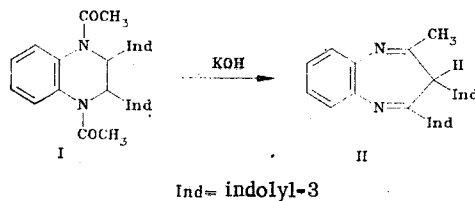


A NEW RECYCLIZATION OF 1,4-DIACETYL-1,2,3,4-TETRAHYDROQUINOXALINES
TO 1,5-BENZODIAZEPINES

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We have discovered a new recyclization reaction which permits the direct preparation of substituted 1,5-benzodiazepines from readily available 1,4-diacetyl-2,3-disubstituted 1,2,3,4-tetrahydroquinoxalines [1] by the action of 10% ethonolic alkali, for example:



2,3-Di(indolyl-3)-4-methyl-1,5-benzodiazepine (II) is formed upon heating I in diethyleneglycol with 10% aq. KOH at 160°C for 15 min, mp 281.5-283°C. IR spectrum: 1540 (C=N), 3420 cm^{-1} (NH). PMR spectrum (DMSO- d_6): 2.30 (s, 3H, CH_3), 1.95 (s, 1H, CH), 11.11 and 11.31 (s, 1H, indole NH), 6.65-7.47 ppm (m, 14H, aromatic protons). Mass spectrum, m/z: 76 (11.1), 77 (24.8), 89 (6.9), 90 (5.8), 102 (7.4), 105 (11.8), 115 (5.8), 117 (10.7), 128 (8.6), 129 (5.2), 130 (9.9), 131 (8.5), 132 (8.6), 189 (10.7), 194 (11.6), 216 (19.7), 242 (15.4), 243 (98.1), 244 (38.2), 245 (15.3), 255 (12.1), 256 (17.2), 257 (12.8), 258 (11.7), 269 (14.2), 270 (29.0), 271 (9.5), 373 (20.8), 387 (30.0), 388 (M^+ , 100.0), 389 (30.0). The elemental analysis data correspond to the calculated values.

LITERATURE CITED

1. A. K. Sheinkman, Kh. Ya. Lopatinskaya, N. A. Klyuev, and Zh. K. Torosyan, *Khim. Geterotsikl. Soedin.*, No. 2, 234 (1980).

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