

Some new organotellurium compounds derived from 4, 5-diphenylimidazole

Abstract

Mercuration of 4, 5-diphenylimidazole with mercury acetate followed by addition of LiCl gave 4, 5-diphenyl-2-imidazolylmercury chloride (1) in 59% yield. Trans-metallation of 1 with tellurium tetrabromide in glacial acetic acid afforded 4, 5-diphenyl-2-imidazolyl tellurium tribromide (2). Reaction of 1 with tellurium tetrabromide in dry dioxane yielded the unknown complex (3) which on reduction with hydrazine hydrate or with sodium sulphide gave 4, 5-diphenylimidazole in good yield. Reaction of 1 with 2 in dry dioxane followed by reduction with sodium metabisulphite or reduction of 3 by sodium metabisulphite gave bis (4, 5-diphenyl-2-imidazolyl) telluride (4). Reaction of 4 with bromine and iodine gave dibromo (5) and diiodo (6) derivatives, respectively. Reduction of 2 by hydrazine hydrate in boiling ethanol gave bis (4, 5-diphenylimidazolyl) ditelluride (8). All compounds were characterized by elemental analysis, IR, ^1H , ^{13}C NMR and mass spectroscopic data.