

ABSTRACT

In this present research work the antibacterial potential of green synthesized nanoparticles (*Halymenia porphyraeformis* and *Soleria robusta*) was evaluated against oral bacteria. Characterization of AgNPs was done by FTIR, SEM, XRD and UV-Visible spectroscopy respectively. UV visible spectroscopy displayed absorption peak of 20 % reaction mixture of both type of particles at 440 nm. XRD analysis revealed the morphology of both the particles which confirmed the crystalline nature of the particles The size of the green AgNPs of *H. porphyraeformis* was calculated as 15.23nm while AgNPs of *S. robusta* was 17 nm The FTIR analysis indicated that C=C bending, S-H groups and aromatic functional groups were attached with both the green synthesized AgNPs. For stains of pathogenic bacteria *Staphylococcus aureus* (MT416445), *Streptococcus viridans* (MT416448), *Lactobacillus acidophilus* (MT416447) and *Lactobacillus brevis* (MT416446) were used. Both green synthesized silver nanoparticles showed moderate antibacterial activity against all strains of bacteria except *L. acidophilus*. Both particles showed maximum zone of inhibition against *L. acidophilus* at a lower concentration of 50 and 100 µg. However it was concluded that silver nanoparticles of *H. porphyraeformis* is more effective then *S. robusta* because of smaller size and spherical shape of particles of *H. porphyraeformis*.