The scientific term “Nano”, is mostly used to determine the size of a particle (Albrecht, et. al; 2006). The particle varies in size from 1 to 100 nano-meters in size are considered as nanoparticles. The research on nanoparticle is currently an area of interest scientific field due to a wide of potential application in biomedical. There are various application of nanosize like medicine, mechanical, Bio-medical electronics Metals purposes by chemical and biological methods (Albrecht et al; 2006). Now a days, plant extracts are a matter of concern for synthesizing nsano particles due to several advantages. In the nanotechnology field, researcher are busy to find the metal i.e. nanoparticles for its benefits. They are made up of noble metals like silver, gold, platinum and palladium while silver nanoparticles being most exploited (Grossarth et al; 2007). Now it is widely used in different areas like medicine, energy saving, electronics, textile, environment, biomedical, cosmetics etc. However, silver nanoparticles synthesized these common hemi-parasitic taxa have been assayed for anti-parasitic effect. Hence, the present study is related to silver nanoparticles synthesizing property of mistletoes leaves to detect their effectively.

Materials and methods

Preparation of plant extract

The leaves were washed several times with deionized water. Then leaves are sundried and grinded with mortar-pestle to make homoginised powdery form. 1g of leaves powder dust dissolve in 10ml distilled water, then the homogenized material are taken in a test tube and placed for boiling with water bath 15 min. Then the Whatman No 1 filter paper is used to filtrate the plant material and simultaneously collected for storing at 4°C for further use.

Now, 90ml 1mM $AgNO_3$taken into a conical flasks and 1ml of plant extract mixed drop by drop and the solution are homogenized about 15 min. The change in colour in solution was observed at a certain time gap. Then the incubation of the conical flasks was done at room temperature for 3 h. After incubation, the colour of the solution is checked.

Characterization of silver nanoparticles

The silver-nanoparticles thus synthesized were subjected to various characterization techniques such as UV-Vis spectrophotometer (model no.).

Results and Discussions

The synthesis of silver-nanoparticles using *L. parasiticus and M. cochinchinensis* leaf extract was found to be significant in Boiled extract method compared to other methods. The colour of the reaction medium gradually changed due to surface plasmon resonance and turned into dark brown.

Characterization of silver nanoparticles by UV-Visible spectroscopy

The presence of silver nano-particles is observed at absorption peak between 430-460 nm. In our experiment we plotted Absorption Spectrum according to the "Y" axis and wave length plotted according to "X" axis. In case of *L. parasiticus,* the absorption pick increase from 692µm, and maximum increase at 440 nm. then the pick decrease. The absorption pick at 440 nm indicate the presence of Silver Nano particle in the *Loranthus* and *Macrosolen* leave powder. At the same time, there is no pick found within the range in case of *Viscum.*

Fig-81: Plant extract with $AgNO_3$ shows dark brown colour after incubation in case of *Loranthus*

Fig -82: Plant extract with $AgNO_3$ shows dark brown colour after incubation in case of *Macrosolen*

