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SUPPLEMENTARY MATERIAL TO

Green synthesis of silver nanoparticles utilizing *Gardenia latifolia* extract, characterization and *in vitro* antibacterial activity

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PHYTOCHEMICAL INVESTIGATIONS OF CRUDE EXTRACT AND FRACTIONS

Table S-I. Preliminary phytochemical investigation of the bark of Indian plant *G.latifolia*

Functional groups	Test	Impression
Alkaloids	Dragendrof's reagent: Extract + dilute Hydrochloric acid + Dragendroff's reagent (potassium bismuth iodide solution). Red ppt. obtained indicated the presence of alkaloids	-
Flavonoids	Lead acetate test: Extract + 2-3 drops of lead acetate solution. The yellow color ppt. obtained indicated the presence of flavonoids.	+
Anthraquinones	Bontrager's test: Boil the extract + dilute sulfuric acid+ filter + chloroform. The organic layer obtained + 2-3 drops of strong ammonia solution. The lower ammoniacal layer takes on a pink or red color indicating the presence of anthraquinones	+
Tannins	Gelatin test: Extract + 1% gelatin solution containing NaCl. White ppt. obtained shows the presence of Tannins.	+
Saponins	Extract + 20 mL water. The formation of stable foam indicates the presence of saponins.	+
Steroids	Libermann-Burchard test: Extract + 2 mL of chloroform + ten drops of acetic anhydride and two drops of concentrated sulfuric acid. If the solution turns red, then blue, and finally bluish-green, a steroidal nucleus is present. If the solution turns purple or red, a triterpenoid nucleus is present.	+
Glycosides/Sugars	0.5 mL of crude extract +1 mL of distilled water and NaOH. The yellow tint obtained indicates the presence of glycosides/reducing sugars.	+

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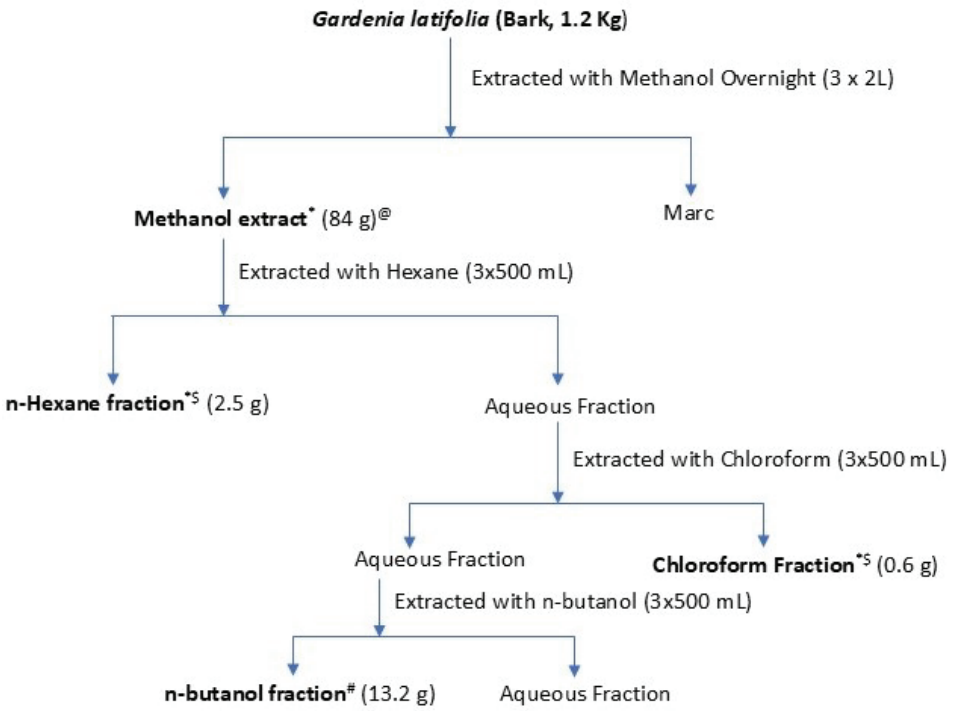

@A part (24g) was taken out.
$Washed with water and dried over Na_2SO_4
*Solvent was completely removed under vacuum at 60-70°C on Buchi Rota Vapor.
#Solvent removed under vacuum by making azeotrope with water.

