

## Abstract

Silver nanoparticles has been considered for many applications in medicine and industry and their green synthesis is common due to low cost, high speed, non-toxic and biocompatible component. *Biebersteinia multifida DC.* from Geranium family is endemic of Iran and contains alkaloid compounds, polysaccharide and polypeptide. In the present study silver nanoparticles were synthesized using aqueous extract of the root bark of this plant. This nanoparticle was identified using spectrophotometry (UV-Vis), X-ray diffractometer (XRD), transmission electron microscopy (TEM) and (FTIR). Results indicated that silver nanoparticle was the spherical shape with dimension of 57nm. Biologic effect of silver nanoparticle on gram-positive bacteria (*Staphylococcus aureu*) and gram-negative bacteria (*Salmonella enteritidis* and *Escherichia coli*) was evaluated which represents its antibacterial properties.

Keyword: Green synthesis, *Biebersteinia multifida DC.*, Silver nanoparticles, Antibacterial properties.



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**Title**

**Green synthesis of silver nanoparticles using some  
medicinal plants and evaluation of its antibacterial  
properties**

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