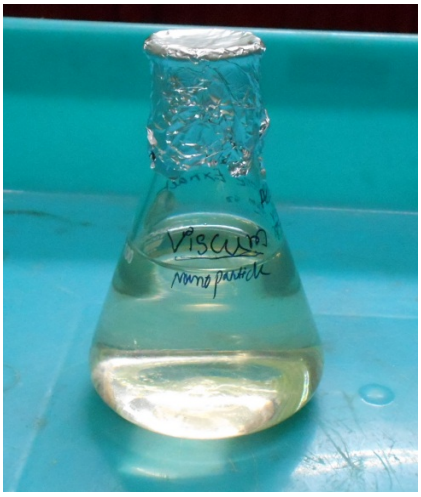
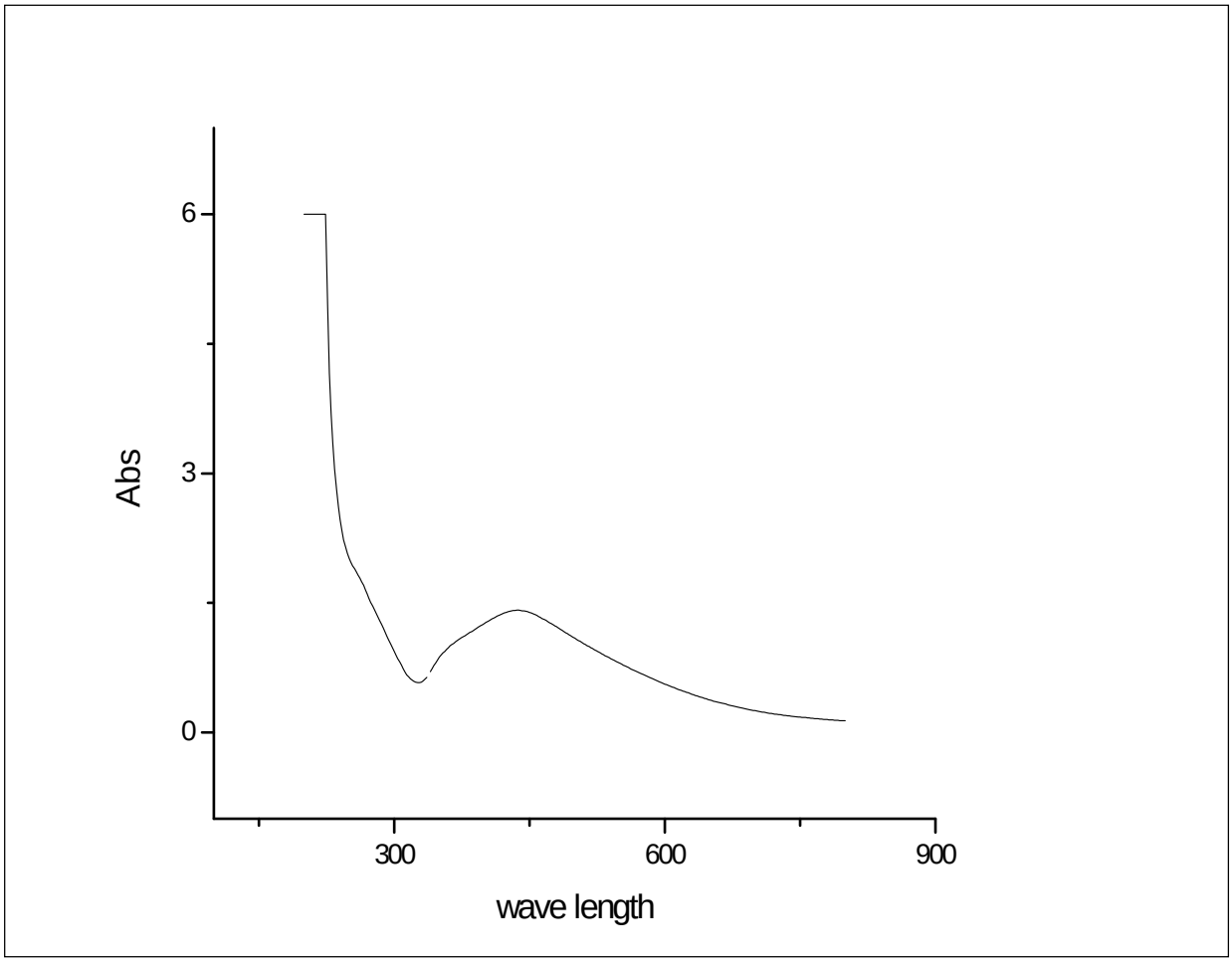
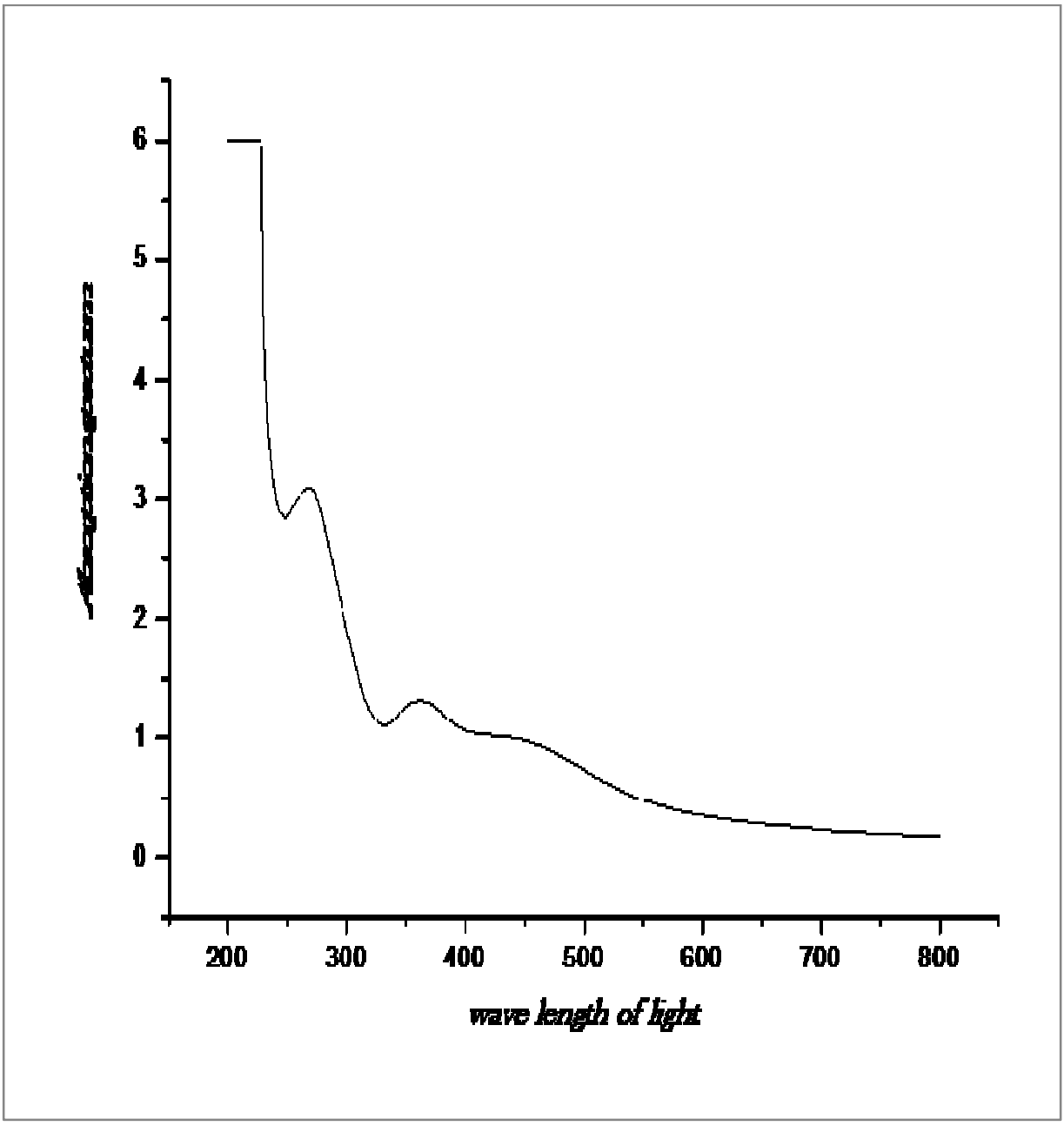


