

University of Zabol Graduate school Faculty of Agriculture

#### The Thesis Submitted for the Degree of M.Sc Horticultural Science-Medicinal Plant

# Biosynthesis of nano-silver particles using persimmon (Diospyros kaki) extract

### Supervisors: Dr. B. A. Fakheri Dr. M. R. Asgharipour

Advisor: Dr A. R. Yazdinezhad

## **By:** Faegheh Najafi

February 2016

#### Abstracts

Nano Technology is considered attractive research area for mankind due to Production nanoparticles in different size, shape , chemical composition, and distribution. One of the ways affordable production of silver nanoparticles is the reduction method  $Ag^+$  to  $Ag^0$ , on the contrary nowadays use reducing chemical compounds or use reducing microorganisms followed by chemical and biological contamination risks. In this research used extract of astringent persimmon fruits (*Diospyros kaki*) that collected from Tarom , Zanjan. Particles synthesized by using green chemistry without any additives. The results of this research indicate the identification of these particles with UV-vis absorption peak at 450 nm and Phytosynthese silver nanoparticles With dimensions less than 100 nm with XRD and TEM devices. Early reviews shows the size and the potential of the synthesized particles that measured by zetasizer very good stability.

Keyword: persimmon (Diospyros kaki), phytosynthesis, nano silver particles, Zetasizer