

References

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Marine Natural Products : Part I—Occurrence of Batyl Alcohol & Brassicasterol in *Porites lutea*

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Batyl alcohol (octadecylglycerol) and brassicasterol ([24S]-24-methylcholesta-5, 22 E-dien-3β-ol) have been isolated from *Porites lutea*, a stony coral from the west coast of India.

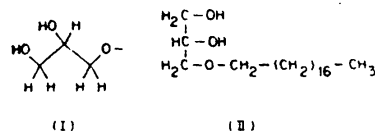
OUR search for the biologically active compounds from marine resources¹ of Indian Ocean, led us to examine chemically *Porites lutea*, a stony coral of Malvan (Maharashtra State).

Methanolic extract of *P. lutea*, was concentrated under reduced pressure and then resolved into petroleum ether, methylene chloride, ethyl acetate and *n*-butanol fractions. Petroleum ether fraction on chromatography yielded in the tail fractions two solid compounds designated as A and B.

Compound-A, a crystalline solid, m.p. 68-70°, analysed for C₂₁H₄₄O₃ (M⁺344) and exhibited in its IR spectrum peaks for hydroxyl group (3400, 3300 cm⁻¹). Compound-A gave positive periodate test indicative of vic-diol system. It gave a bis-*p*-nitrobenzoate, m.p. 66°. The remaining oxygen function is involved in a ether linkage, also supported by an IR absorption at 1140 cm⁻¹; PMR (CDCl₃, 270 MHz), δ 0.87 (3H, *t*, *J* = 7.8 Hz, —CH₃—CH₂—), 1.27 (30H, —(CH₂)₁₅—), 1.58 (2H, *m*), 2.39 (1H, *bm*, —OH) 2.75 (1H, *bm*, —OH), 3.46 (2H, *dt*, *J*, = 1.25 and 6.5 Hz, —O—CH₂—CH₂—), 3.49 (1H, *dd*, *J* = 6.5 Hz and 8.76 Hz), 3.54 (1H, *dd*, *J* = 4.25 and 8.75 Hz), 3.64 (1H, *dd*, *J* = 5.25 and 11.25 Hz), 3.72 (1H, *dd*, *J* = 3.75 and 11.25 Hz) and 3.87 (1H, *q*). The above data indicate that the compound-A contains part structure (I) and hence must be represented by structure (II).

The melting points of compound-A, its bis-*p*-nitrobenzoate are in perfect agreement with those reported² for batyl alcohol (70-71°) and its bis-*p*-nitrobenzoate (65-66°). To our knowledge PMR spectral data on batyl alcohol was not measured earlier and the data will be useful for identification of this substance.

The crystalline substance-B, m.p. 148-50°, which was obtained during chromatography was found to be a mixture of three substances (12%, 30% and 58%) by HPLC. The major component could be obtained as an acetate in pure form (acetate of substance-B) by repeated chromatography of acetylated



mixture over AgNO₃ impregnated alumina; m.p. 158°; IR: 1125 and 1245 cm⁻¹; M⁺ 440; PMR (CDCl₃, 200 MHz): δ 0.69 (3H, *s*) 0.819 (3H, *d*, *J* = 6.5 Hz), 0.838 (3H, *d*, *J* = 7 Hz), 0.9125 (3H, *d*, *J* = 7Hz), 1.014 (3H, *d*, *J* = 6.7 Hz), 1.025 (3H, *s*), 2.05 (3H, *s*, —COCH₃), 2.326 (2H, br *d*, *J* = 8.5 Hz), 4.72-4.49 (1H, *brm*) 5.17-5.21 (2H, *m*) and 5.389 (1H, br *d*, *J* = 8.5 Hz). The physical constants and spectral data are identical with those of brassicasterol acetate³. The major constituent of substance-B is, therefore, identical with brassicasterol.

We thank Dr S. Z. Qasim and Mr. C. V. G. Reddy for their keen interest in the work. Our thanks are due to Dr L. J. Goad, The University of Liverpool for the spectral data of brassicasterol and epibrassicasterol and their acetates.

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Terpenoids & Related Compounds : Part XXII† — Schizandraflorin, a New Tetracyclic Triterpene Dione from *Schizandra grandiflora* Hook. f. & Thom.

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A new tetracyclic triterpene dione, designated as schizandraflorin, and isolated from the whole plant of *Schizandra grandiflora* (fam. Schizandraceae) along with β-sitosterol and its β-N-glucoside has been shown to have cycloart-20(21)-ene-3,24-dione (I) structure from its PMR and mass spectral fragmentation studies. The presence of traces of cycloartenone (II) is revealed only from the mass spectral evidence.

SCHIZANDRA GRANDIFLORA¹ Hook. f and Thom. (fam. Schizandraceae) is a small tree growing in the temperate zone of the Himalayas at an altitude of 2000-3000 m. There is no previous report of work on this plant. The whole plant, collected from the vicinity of Darjeeling (West Bengal) during August 1979, has been investigated for its chemical consti-

†For Part XXI see B. Talapatra, A. K. Mallik & S. K. Talapatra, *J. Indian chem. Soc.*, **58** (1981), 315.