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SYNTHESIS OF 2-VINYLOXYPYRIDINE

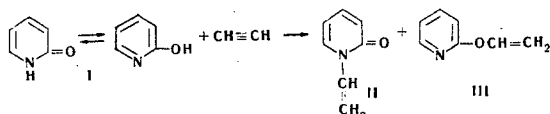
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The idea of the existence of 2-hydroxypyridine (I) in two forms, of which 2-pyridone (Ia) is the most stable, is generally accepted, and the presence in the free crystalline state of the tautomeric hydroxypyridine form (Ib) has frequently been doubted [1, 2].

It has been shown previously [3, 4] that when I is vinylated in the presence of caustic potash only N-vinyl-2-pyridone (II) is obtained. Assuming that the reaction of I with acetylene can take place at two reaction centers, we have attempted to effect the synthesis of III.



As a result of a study of the influence of the medium and various catalysts on the vinylation of I, we succeeded in obtaining, in addition to II, the new vinyl ether III. It has been established for the first time that, in the presence of heavy-metal chlorides and acetates, I reacts with acetylene under pressure forming mainly 2-vinyloxy-pyridine (III) and only small amounts of II. The structure of III has been confirmed by IR and NMR spectroscopy.

2-Vinyloxy-pyridine. Yield 42%, bp 59-60° C (15 mm), d_4^{20} 1.0244, n_D^{20} 1.5205. Found, %: C 69.40; H 5.94%; MR_D 35.97. Calculated for C_7H_7NO , %: C 69.40; H 5.82%; MR_D 35.24.

N-Vinyl-2-pyridone. Yield 15%, bp 107° C (6 mm), d_4^{20} 1.1220, n_D^{20} 1.5960.

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