

Heartwood. An unidentified sterol, m.p. 73–74° and β -sitosterol (ether extract-chromatography on Al_2O_3). Leucocyanidin (acetone extract), microcrystalline powder (EtOAc-petrol), m.p. > 330° (darkens at 190°), $[\alpha]_D^{30} - 8.6$, λ_{max} 280 nm, colour reactions, preparation of enol acetate ($\text{Ac}_2\text{O} + \text{Py}$), m.p. 200°, $[\alpha]_D^{30} - 14^\circ$ and methyl ether ($\text{Me}_2\text{SO}_4 + \text{K}_2\text{CO}_3$, 36 hr), m.p. 260–263° and acid conversion to cyanidin chloride.

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ASCLEPIADACEAE

ISOLATION OF FRIEDELIN FROM *SECAMONE AFZELII*

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FOLLOWING a procedure which we normally use for the isolation of the alkaloidal fraction of plant organs, friedelin was obtained from the root of *Secamone afzelii* Schultes (= *S. myrtifolia* Benth.) This is the first mention of the occurrence of friedelin in *S. afzelii* although, in a recent review, Sainsbury¹ mentioned the fact that this compound and epifriedelinol frequently co-occur and are abundant in Nature. *Sarcostemma viminalis* R.Br. is the only other member of the Asclepiadaceae reported to contain friedelin.

1 kg of the powdered root was moistened with conc. ammonia solution and allowed to stand for 3 hr before it was exhausted with CHCl_3 in a soxhlet. The CHCl_3 extract was evaporated to dryness *in vacuo*, then the granular residue was triturated with warm N HCl (10 × 100 ml), and filtered before the acidic extract was shaken with CHCl_3 (5 × 100 ml). The CHCl_3 fraction was dried (MgSO_4) and evaporated to dryness to afford 760 mg of a brown residue (I). Preparative TLC of I (Silica gel; CHCl_3 -alcohol (abs.)-acetone 90:5:5) gave, among others, a band (R_f 0.70) with bright blue fluorescence in UV and this was eluted with MeOH. Removal of the MeOH, *in vacuo*, gave a pale brownish residue 60 mg of which was taken up in benzene (20 ml), washed twice with dil. HCl (5 ml), dried (MgSO_4) and chromatographed on neutral grade Al_2O_3 . The benzene fraction yielded friedelin (8 mg) which on TLC (Al_2O_3 ; 5% HOAc in C_6H_6) gave R_f 0.37 and red colour with 5% H_2SO_4 in EtOH after heating at 100° for 5 min. Recrystallization from benzene gave m.p. 261–262°; $[\alpha]_D^{21} - 20^\circ$ (benzene); Mass $M = 426.3869$. $\text{C}_{30}\text{H}_{50}\text{O}$ requires $M = 426.3861$. IR(CCl_4) λ_{max} 1709 cm^{-1} . This material was identical in all respects to authentic friedelin.

¹ M. SAINSBURY, *Phytochem* 9, 2209 (1970).