

SAPOTACEAE

STEROIDAL AND OTHER CONSTITUENTS OF *MADHUCA LATIFOLIA* LEAVES

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(Received 19 October 1971)

Plant. *Madhuca latifolia* syn. *Madhuca indica*. *Uses.* Flowers rich in sugar¹ and yeast²—for fermentation (country liquor); seed fat a commercial commodity.^{3,4} *Previous work.* Fruit pulp and nut-shell,⁵ nuts,⁶ seed saponins^{7,8} and bark.⁹

Leaves. EtOH extr. fractionated successively with *n*-hexane, ether and ethyl acetate.

Hexane extract. Chromatography (neutral Al₂O₃): β -carotene, UV *n*-Octacosanol, m.p., m.m.p., acetate, m.p., m.m.p. and superposable IR. *Sitosterol*, m.p., m.m.p., acetate, m.p., m.m.p., co-TLC, superposable IR. *Stigmasterol*, m.p., m.m.p., acetate, m.p., m.m.p., superposable IR. β -D-glucoside of *sitosterol*, m.p., m.m.p., acetate, m.p., m.m.p., superposable IR; acid (5% alc. HCl.) hydrolysis to sitosterol (*vide supra*) and glucose (paper co-chromatography). *Erythrodiol mono-palmitate* (3 β -Palmitoxy-olea Δ^{12} -en-28-ol), m.p., m.m.p.,¹⁰ M⁺ = 680, co-TLC, superposable IR; hydrolysed (5% alc. KOH) to *erythrodiol*, m.p., m.m.p., superposable IR, diacetate, m.p., m.m.p., superposable IR and *palmitic acid*, M⁺ = 256.

Ether extract. Chromatography (silicic acid): *Oleanolic acid*, m.p., m.m.p.,⁵ co-TLC, superposable IR, methyl ester, m.p., m.m.p., co-TLC, superposable IR. *Quercetin*, paper co-chromatography, UV. *Erythrodiol*, identified as above.

The hexahydroxy flavonoid earlier reported¹¹ from the leaves of *Madhuca longifolia* could not be detected in the leaves of *Madhuca latifolia*. This difference in flavonoid composition is chemotaxonomically significant, since recently these two species (of Malaysian origin) have been merged under the name *Madhuca longifolia*.¹²

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Key Word Index—*Madhuca latifolia*; Sapotaceae; steroids; oleanolic acid; erythrodiol; quercetin.