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## DIHYDROSANGUILUTINE, A NEW ALKALOID FROM *SANGUINARIA CANADENSIS*

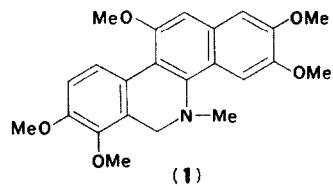
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**Key Word Index**—*Sanguinaria canadensis*; Papaveraceae; dihydrosanguilutine.

**Plant.** *Sanguinaria canadensis* L. roots. **Source.** Purchased as ground powder from S. B. Penick, New York and authenticated by them (reports 71B-2880 and 71B-3612). **Previous work.** See, for example, J. Slavik and L. Slavikova (1960). *Coll. Czech. Chem. Comm.* **25**, 1667.



**Present work.** Florisil chromatography of mother liquor residues from which chelerythrine, protopine and sanguinarine had been removed yielded crystals of a colorless base (1), mp 154–155°,  $R_f$  0.72 (Si gel; EtOAc); NMR ( $CDCl_3$ ): s,

2.61 δ (3H); s, 3.85 (3H); s, 3.92 (3H); s, 3.96 (3H); s, 4.03 (3H); s, 4.11 (3H); s, 4.26 (2H); m, 7.0–7.7 (5H); UV (MeOH): 238 nm (log  $\epsilon$  4.21), 262 (4.38), 275 (4.42), 325 (4.22); MS:  $m/e$  395 (30%), 394 (100), 379 (20). **Anal.** Calcd for  $C_{23}H_{25}NO_3$ : C, 69.86; H, 6.37; N, 3.54. Found: C, 69.29; H, 6.16; N, 3.15%.

A hot soln of 10 mg (1) in 6 ml aq. HOAc was treated with 100 mg mercuric acetate and heated for 2 hr. The cooled mixture was filtered and evaporated to dryness to leave a residue of sanguilutine identical with an authentic sample isolated from the same plant. These data show the unknown to be dihydrosanguilutine (1), a previously unreported alkaloid.

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