

Synthesis and Biological Studies of Some Sulfur, Selenium and Tellurium Organic Compounds Based on Diethanolamine

Abstract

Several new and known bis(2-(arylchalcogeno)ethyl)amines (i.e. $\text{HN}(\text{CH}_2\text{CH}_2\text{EAr})_2$; where $\text{E}=\text{S}$, Se and Te , $\text{Ar} = \text{C}_6\text{H}_5$, 4- $\text{CH}_3\text{C}_6\text{H}_4$, 4- $\text{CH}_3\text{OC}_6\text{H}_4$, 4- $\text{CH}_3\text{CH}_2\text{OC}_6\text{H}_4$, 4- BrC_6H_4 , 4- ClC_6H_4 and 4- PhC_6H_4) were prepared by the reaction of bis(chloroethyl)amine with lithium arylthiolate or with the corresponding sodium arylchalcogenate (generated in situ by borohydride reduction of R_2Ee_2 ; i.e. ArE-Na^+ ; $\text{E} = \text{Se}$ and Te). All compounds were obtained in good yield and characterized by elemental analysis, IR, ^1H and ^{13}C NMR and mass spectroscopic data. Antibacterial activity study of these compounds showed some promising activity against *S. aureus*, *P. aeruginosa* and *E. coli*