esters $CH_3(CH_2)_n$–COOMe, where n = 12–16.

Acknowledgement

This work was supported by a Fellowship from U.G.C., New Delhi to one of the authors (P.P.). Authors are grateful to Professor A. T. Bottini, University of California, Davis for GC-MS and ^1H nmr spectra.

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