

ELECTROCHEMICAL FLUORINATION OF THE N-METHYLMORPHOLINE

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The results of some researches as regards the possibility to carry out selective electrochemical fluorinations of organic compounds by use of organic solvents are reported.

Various organic solvents (acetonitrile, 1,4-dioxane, N,N-dimethylformamide) have been employed in the electrochemical fluorination of the N-methylmorpholine (NMM) but the results have not been those

expected. Because of strong interactions taken place within certain ratios solvent/HF, many difficulties have been got into as regards the conductivity.

Better results were obtained working without the solvent and with a great concentration (40 %) of the NMM in hydrogen fluoride. In the experiments carried out, the electrochemical fluorination of the NMM appeared highly selective: at first it took place on the positions beside the oxygen atom, then on those beside the nitrogen atom and at last on the methylic group. A mechanism of the reaction is proposed.