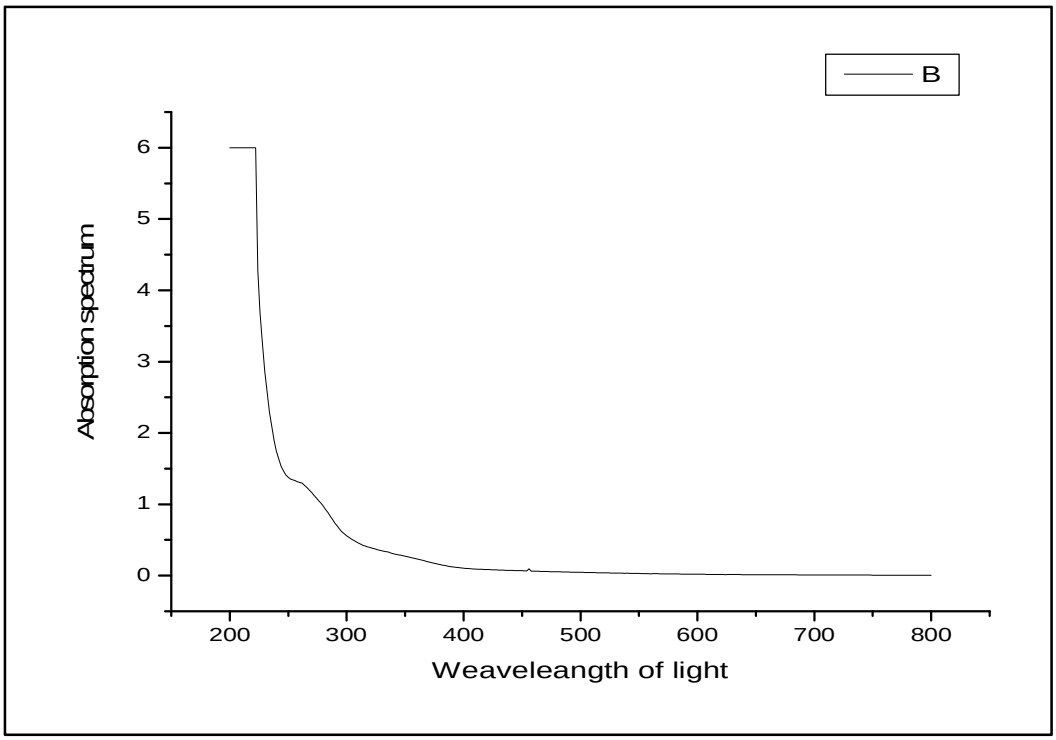
Fig -83: Plant extract with $AgNO_3$ (Significant change in coloration has not observed after incubation in case of *Viscum)*



Graph – 26: UV-Visible Spectroscopy showing showing spectrum which indicate the presence of Nano-particles in *Loranthus*



Graph – 27: UV-Visible Spectroscopy showing showing spectrum which indicate the presence of Nano-particles in *Macrosolen*



Graph – 28: Graphical representation of silver nanopartical synthesis result of *Viscum* leaf.