COUMARINS FROM *MURRAYA GLEINEI* (RUTACEAE)

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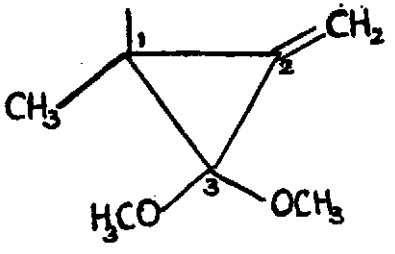
From the cold light petroleum extraction of leaves of the endemic *Murraya* species, *M. gleinei*, colourless crystals separated out. This crystalline material contained two compounds which were identified as coumarins.

One compound was shown to be sibiricin (5, 7-dimethoxy-8-(2, 3-epoxy-3-methyl butane) coumarin) by comparison of spectral and physical data. Conversion to sibiricin glycol (1) (mexoticin) (2) by treatment with oxalic acid confirmed the structure.

The second compound appears to be a new coumarin (C_{16} H_{18} O_5 m.p. 124–126°) and its ^1H NMR spectrum showed the presence of 3-OMe groups, a long range coupled methyl group, 2(=CH_2) 'protons and 2 sets of AB double doublet due to coupling in the coumarin ring. The compound was therefore 7-methoxy coumarin into an 8 position substituent containing 2 methoxy groups. Formation of Murralongin (3) (8-substituent CH_3–C=C (CH_3) CHO) on acid treatment and other evidence suggested the side chain to be cyclopropanone dimethyl acetal with an exocyclic =CH_2 group.

The new coumarin is believed to have the side chain 1-methyl-2-methylene-3, 3-dimethoxycyclopropane.



References

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