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SYNTHESIS AND REACTIONS OF N-AMINOIMIDAZOLIUM AND N-AMINOTHIAZOLIUM SALTS

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The salts of N-amino 1-methyl(benz)imidazole, 1,2-dimethyl(benz)imidazole, 2-methyl(benzo)thiazole, 2-amino(benzo)thiazole, and 2-acylamino(benzo)thiazoles were readily prepared by treating the parent heterocycles with O-mesitylenesulfonylhydroxylamine (MSH) in high yields. Treatment of 3-amino-1-methyl(benz)-imidazolium, 3-amino-1,2-dimethyl(benz)imidazolium, and 3-amino-2-methylthiazolium salts with benzoyl chloride gave the corresponding N-benzoylimino derivatives, which showed the expected spectral properties. Reaction of 3-amino-1-methyl-benzimidazolium salt with dimethyl acetylenedicarboxylate resulted in the formation of an unusual 1 : 1 adduct, dimethyl 1-(2'-methylamino)phenylpyrazole-3,4-dicarboxylate. Treatment of 3-amino-1-methylbenzimidazolium salt and 3-amino-2-methyl-benzothiazolium salt with benzaldehyde in the presence of alkali gave benzaldehyde 2-(N,N'-formylmethylamino)phenylhydrazone and 4-acetyl-2-phenylbenzo-2,3-dihydro-1,3,4-thiadiazine, respectively. Heating 2-acylamino-3-amino(benzo)-thiazolium salts in polyphosphoric acid afforded thiazolo[3,2-b]-s-triazoles in high yields.