



Research article

Green synthesis of magnetic iron oxide nanoparticle using leaves of *Glycosmis mauritiana* and their antibacterial activity against human pathogens

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Abstract

The potential effect of *Glycosmis mauritiana* leaf extract for the formation of iron oxide nanoparticles and its application on antibacterial activity was discussed. The efficiency of *G. mauritiana* leaves are used as a bio-material for the first time as reducing agent. Synthesized iron oxide nanoparticles were characterized by UV-Vis spectrometry, DLS, XRD, FT-IR, SEM and TEM analysis. The results revealed that iron oxide nanoparticles has the absorption peak at 404 nm, spherical shaped and average size of particle is found to be below 100 nm. The green synthesized iron oxide nanoparticles showed good antibacterial activity against the tested pathogens. The present study highlights the potential application of iron oxide nanoparticles can be explored for biomedical industries.