ABSTRACT

More than twenty thousands of sulfonamide analogs, derivatives and related compounds have been synthesized. Such type of synthesis is responsible for the discovery of new compounds containing varying pharmacological properties. In the present study first synthesis of *N*-alkyl substituted derivatives of *N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide was carried out and then their Haemolytic, Antimicrobial and Antioxidant potential was evaluated by conventional methods. The synthetic scheme actually comprised of two steps including sulfonamide formation by the reaction of *p*-methyl benzenesulfonyl chloride with *m*-phenetidine (*m*-ethoxy aniline) and then *N*-alkylation. FTIR, ^{1}H-NMR and X-ray crystallography tools were employed for the characterization of the synthesized compound namely; *N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide, *N*-methyl-*N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide, *N*-ethyl-*N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide, *N-iso*-propyl-*N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide, *N*-benzyl-*N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide and *N*-2-phenylethyl-*N*-(3-ethoxyphenyl)-4-methyl benzenesulfonamide. Our results revealed that these compounds exhibited antioxidant and haeomolytic potential but none of them displayed antimicrobial activity.