

Terpenoids and Related Compounds—XIV¹.

Triterpenoids of the Bark of *Rhododendron arboreum* Sm.

P. Sengupta, J. Mukherjee and Ashesh K. Dey

The bark of *Rhododendron arboreum* Sm. has been shown² to contain taraxerol, ursolic acid and betulinic acid. A reinvestigation of the bark of the plant by us revealed the presence in it of taraxeryl acetate, β -sitosterol and betulinic acid but no ursolic acid.

Dried and powdered bark of *R. arboreum* was extracted with benzene for 10 hr. The partially crystalline mass obtained was separated into a neutral semicrystalline material and a crystalline acid.

The above crystalline acid was esterified with an ethereal solution of diazomethane. The crude methyl ester was directly converted into its acetate by treatment with acetic anhydride and pyridine. The acetate-ester was chromatographed over a column of deactivated alumina. Elution with pet. ether gave a solid, m.p. 191–196°, which on crystallisation from chloroform and methanol provided pure methyl betulinate acetate, m.p. 197–199°, $[\alpha]_D + 19.8^\circ$. (Lit.³ m.p. 200–203°, $[\alpha]_D + 18^\circ$), identical (mixed m.p.) with an authentic specimen.

The partially crystalline neutral component of the plant was chromatographed over a column of activated alumina. Elution with a mixture of pet. ether and benzene (3 : 2) furnished a crystalline solid, which on crystallisation from a mixture of chloroform and methanol yielded taraxeryl acetate, m.p. 291–293°, $[\alpha]_D + 8.7^\circ$ (Lit.⁴ m.p. 298–305°, $[\alpha]_D + 9.5^\circ$) identical (mixed m.p.) with an authentic specimen.

Further elution of the above column with a mixture of benzene and ether (3 : 2) furnished a crystalline solid m.p. 270–272°, which was identified as taraxerol by conversion into taraxeryl acetate, m.p. 295–297°, identical (mixed m.p.) with an authentic specimen.

Elution of the column with a mixture of benzene and ether afforded a crystalline solid, m.p. 132–134°, which was identified as β -sitosterol by its conversion into its acetate, m.p. 121–123°, $[\alpha]_D - 34.6^\circ$, identical (mixed m.p.) with an authentic specimen of β -sitosterol acetate.

1. Part XIII. P. Sengupta and Santasil Roy, *Indian J. Chem.*, in press.

2. V. Hariharan and S. Rangaswami, *Curr. Sci.*, 1966, **35**, 390.

3. P. Boiteau, B. Paisch and A. Rakoto Ratsimamanga, *Les Triterpenoides en physiologie vegetale et animale*, Gauthier-Villars, Paris, 1964, 116.

4. Ref. 3, p. 168.

All the compounds described gave correct, C, H analytical data.

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Organic Chemistry Laboratory,
University of Kalyani,
Kalyani, Nadia,
West Bengal.

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