

Chemical Constituents of *Clerodendron infortunatum* Linn. and *Ficus racemosa* Linn.

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CLERODENDRON *infortunatum* Linn. (Verbenaceae) is a shrub and found throughout India. All parts of the plant have a bitter pungent taste. The leaves are used externally for tumors and certain skin diseases¹. A perusal of literature revealed that some work has been reported on the roots²⁻⁵ and leaves⁶ of this plant. The present investigation deals with the isolation and identification of the constituents from flowers.

Ficus racemosa Linn. (Moraceae), a moderate sized tree, is an important medicinal plant⁷. The roots⁸ and leaves⁹ of this plant have been earlier investigated. A chemical investigation of the bark and heartwood of the plant has, therefore, been undertaken.

C. infortunatum: The air dried flowers (2 Kg.) were extracted with petroleum ether (60-80°). The extract was concentrated to 100 ml. On cooling and filtration a solid material was obtained (Fraction-A). The filtrate was concentrated to dryness (Fraction-B).

Fraction-A, on column chromatography over deactivated alumina and elution with petroleum ether, gave a solid which on crystallization (pet. ether), furnished colourless needles, $C_{24}H_{34}O_7$, m.p. 164°. It gave positive Liebermann-Burchard and Noller's test. ν_{max}^{KBr} 1730, 1250, 1018, 735 cm^{-1} , etc.; $\delta(CCl_4)$ 0.92(s), 1.92-2.10(d), 2.9-3.0(t), 4.8(s), 5.95-6.06(d) and 6.5(t); M^+ 434. It was identified as the diterpene clerodinin.

Fraction-B, on column chromatography over deactivated alumina, gave two compounds. Elution with petroleum ether yielded a product, which on crystallization from ethyl acetate gave a white solid, $C_{21}H_{34}O$, m.p. 67°. ν_{max}^{KBr} 730, 720 cm^{-1} [doublet, $-(CH_2)_n$ -bending, $n > 4$]. It was identified as hentriacontane by m.m.p., Co-TLC with an authentic sample.

Further elution with petroleum ether-benzene (4:1), gave a greenish-white solid which on crystallization (pet. ether) gave colourless needles, $C_{29}H_{48}O$, m.p. 148°. ν_{max}^{KBr} 3400-3200 1630, 960, 885, 795 cm^{-1} , etc. It was identified as (24s)-ethylcholesta-5,22,25-triene-3 β -ol by m.m.p. and Co-TLC with an authentic sample.

F. racemosa: The dried and powdered bark (2 Kg.) was extracted with petroleum ether (60-80°). The extract was concentrated and chromatographed

over deactivated alumina. Elution with petroleum ether and crystallization from methanol gave compound A, $C_{29}H_{48}O_2$, m.p. 184°. It gave positive Liebermann-Burchard, Noller's and TNM tests. ν_{max}^{KBr} 1750, 1450, 1380, 1365, 1240, 975 cm^{-1} , etc. M^+ 468. Compound A was identified as gluanol acetate.

Elution with petroleum ether-benzene (1:1) and benzene and crystallization from methanol gave shining white flakes of compound B, m.p. 136-37°. It was identified as β -sitosterol by m.m.p. and Co-TLC with an authentic sample, and preparation of its acetate, m.p. 127° and benzoate, m.p. 143°.

In addition a small amount of a long chain ketonic compound, m.p. 72° was also isolated.

Heartwood shavings (5 Kg.) were extracted with petroleum ether (60-80°). The pet. ether extract was chromatographed over deactivated alumina. Elution with petroleum ether yielded a product which was identified as gluanol acetate and elution with benzene gave β -sitosterol.

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Potential Antituberculosis Compounds : Part I. Substituted Thioureas Containing Quinoline Nucleus*

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ANTIBACTERIAL property of thiourea was observed by E. Nicholas¹ in 1928 and Mayer in 1941². Sulphanilamido thiourea and phenyl sulphanilamido thiourea were found to be very active against

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