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SYNTHETIC USES AND SOME REACTIONS OF FRISTIMERIN

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Pristimerin (3-hydroxy-2-oxo-24-nor-D : A-friedo-oleana-1(10), 3,5,7-tetraen-29-oic acid methyl ester (20 α)), a biologically active quinoid triterpene pigment, has been found to be the major constituent of several plants belonging to the family, Celastraceae. Therefore, it prompted us to synthesise zeylasterone (2,3-dihydroxy-6-oxo-24-nor-D : A-friedo-oleana-1,3,5 (10), 7-tetraen-23,29-dioic acid-29-methyl ester (20 α)), the first natural phenolic D : A-friedo-oleanane triterpene starting from pristimerin and to carry out some structural modifications of pristimerin for bio-assay. In this paper we report the syathesis of trimethylzeylasterone from pristimerin by a four step route which aided us to confirm the structures of zeylasterone and two other new phenolic triterpenes obtained from *Kokoona zeylanica*.

Pristimerin on reductive methylation yield dimethylpristimerol (66%), which on oxidation with *N*-bromosuccinimide in aqueous dioxan and calcium carbonate with UV irradiation gave 6-oxo dimethylpristimerol (40%). To oxidise the allylic methyl, a catalytic amount of dibenzoylperoxide was added in addition to the reagents employed in the previous oxidation and irradiated with IR (35)%. The acid thus produced was esterified with diazomethane affording trimethylzeylasterone in quantitative yield.

Attempted methylation of pristimerin with dimethyl sulphate and potassium carbonate in acetone yielded the previously unidentified product m.p. 177-179°, whose spectral data (IR, ^{1}H-NMR and MS) suggested it to be 6-(2-oxopropyl) dimethylpristimerol.