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DIHYDROSANGUILUTINE, A NEW ALKALOID FROM *SANGUINARIA CANADENSIS*

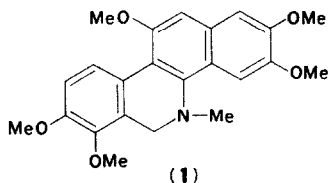
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Key Word Index—*Sanguinaria canadensis*; Papaveraceae; dihydrosanguilutine.

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 chelerythine, 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 $\text{C}_{23}\text{H}_{25}\text{NO}_3$: 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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