ABSTRACT

The reaction of 4-methyl-1,3-thiazol-2-amine (1) with benzenesulfonyl chloride (2) was carried out at PH 9 with 10% aqueous sodium carbonate solution. Reaction mixture was stirred for 4 hours at reflux process till Precipitation occur, followed by the TLC technique. Precipitates separated was washed and dried to get purified Preparation of sulfonamide derivative Synthesis of Synthesis of *N*-(4-methyl-1,3-thiazol-2-yl) benzene sulfonamide (3). Then, calculated amount of above mentioned parent molecule 3 was put in RB flask and DMF (*N*,*N*-dimethyl formamide) was added Lithium hydride was mixed in above mixture. The mixture was set on stirring for 40 minutes and substitutes of aromatic halides will be mixed in prepared mixture and was stirred more for 4-5 hours. The evolvement of reaction was observed with thin layer chromatography till single spot is displayed. To get the final products, the mixture was washed with cold water. Griffin-George apparatus for used to determine the melting point. So, the final derivatives of sulfonamides *N*-(4-methyl-1,3-thiazol-2-yl)-*N*-(mono/dichlorobenzyl) benzene sulfonamides **(5a-c)** was deduced by spectral techniques. The spectroscopic techniques ^{1}H-NMR, EIMS, IR and biological activity was done to illustrate the compounds. NMR was done by utilizing DMSO d_6 as a solvent operating spectrometer at 600 MHz and TMS used as standard reference. The ppm used to record the chemical shift and hertz unit for coupling constant. Biological activity of the compounds gave good results. The compounds were active, however, these showed very moderate results of anti-bacterial, anti-fungal and enzyme inhibition activity.