

2,3,4-Trimethyl-3H-imidazo[4,5-c]pyridine (VII). This compound had mp 134-135° (from heptane). PMR spectrum,  $\delta$ : 2.55 (s, 2-CH<sub>3</sub>), 3.00 (s, 4-CH<sub>3</sub>), 4.01 (s, 3-CH<sub>3</sub>), 7.88 (d, 7-H, J = 7.2 Hz), and 8.28 ppm (d, 6-H, J = 7.2 Hz).

#### LITERATURE CITED

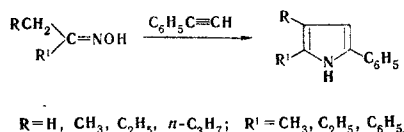
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#### REACTION OF KETOXIMES WITH PHENYLACETYLENE - A ROUTE TO $\alpha$ -PHENYLPYRROLES

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The synthesis of pyrroles from ketoximes and acetylene [1] could not be extended to substituted acetylenes (for example, see [2]). However, we have demonstrated that phenylacetylene is capable of undergoing reaction with various ketoximes when the reagents are heated to 120-140°C with 30-50% KOH (based on the weight of the ketoxime) to give the expected  $\alpha$ -phenylpyrroles.



Thus we have demonstrated the possibility of the use of substituted acetylenes in the reaction; this makes the range of application of this synthesis considerably wider than it was prior to this research.

Thus 2-methyl-5-phenylpyrrole was obtained from acetone oxime in 21% yield. The product was isolated from the reaction mixture by steam distillation and was obtained as white crystals with mp 95°C (from 50% aqueous methanol). Its <sup>1</sup>H and <sup>13</sup>C NMR spectra and UV spectra were identical to those previously described, and the results of gas-liquid chromatography (GLC) and the PMR spectrum indicated that it was an individual substance. Similar reaction of acetophenone oxime gave 2,5-diphenylpyrrole (15% yield) as greenish crystals with mp 143°C [isolated by chromatography on Al<sub>2</sub>O<sub>3</sub> by elution with petroleum ether-hexane-diethyl ether-alcohol (40:32.8:26.2:1)]. PMR spectrum (in CCl<sub>4</sub>): singlet at 8.5 ppm (1-H), doublet at 6.3 ppm (J<sub>CH-C-NH</sub> = 2 Hz); 3-H and 4-H), and a multiplet of phenyl protons centered at 7.27 ppm. The results of elementary analysis of both compounds were in agreement with the empirical formulas, and the IR spectra contained the typical bands of pyrroles.

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