

Synthesis of SnI_4

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§ 1 Reaction Theory

§ 2 Experimental Method

§ 2.1 Tin(IV) Iodide

Granulated tin (3 g) and chloroform (40 cm³) were added to iodine (4.5 g) in a Quickfit round bottom flask (100 cm³). The flask was then added to a reflux setup, with the guard tube being filled with calcium chloride (1-2 cm) packed between two pieces of cotton wool. The mixture was heated gently until solvent vapour appeared and then was left on the hot plate until the violet colour from the iodine had disappeared. The solution was decanted and then cooled in an ice bath. The product was vacuum filtered and washed with n-pentane (10 cm³) and then dried via suction. The dry product was then weighed (2.5 g, 56%).

§ 2.2 Bis(dimethylsulphoxide) adduct of Tin(IV) Iodide