SYNTHESIS OF SUBSTITUTED EPOXYALKYLPYRIDINES

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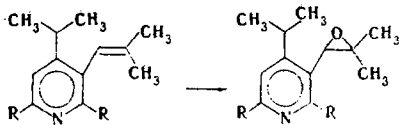
We have established that 4-isopropyl-3-(2-methyl-1-propenyl)-2,6-diarylpyridines Ia-c are converted to epoxyalkylpyridines IIa-c in 12 h when they are treated with 82% m-chloroperbenzoic acid in methylene chloride at room temperature. N-Oxides are not formed under these conditions.

The following compounds were obtained [the melting points (solvent) and yields (%) are given]: IIa, 90°C (petroleum ether), 82; IIb, 152-153°C (benzene—petroleum ether), 76; IIc, 127-128°C (benzene—petroleum ether), 70.



I a-c II a-c

I-II a R = C_6H_5; b R = C_6H_4Cl-*p*; c R = $C_6H_4CH_2C_6H_5$-*p*

PMR spectra (CCl_4): 1.34 [two s, 4-$(CH_3)_2$], 3.6 (m, 4-CH), 0.4 and 1.0 (two s, 3-$(CH_3)_2$], 4.05 (s, 3-CH), and 6.8-8.2 ppm (signals of the aromatic substituents and the proton of the pyridine ring). The mass spectra of IIa-c contain molecular-ion and fragment-ion peaks ($M^+ - 15$, $M^+ - 42$, $M^+ - 58$, and $M^+ - 72$) that confirm the presence of an epoxide fragment in the reaction products.

The results of elementary analysis for C, H, and N are in agreement with the calculated values.

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