**Abstract**

In recent decades nanotechonology has become the most emerging field of material science. The size of nano particles ranges from 1nm to 100nm scale($10^{-9} m$).The major methods used for the synthesis of silver nano particles are the physical and chemical methods. The problem with the chemical and physical method is that the synthesis is expensive and can also have toxic substances absorbed on to them. Biological method provides a feasible alternative to replace these methods**.** Metal nanoparticles synthesized from the green synthesis process come as a boon for medical industry. These green synthesized metal nano particles is of great consideration because of its widened application in optical, electrical , thermal and mechanical fields. Among various metals, Silver and silver ion nano particles are widely known for their bactericidal and fungicidal activity. The theraptic efficiency of silver nano particles is several folds greater than conventional silver compounds. In the present study, silver nanoparticles were synthesized using green synthesis process by Ocimum Sanctum leaves. The presence of silver was confirmed by different characterization techniques such as UV-VIS spectroscopy spectrum, FTIR, XRD studies. Synthesized Silver nanoparticles activity on water borne bacteria was investigated