BROMINATION OF 1,2-DIMETHYL-1H-IMIDAZO[4,5-b]PYRIDINE

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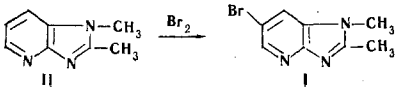
The synthesis of 6-bromo-substituted imidazo[4,5-b]pyridines by cyclization of the corresponding 2,3-diamino-5-bromopyridines by refluxing them with formic acid [1] is described.

Our experiments indicated that 1,2-dimethyl-6-bromo-1H-imidazo[4,5-b]pyridine (I) can be readily obtained by direct bromination of 1,2-dimethyl-1H-imidazo[4,5-b]pyridine (II) by heating in dilute acetic acid.



II I

EXPERIMENTAL

1,2-Dimethyl-6-bromo-1H-imidazo[4,5-b]pyridine (I). Bromine (1 ml) was added at 70 deg to a solution of 2.14 g (0.014 mole) of II in 75 ml of dilute acetic acid (1:1), the mixture was stirred at the same temperature for 5 h, the solution was evaporated, and the residue was dissolved in water. The solution was neutralized with sodium carbonate, and the precipitate was filtered to give 1.5 g (46%) of I as colorless needles (from benzene) with mp 175-176 deg, λ_{max} 295 nm (ethanol), and ν_{C-Br} 595 cm^{-1}. Found %: N 19.0; Br 35.6. $C_8H_8BrN_3$. Calc. %: N 18.6; Br 35.4.

LITERATURE CITED

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