SAPOTACEAE

MYRICETIN AND MYRICETIN-3-O-L-RHAMNOSIDE FROM
THE LEAVES OF MADHUCA INDICA AND ACHRAS SAPOTA

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Key Word Index—Madhuca indica; Achrus sapota; Sapotaceae; flavonols; myricetin; myricetin-3-O-L-rhamnioside.


The total flavonoid in the concentrate of the hot 80% EtOH extracts of fresh leaves was fractionated by partition between water and organic solvents.

Ether extract. Myricetin and quercetin (characteristic colour reactions, λmax, acetyl and methyl derivatives, Rf values and co-chromatography with authentic samples).

EtOAc extract. A pale yellow solid (0.15%), m.p. 196–197º, [α]D 30 = 147.5º (c 0.8 in MeOH), λmax (nm) 256, 300 (b), 352 (MeOH); 268, 359 (NaOAc); 268, 419 (AlCl3) and 260, 297 (b), 375 (NaOAc + H3BO3). The NMR spectrum of the glycoside could not be taken as it was practically insoluble in CDCl3, CD3COCD3 and CF3COOH. It yielded a crystalline acetate (Ac2O + Py), m.p. 140–141º and a methyl ether (Me2SO4 + K2CO3 in Me2CO, 70º, 36 hr), m.p. 136–137º (deep blue under UV). The glycoside was purple under UV changing to yellow with NH3, showed typical colour changes with alkaline reagents similar to myricetin and gave green colour with Fe3+. On treatment with 5% H2SO4 for 1 hr or 1 N HCl for 5 min at 100º, it yielded myricetin and L-rhamnose in the molar ratio of 1:0.4:1.0. It was unaffected on treatment with 2% HOAc for 2 min at 100º, indicating that it was a monoglycoside.

The glycoside methyl ether on hydrolysis yielded 5,7,3′,4′,5′-penta methyl myricetin, m.p. 226–227º, Fe3+-light pink brown, intense golden yellow under UV, λmax 260 (b), 310 (b), 353 (MeOH); 260 (b), 310 (b), 353 (NaOAc); 271, 335 (b), 419 (AlCl3) and 262, 305 (b), 355 (NaOAc + H3BO3), and yielded a monoacetyl derivative, m.p. 196–197º (light yellowish brown under UV). From the above data, the glycoside was identified as myricetin-3-O-L-rhamnioside.

The EtOAc mother liquor, after the separation of myricetin rhamnoside, on PC showed two additional spots which were identified as myricetin-3-arabinoside and quercetin-3-galactoside by Rf, products of hydrolysis and direct comparison with authentic samples.

Plant. *Achras sapota* L. (Voucher specimen No. 5/72 deposited at JIPMER) (syn. *Mimusops manilkara* Don.) *Uses.* Edible fruit.4 *Previous work.* Polyphenols of immature fruits,5 sterol and triterpenes of fruit,6 triterpenoids of leaves;7 no work on flavonols.

*Present work.* Isolation of myricetin and myricetin-3-O-L-rhamnoside (0.1%) from fresh leaves. Quercetin also identified. Working up and identification as in the case of *M. indica* above.

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**SOLANACEAE**

**ANTHRAQUINONES AND OTHER CONSTITUENTS OF *FABIANA IMBRICATA***


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**Key Word Index**—*Fabiana imbricata*; Solanaceae; n-alkanes; fatty acids; erythroglaucin; physcion; acetovanillone.


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