AN INVESTIGATION OF THE ALKALOIDS OF *Malacocarpus crithmofolius*

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Malacocarpus crithmofolius (Retz.) CAM (family Zygophyllaceae) has not been studied chemically. We have investigated the plant collected in May, 1970, in the budding stage (Ustyurt plateau, Karakalpak ASSR).

The raw material, previously moistened with a solution of sodium carbonate or ammonia, was extracted with chloroform. After the usual working up, we found that the combined alkaloids in the leaves amounted to 0.064% and in the stems 0.88% (of the weight of the dry raw material).

The mixture of alkaloids, consisting of a dark brown oil, was treated with petroleum ether, which was then driven off. An oil was obtained. Its homogeneity was established by chromatography; bp 145-150° C (25 mm), $[\alpha]_D^{20}$ + 7.5° (c 20; acetone), +10.1° (without a solvent), n_D^{20} 1.5412, yield 50% of the combined alkaloids.

The base formed crystalline salts: perchlorate with mp 152-153° C, nitrate with mp 78-80° C, oxalate with mp 68° C, and picrate with mp 186° C. UV spectrum: $\lambda_{max}^{ethanol}$ 260 nm (log ε 3.18), inflections at at 255 and 264 nm disappearing in an acid medium, which is characteristic for pyridine bases [1].

The composition of the alkaloid, $C_{10}H_{14}N_2$, and its mass and NMR spectra lead to the conclusion that it is anabasine. The IR spectra of a sample of anabasine and our alkaloid in chloroform were identical. A mixture of the picrates of the dehydrogenation products of our base and of anabasine gave no depression of the melting point. Thus, the base that we isolated is nothing other than dextrorotatory anabasine, obtained from the plant for the first time.

LITERATURE CITED

1. M. Swain, A. Eisner, C. F. Woodword, and B. A. Brice, J. Amer. Chem. Soc., 71, No. 3, 1341 (1949).

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