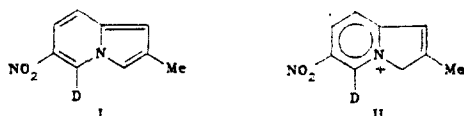


BASIC DEUTERIUM EXCHANGE IN THE INDOLIZINE SERIES

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Using 2-methyl-6-nitroindolizine as a model indolizine we have for the first time demonstrated selective basic deuterium exchange at position 5. Thus a sample of I was refluxed for 5 h in a solution of 4 mole/liter MeONa in MeOD. In its NMR spectrum the integrated intensity for the lowest field signal for 5-H fell more than 30 times while the remainder of the spectrum remained unchanged.



Monodeuteration was confirmed by mass spectrometric data. Solution of I in CF_3COOH led to formation of the 3H-indolizinium cation (II) which had "shifted" PMR signals and allowed a specific assignment of the deuterium exchange position (the spectra of non-deuterated I and II are given in [1]). Under the same conditions it was found that 2-methyl-8-nitroindolizine did not undergo deuterium exchange.

LITERATURE CITED

1. S. I. Bobrovskii, E. V. Babaev, and Yu. G. Bundel', *Khim. Geterotsikl. Soedin.*, No. 2, 203 (1987).