Abstract

Controlled conditions were implemented throughout during the synthesis of desired compounds. The reaction of morpholine with 3,5-Dichloro-2-hydroxybenzenesulfonyl chloride (**2**) was done according to balanced chemical equation in stoichiometric amounts in the solution of 10% sodium carbonate. The pH of solution was maintained at 9-10 units. Then continuous stirring for 4 hours was made until the adjustment of solution pH at 6 units. The monitoring of reaction is done by using TLC. The precipitated particles were subjected to washing by using distilled water. This precipitate is marked as **"3".** After it, Compound **3** (0.0015 mol) was dissolved in DMF (15 mL) in a 50 mL RB flask and lithium hydride (0.0015 mol) was added. The reaction mixture was stirred for 30 minutes. Equimolar amounts of 2/4-chlorobenzyl chlorides (**4** & **6**; one in each reaction) were then added to the reaction mixture, which was further stirred for 7-8 hours. The reaction was monitored by TLC. Excess cold distilled water was added to obtain the precipitated respective final products, **5** & **7**, which were recovered by filtration, washed with distilled water and dried. Elucidation of compounds structures was done by employing ^{1}H-NMR, ^{13}CNMR. The molecular weights of the compounds were calculated by adding up the masses of protons detected by proton NMR and carbons detected by ^{13}CNMR. DMSO-d6 was employed as solvent operating spectrometer for NMR analysis. NMR Spectral interpretation showed good results for both compounds. Enzyme inhibition activity was determined against mushroom tyrosinase by using Kojic acid. Results obtained from enzyme inhibition activity were poor as compared to that of Standard. However, results inferred that compound **7** has more inhibition potential than compound **5**.