

SYNTHESES AND REACTIONS OF 3-CHLOROISOXAZOLIUM CHLORIDES

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When 3-isoxazolones(I) were treated with phosgene(2 eq.) or trichloromethyl chloroformate(T.C.F) (1 eq.) at ambient temperature, 3-chloroisoxazolium chlorides(II) were obtained in excellent yield.

Reactions of II with nucleophiles(amine, aniline, phenol, thiophenol, alkylthiol) gave the corresponding onium salts, whereas the reaction with an alcohol yielded I. 3-Alkylthioisoxazolium salts could be also prepared from 4-isoxazolin-3-thiones and alkyl halides.

Pyrolysis of these onium salts afforded 3-chloro,-amino,-anilino,-phenoxy,-thiophenoxy and -alkylthioisoxazoles. Their formations depended upon the nature of substituents at 2-position of the onium salts. 2-Methyl derivatives gave good results in the most of cases, and 2-benzyl derivatives did the best results in the cases of 3-alkylthioisoxazolium salts.