DIPTAMINE — A NEW ALKALOID FROM THE EPIGEAL PART OF *Dipthychocarpus strictus*

S. F. Aripova and O. Abdilalimov

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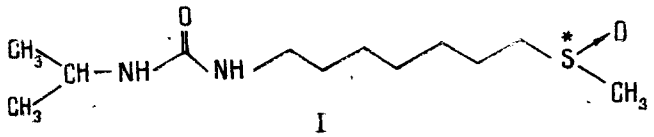
Continuing the preparation of the total alkaloids of the epigeal part of *Dipthychocarpus strictus* (Fisch.) Trautv. (family *Cruciferae*) collected in the Chimkent province, when the mixture of bases was chromatographed on a column of silica gel (1:25), the chloroform fractions yielded a crystalline substance with mp 87-89°C. The base proved to be new and has been named diptamine. Diptamine (I) is an optically active substance, $[\alpha]_D^{20}$ −42° (MeOH), readily soluble in chloroform, methanol, and water and sparingly soluble in benzene, ether, and acetone.

The IR spectrum of the alkaloid shows absorption bands at (cm^{-1}) 3320-3370 (active hydrogen), 1630 (amide carbonyl), and 1035 (sulfoxide group). The mass spectrum of (I) contains the peaks of ions with m/z 262 (M^+)(5), 247 $(M - CH_3)^+$(11), 204$(M - NH\text{-}CH(CH_3)_2^+$(30), 199 − $(M-S(=O)-CH_3)^+$(25), 161(10), 132(28), 114(16), 101(7), 84(27), 71(60), 69(52), 58(100%). In a comparative study of the mass spectra of diptocarpamine (II) [1] and (I), it can be seen that they differ in the m/z value of the molecular ion by 14 m.u.

The PMR spectrum of diptamine ($CDCl_3$) showed the signals of the protons of the following groups: $>C(CH_3)_2$ (1.13 ppm, 6 H, d, J = 8 Hz; $(CH_2)_5$ (1.25-1.75 ppm, 10 H, m); $CH_3S(\rightarrow O)$ (2,52; 3 H, s); $O{-}S{-}CH_2{-}$ (2.65 2 H, q, J = 8 Hz); $-CH_2{-}N{-}$ (3.07 2 H, t); $-CH{-}N{-}$(3.79; 1 H, m); 2 NH groups (5.07 and 5.26; 1 H, d, J = 8 Hz at 1 H, t).

The presence in the mass spectrum of (I) of a strong peak of an ion with m/z 58 as in the mass spectrum of diisopropylurea [2] shows that diptamine is also a N-alkyl derivative of isopropylurea. The difference of 14 m.u. between the molecular weights of (I) and (II) shows that diptamine is a homolog of diptocarpamine differing from the latter by one methylene group.

Thus, on the basis of spectral characteristics and the comparative study with diptocarpamine, diptamine has the structure of N-isopropyl-N'-(7-methylsulfinyl-n-heptyl)urea.



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LITERATURE CITED

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