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Scopoletin from the Leaves of *Swietenia mahagoni* Jacq[1]

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The tetranorterpenoids of the family Rutaceae and Meliaceae reflect their taxonomic relationship with each other. The closeness has also been reflected in the polymethoxy flavonoid constituents of these families[2]. From taxonomic considerations, we have been interested to look for the coumarins of the family Meliaceae, the report of which has been very rare uptil now[3].

In the present communication we report the isolation of a coumarin, scopoletin from the leaves of *Swietenia mahagoni* Jacq. We reported several triterpenoids from this plant previously[4–9].

Dried leaves of *S. mahagoni* Jacq. were extracted with alcohol after they had been extracted with petroleum ether (60–80°). After complete extraction, the solvent was distilled off. The residue was then extracted with benzene. The benzene extract was concentrated and adsorbed on a silica gel column. The column was then successively eluted with petroleum ether, petroleum ether-benzene, benzene, benzene-chloroform and chloroform respectively. Fractions were collected in 250 ml. in each case. Several fractions collected from benzene on evaporation yielded a crystalline solid m.p. 195–98°. After several crystallisations from benzene the compound melted at 202–03°. The compound was found homogeneous in the thin layer chromatogram (R_f 0·58 in the solvent system, chloroform-methanol, 98 : 2). It was found to be optically inactive. The compound responded to the colour reaction with alcoholic alkali showing it to be a coumarin derivative. The u.v. spectrum[10] of the compound showed absorption at 229·5 and 297 mμ with log ϵ 4·52 and 4·18 respectively similar to scopoletin. The i.r. spectrum of the compound (in nujol) showed bands at 3330 (phenolic –OH), 1700 (δ-lactone), 1625, 1565, 1510 (aromatic residue and unsaturation), 925, 862, 840, 820 and 745 cm^{-1} (aromatic substitution). All the above data showed that the compound may be scopoletin which was eventually established by direct comparison with a specimen of scopoletin (m.m.p., t.l.c., i.r. and u.v.), isolated from *M. paniculata* in our laboratory.

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