

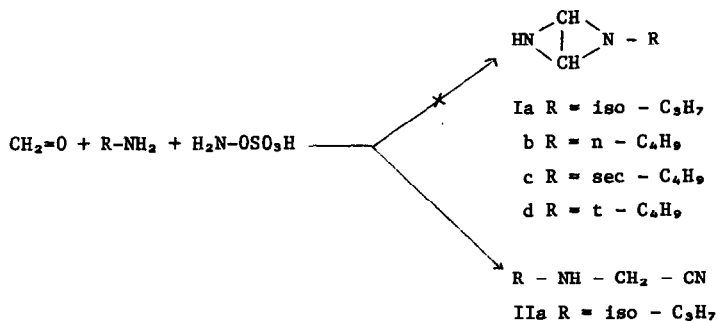
2-ALKYL-2,4-DIAZABICYCLO[1.1.0]-BUTANES. A CORRECTION

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Russian workers¹ recently described a surprising synthesis of 2-alkyl-2,4-diazabicyclo-[1.1.0]-butanes(I), citing empirical analysis, spectroscopic studies and chemical reactivity to support their assigned structures. Nevertheless, the thermal stability² and the stability to aqueous base³ reported for these compounds appear to belie the proposed structures. We now report that the products are in fact the well known⁴, N-alkyl-glycinonitriles(II).



Using the published¹ procedure we have prepared and isolated a compound having properties [b.p. 61°/26mm. (63-63.5°/23mm.)¹, η_D^{20} 1.4252, (η_D^{20} 1.4282)¹] similar to those reported previously¹ for Ia.

The ¹³C NMR spectrum** of this compound in (CDCl₃) consists of a quartet at 22.2 (2 CH₃'s), a triplet at 34.9 (CH₂), a doublet at 47.5 (CH) and a somewhat broadened singlet at 117.9 (C=N). It is clear that this spectrum is not in accord with structure Ia, but is entirely compatible with structure IIa. Furthermore, a weak but sharp band at 2240 cm⁻¹, in the IR spectrum of IIa

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** Peak positions are given in ppm from TMS.

(in CCl_4) clearly indicates the presence of a nitrile group; IR spectra of IIA prepared by both published procedures^(1,4a) are identical.

Finally, we propose that compound IIA is formed by, reaction of $\text{CH}_2=\text{N}-\text{CH}(\text{CH}_3)_2$ with HCN; the formation of HCN in the reaction of hydroxylamine-O-sulfonic acid with formaldehyde is a well known process⁵.

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