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IDENTIFICATION OF LICHEN SUBSTANCES FROM A LICHEN *ROCELLA* SPECIES

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Lichens are by definition symbiotic organisms composed of a fungal partner (mycobiont) and one or more photosynthetic partners (photobiont/s). The photobiont can be either a green alga or a cyanobacterium. Morphologically lichens can be classified into three major groups. They are foliose, fruticose and crustose. Growing rates of lichens are extremely slow. More than twenty thousand species of lichens have been found. They can tolerate very drastic weather conditions and are resistant to insects and other microbial attacks. Lichens produce a variety of secondary compounds. They play an important role in protection and maintenance of the symbiotic relationship.

This paper describes isolation and structural elucidation of several lichen substances, which were isolated from a fruticose type lichen *Rocella* sp., growing on tree trunks of coconut trees collected from the Kurunegala area.

Air-dried lichen specimen was sequentially extracted into hexane, dichloromethane and methanol. The extracts were concentrated under reduced pressure. They were separately subjected to Medium Pressure Liquid Chromatography, flash chromatography and Preparative Thin Layer Chromatography to yield seven compounds. The compounds were characterised by spectroscopic methods (NMR, GC-MS, HRMS).

Based on spectroscopic evidence and their physical properties, the structures were found to be erythrin, methyl orsellinate, γ -carotene, β -stosterol, a hexose sugar, a macrocyclic compound and a γ -lactone. The latter two compounds appear to be new.

Methyl orsellinate exhibited significant antifungal activity against the fungi *Cladosporium cladosporioides*, *Collitotricuhm gleosporioides*, *Collitotricuhm musae*, *Monacrosporium ambrosium* and *Curvularia trifolii* in the TLC bioassay technique.

We thank the NSF for a research grant (RG/96/C/04).