

LETTERS TO THE EDITOR

TRITERPENOIDS I: α -AMYRIN FROM *WRIGHTIA*

THERE are only two species of *Wrightia* (Family—Apocynaceae) available in India, namely *W. tomentosa* Roem. and Schult. and *W. tinctoria* R. Br., on which no thorough chemical studies have so far been made. The present work deals with the triterpene contents of the barks of both.

Air-dried powdered bark (1 kg.) of *W. tomentosa* was exhaustively extracted with rectified spirit by cold percolation. The alcohol-free extract on shaking with petroleum ether (60–80°) gave a semisolid mass. This on chromatography over Brockmann alumina gave principally a white crystalline substance m.p. 200–12° (yield 0.2%). It responded to Liebermann-Burchard reagent and produced yellow coloration with tetranitromethane. Repeated crystallisations from methanol raised the m.p. to 225–26°; $[\alpha]_D^{27} + 76.4^\circ$. This was found to be α -amyrin acetate from mixed m.p. determination with an authentic sample. Hydrolysis to α -amyrin, m.p. 186°, and preparation of α -amyrin benzoate, m.p. 194°, $[\alpha]_D^{27} + 95^\circ$ from the latter confirmed the identity.

Air-dried powdered bark of *W. tinctoria* similarly gave α -amyrin acetate, m.p. 224–26°; $[\alpha]_D^{27} + 76.8^\circ$ (yield 0.18%).

We take this opportunity to express our thanks to the Chief Botanist, Botanical Survey of India, for extending facilities for carrying out the work. Thanks are also due to Dr. R. K. Arora, Assistant Ecologist, Botanical Survey of India, Calcutta, for collection and identification of the plant material.

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CHEMICAL INVESTIGATION OF *EULOPHIA NUDA* LINDL.

THE plant *Eulophia nuda* Lindl. known in Sanskrit as *Manya* and in Hindi as *Goruma* belongs to the natural order Orchidaceae. It is distributed in the tropical Himalayas from Nepal eastwards to Sikkim, Assam, Kharria hills and Burma. It is also available in the Deccan from Konkan southwards. The tubers of the

plant are useful for tumours, scrofulous affections of the glands of the neck and in diseases of the blood. The plant is also useful as an anthelmintic and in cases of bronchitis. It is also claimed to be useful in tuberculosis.¹ Due to its important medicinal properties, the chemical investigation of the plant was undertaken.

The petroleum ether extract of the tubers on chromatographic separation over alumina yielded in addition to a yellow wax, two colourless, neutral, nitrogen-free substances, of m.p. 75° and 82°. The former (C, 81.9; H, 13.8, OCH₃—nil) was identified to be *n*-hexacosyl alcohol by the preparation of its acetyl derivative, m.p. 64° (C, 79.0; H, 13.3%) and a mixed melting point determination of the latter with an authentic specimen. The substance (C, 78.4; H, 13.0%) was too small for identification.

The methanolic extract of the plant was divided into two parts. The first portion (about 15 gm.) was made alkaline and on steam-distillation gave a dark-brown oil (100 mg.) with a strong odour of pyridine. It was redistilled at 115–20° at 0.02 mm. It contained nitrogen but did not give the characteristic tests for alkaloids. Due to variable results of analysis no structure could be assigned to it.

The second portion of the methanolic extract gave on chromatographic separation over alumina an appreciable amount of a brownish oil which could not be purified, together with small amounts of a colourless solid, m.p. 211–12° (C, 84.3, H, 11.4; $[\alpha]_D^{25} = +28$) which gave a positive Liebermann Burchard test. It was identified as lupeol by a mixed melting point with an authentic specimen and by the preparation of its acetyl derivative, m.p. 214–15° (C, 82.1; H, 11.6).

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Institute of Science,
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1. Chopra, R. N., *Glossary of Indian Medicinal Plants*, 1956, p. 112 and *Review of Work on Indian Medicinal Plants*, 1955, p. 98.