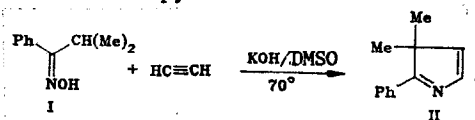


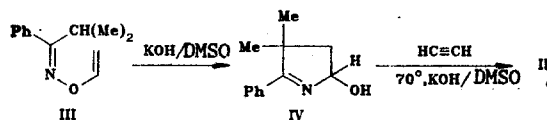
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Taking as an example the reaction of isopropyl phenyl ketoxime (I) with acetylene in the system KOH-DMSO, we have found that ketoximes which have only one 'aliphatic' hydrogen atom in the  $\alpha$ -position to the oxime function can be used as starting materials for the synthesis of the difficultly-accessible 3H-pyrroles.

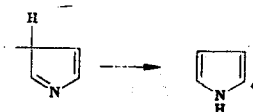


Since the corresponding 2-hydroxypyrrole (IV) (the rearrangement product of the O-vinyl oxime (III) [1] is converted under the reaction conditions into the 3H-pyrrole (II), this finding may be regarded as confirming one of the mechanisms proposed previously for a new synthesis of pyrroles [2, 3] in which O-vinylloximes undergo rearrangement.



The oxime (I) (4.08 g), 1.4 g of KOH, and 60 ml of DMSO, were mixed, and acetylene passed into the mixture with stirring at 70°C for 5 h. Treatment with water, extraction with ether, and chromatography (alumina, hexane-ether, 2:1) gave 0.4 g (9%) of 3,3-dimethyl-2-phenyl-3H-pyrrole (II),  $d_4^{20}$  1.0290,  $n_D^{20}$  1.5648. IR spectrum (film): 1370, 1387 (gem-dimethyl group), 2880, 2930, 2970 ( $\text{CH}_3$ ), 1510, 1570 (Ph), 3030, 3070, 3085 (ring CH), 1675  $\text{cm}^{-1}$  (C=N), no OH absorption in the region 3200-3600  $\text{cm}^{-1}$ . PMR spectrum (acetone- $\text{D}_6$ ): 1.39 (6H,  $2\text{CH}_3$ , s), 6.30, 7.00 (2H,  $-\text{CH}=\text{CH}$ , d.d.,  $^3J_{4,5} = 3.2$  Hz), 7.39-7.48, 8.04-8.09 ppm (5H, Ph, m). Mass spectrum:  $M^+$  171. The elemental analyses agreed with the calculated values.

3H-Pyrroles function as intermediates if only one hydrogen atom is present in the 3-position



The hydroxypyrrole (IV) (1.19 g), 0.35 g of KOH, and 15 ml of DMSO were stirred and heated at 70°C for 5 h while passing in acetylene. GLC showed the presence of the 3-H-pyrrole (II).

## LITERATURE CITED

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