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Ultrasound assisted synthesis, molecular docking and antimicrobial activities of some aryl sulfonamides

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A series of aryl sulfonamides have been synthesised with more than 70% yield using ultrasound assisted condensation of aryl sulfonyl chloride and aryl amines in the presence of ferric chloride-bentonite in ethanol medium. The synthesised sulfonamides have been characterized from their physical constants, infrared and NMR spectroscopic data. In this synthetic method, the effect of catalyst and solvents on the yields have been studied. The molecular docking analysis of these sulfonamides have been investigated by finding protein-ligand interaction and binding affinities. Antimicrobial activities of these sulfonamides have been studied against selected microbes.

Keywords: Aryl sulfonamides, Ultrasound assisted synthesis, Ferric chloride-bentonite, Molecular docking, Antimicrobial activities