

## ALKALOIDS FROM *Korolkowia sewertzovii*.

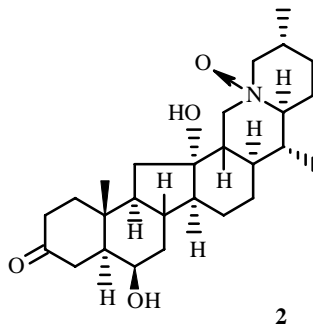
### SEVEDININE N-OXIDE

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UDC 547.944/945

Several steroidal alkaloids were isolated from the total alkaloids of the aerial part of *Korolkowia sewertzovii* Regel. These included korseveriline, sevcorine, korseveramine, severine, sevedine, sevedinine, et al. [1-5].

In continuation of the study of the alkaloidal composition of this plant, the mother liquor from sevedinine [6] was chromatographed over a column of  $\text{Al}_2\text{O}_3$  with elution by  $\text{CHCl}_3:\text{C}_6\text{H}_6$  (2:1),  $\text{CHCl}_3$ , and then  $\text{CHCl}_3:\text{CH}_3\text{OH}$  (10:0.5). The eluates were collected in fractions of 10-15 mL. The  $\text{CHCl}_3:\text{C}_6\text{H}_6$  (2:1) eluates afforded base **1**, mp 215-217°C (acetone);  $\text{CHCl}_3$  eluates, base **2**, mp 233-234°C (ethylacetate),  $[\alpha]_{\text{D}} -10.9^\circ$  ( $c$  0.63, ethanol), very soluble in ethanol,  $\text{CH}_3\text{OH}$ , and water.



The IR spectrum (KBr,  $\nu$ ,  $\text{cm}^{-1}$ ) of **1** showed characteristic absorption bands at 3131, 3037 (OH), 2950, 2915, 2762 (*trans*-quinolizidine) [7], 1710 (C=O), and 1460 ( $-\text{CH}_3$ ,  $-\text{CH}_2-$ ). Alkaloid **1** was identified as sevedinedione [4, 5] by mixed melting point and comparison of its IR spectrum. Sevedinedione was isolated for the first time from this plant.

The IR spectrum (KBr,  $\nu$ ,  $\text{cm}^{-1}$ ) of **2** contained absorption bands at 3400 (OH), 2950-2850, 1475 ( $-\text{CH}_3$ ,  $-\text{CH}_2-$ ), and 970 (N $\rightarrow$ O).

The PMR spectrum (100 MHz,  $\text{CCl}_4 + \text{C}_6\text{D}_6$ ,  $\delta$ , ppm, J/Hz) of **2** had characteristic signals at 1.18 (3H, s, 19- $\text{CH}_3$ ) and 0.86 (6H, d,  $J = 7$ , 21- $\text{CH}_3$ , 27- $\text{CH}_3$ ).

The good solubility in water and the lack of a Bohlmann band [7] in the IR spectrum indicated that **2** was an *N*-oxide.

Reduction of **2** by Zn in HCl produced a compound with mp 233-235°C that was identified by mixed melting point and IR spectrum as sevedinine [5].

Oxidation of sevedinine by  $\text{H}_2\text{O}_2$  produced the *N*-oxide, which was identical to the *N*-oxide isolated from the plant (mixed melting point, IR spectrum).

Thus, **2** was sevedinine *N*-oxide [5].

## REFERENCES

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