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ANGIOSPERMAE DICOTYLEDONAE

AIZOACEAE

HYDROCARBONS AND STEROIDS OF *TRIANTHEMA PENTANDRA*

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Plant. Trianthema pentandra (Syn. *Zaleya govindia*) N. C. Nair. *Medicinal uses.* Plant is used in treatment of abdominal diseases, as an abortif., as a cure for pain in the bladder and for snake bite.[1] *Previous work.* An unknown alkaloid reported from *T. monogyna.*[2]

Roots and stems. Were extracted with light petroleum (60–80°). Residue was dissolved in EtOH–$CHCl_3$ (10:1). Kept at 0°, filtered and chromatographed on neutral alumina.

Hentriacontane. $C_{31}H_{64}$ (found: C, 85·10; H, 14·84; required C, 84·32; H, 14·67, m.p., mixed m.p., IR and NMR, *m/e* 436 (M^+). Earlier petroleum fractions and crystallization (hexane).

Ketone. (m.p. 75°, IR 1730 cm^{-1}). Reduction with $LiAlH_4$ gives an alcohol (m.p. 84–85°, IR 3640 cm^{-1}, NMR triplet 6·3 τ, Acetate m.p. 65–66°; IR 1735 cm^{-1}). Further work is in progress. Later petroleum ether fractions and crystallization with ($CHCl_3$–MeOH).

Hentriacontol. $C_{31}H_{64}O$ (found: C, 82·6; H, 14·12; required: C, 82·3; H, 14·15, IR 3418 cm^{-1}, m.p., m.m.p. co-TLC. Acetate m.p.; m.m.p., co-TLC and IR 1740 cm^{-1}). From benzene fractions. Crystallizations with $CHCl_3$. Alcoholic extract was extracted with Et_2O. Extract on repeated crystallizations with EtOH gave sitosterol-D-glucoside.

Sitosterol-D-glucoside. $C_{35}H_{60}O_6$ (found: C, 73·12; H, 10·50; required: C, 72·91; H, 10·41, IR, $[\alpha]_D$, m.p., m.m.p., co-TLC). Unstable when run in a mass spectrometer even using direct inlet probe. *m/e* 397, 398, 396. Peak at 396 corresponds to the aglycone obtained after elimination of sugar. (Tetraacetate: m.p.; m.m.p.; IR, NMR, *m/e* 331, 289, 271, 229, 211, 169, 157, 115, 109, 57 are identical for glucose tetraacetate.) Glycoside on acidic hydrolysis gave sitosterol and D-glucose.

Sitosterol. $C_{29}H_{50}O$ (found: C, 83·89; H, 12·04; required: C, 84·05, H, 12·07, IR, *m/e* 414 (M^+), $[\alpha]_D$, m.p.; m.m.p., of sterol and acetate). Crystallization with EtOH.

D-*Glucose.* By paper chromatography and osazone.

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[1] R. N. CHOPRA, S. L. NAYAR and I. C. CHOPRA., *Glossary of Indian Medicinal Plants*, p. 246, C.S.I.R., New Delhi.
[2] N. K. BASU and S. N. SHARMA, *Quarterly Journal of Pharmacy and Pharmacology*, Vol. XX, No. 1, pp. 38–42 (1947).

Key Word Index—Trianthema pentandra; Aizoaceae; hentriacontane; hentriacontol; sitosterol-D-glucoside.