

Aromatic substances from the lichen *Parmotrema* sp.

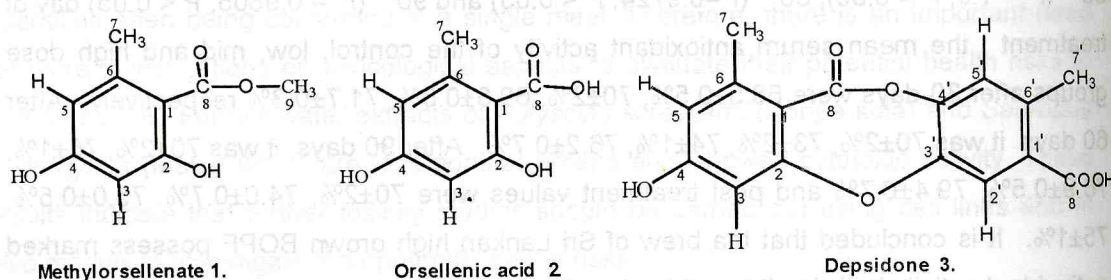
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The lichen symbiosis typically involves a close physiological integration. Lichens accumulate large concentration of products, particularly aromatic phenolic compounds, sometimes exceeding 20% of dry weight. The majority of these compounds originate from the mycobiont.

Parmotrema sp. described in this study belongs to family Physciaceae. The lichens were collected from a stem bark of the palm tree *Roystonea regia* from University of Peradeniya. As part of a program to isolate natural products from novel sources, we report herein the isolation of two simple aromatic compounds, methylorsellenate (1), and orsellenic acid (2) and the depsidone (3).

Cleaned and dried lichen was sequentially extracted with CH₂Cl₂ followed by MeOH. The crude MeOH extract when fractionated via MPLC (step gradient from Hexane → 50% CH₂Cl₂/MeOH): fractions 8 to 11 were pooled and crystallized using CH₂Cl₂/hexane and re-crystallized using 90% CH₂Cl₂/hexane to obtain yellow crystals of methyl orsellenate (1). The MeOH extract further was fractionated via MPLC (step gradient from hexane → 50% CH₂Cl₂/MeOH) and re-fractionated using silica gel MPLC (gradient eluent 100% hexane → 100% ethyl acetate) and further chromatographed using gravity column (gradient eluent 100% hexane → 100% ethyl acetate) to obtain orsellenic acid (2). Depsidone (3) was isolated by fractionating the MeOH extract via MPLC (step gradient from Hexane → 50% CH₂Cl₂/MeOH) and re-fractionated using silica gel MPLC (gradient eluent 100% hexane → 100% ethyl acetate) and recrystallizing using 50% ethyl acetate/hexane. These compounds were fully characterized using ¹H, ¹³C, COSY, HMQC and HMBC data. To the best of our knowledge compound (3) is a new natural product.



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