

GYNOCARDIN FROM THE LEAVES OF *KIGGELARIA AFRICANA*

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Glucosides of substituted cyclopentenone cyanohydrins have hitherto been reported only in plants in the Flacourtiaceae and taxonomically related families (1,2). We have shown recently that extracts of *Acraea horta* butterflies (Acraeinae) contain the same cyanoglucoside as their food plant, *Kiggelaria africana* L. (Flacourtiaceae) (3). It was, therefore, of interest to isolate and identify this compound.

EXPERIMENTAL

PLANT MATERIAL.—Leaves of *K. africana* were obtained locally. A voucher specimen has been deposited with the Bolus Herbarium, University of Cape Town.

EXTRACTION AND IDENTIFICATION.—Fresh leaves (500 g) were macerated and extracted with 96% EtOH. The concentrated extract was defatted (petroleum ether followed by CHCl₃ partition) and concentrated to a syrup (29 g). A portion (10 g) was chromatographed on a dry-packed column of Si gel (70–230 mesh, 500 g), using Me₂CO-H₂O (5:1) as eluent. The cyanoglucoside fractions were monitored by the "sandwich-picric" method (4), using a crude enzyme extract prepared (5) from fresh leaves of the same plant. The positive fractions gave a syrup (2.5 g) that was rechromatographed on a second column of Si gel (100 g) and eluted with CHCl₃-

MeOH (5:2). Evaporation of the cyanogenic fractions followed by treatment of the resulting syrup caused gynocardin to precipitate out (1.5 g, 0.8% leaf wt). The physical, analytical, and spectral data for both the recrystallized (iPrOH) product and its hexaacetate were in accord with that for gynocardin (6). Full details of the isolation and identification are available from the senior author.

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