ABSTRACT

This study focuses on a unique strategy for the biosynthesis of AgNPs from *Polyporous* and *Amylosporous* extract. Morpho-anatomical and molecular analysis of both specimens were performed to identify the species. The synthesized silver nanoparticles were characterized on the aspects of size, shape and Stability by UV-visible spectroscopy, FTIR and SEM. The outcomes showed that the biosynthesized AgNPs using *Polyporous* sp. and *Amylosporous* sp. have strong biological potential. Antibacterial activities against the bacteria *Paracoccus denitrificans*, *Peptostreptococcus* sp., *Bacillus subtilis*, *Pseudomonas maltophilia* and antifungal activities against the fungal strains (*Penicillium digitatum* (Pers.) Sacc., *Trichoderma viride* Pers., *Mucor mucedo* L., were estimated by inhibition zone test and the measurements of zone of inhibition were recorded . In addition to this anti-oxidant activity was assessed with various assays, such as DPPH, FRAP, TAA, TPC and Metal Chelating. ANOVA analysis of mycosynthesized AgNPs has shown that *Amylosporous* sp. (AG01) has more significant value ($p \leq 0.05$) as compared to *Polyporous* sp. (AG02).