Fig. S-1. Flow chart of fractionation procedure of crude extract

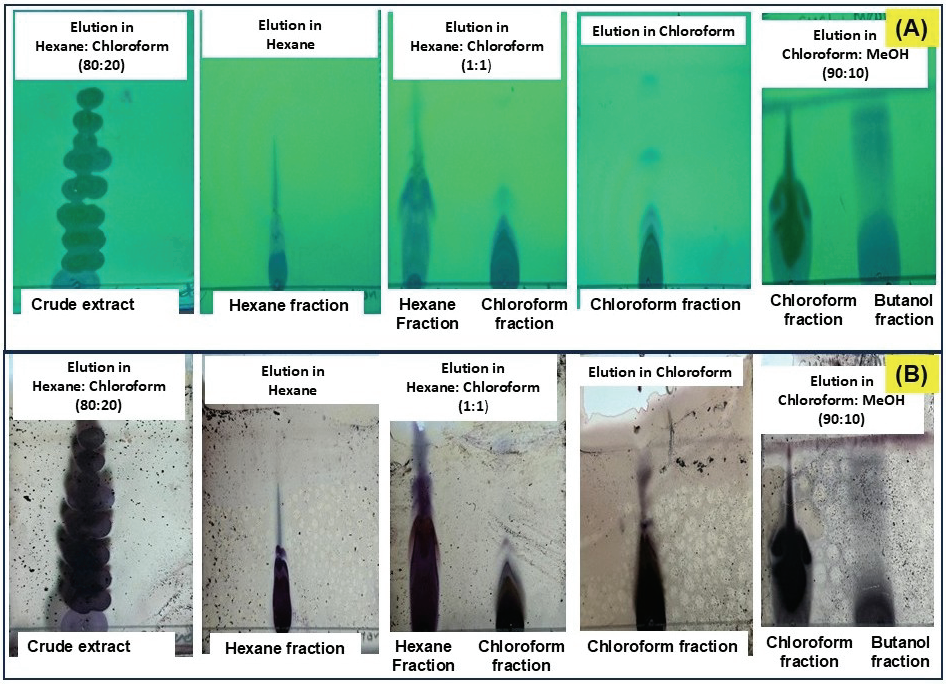

Fig. S-2. Thin layer chromatography profile of extract and fractions visualized under UV-254 nm (**A**), and on treated with a vanillin-sulphuric acid (1: 5, w/v) solution in ethanol, and subsequently heated at 95 °C for 5 minutes (**B**).

CHARACTERIZATION OF THE AGNPS FORMULATIONS

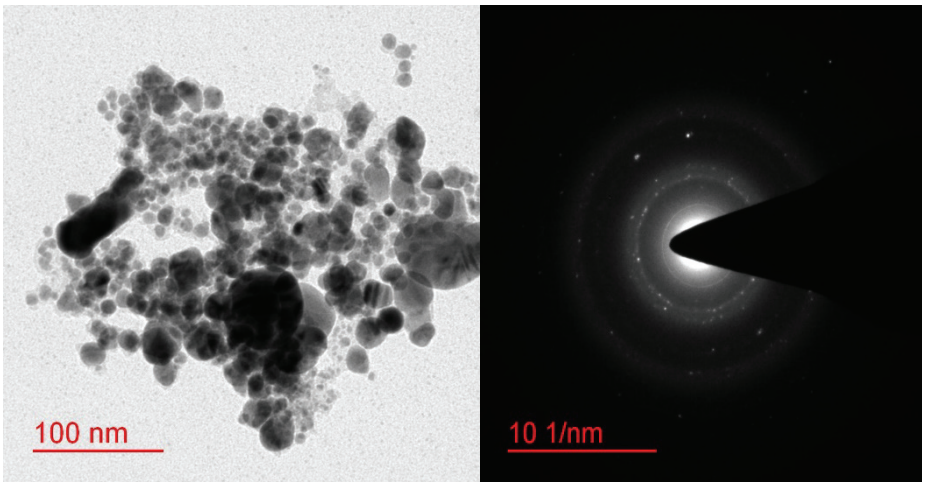

Fig. S-3. HR-TEM and SAED images of the AgNPs formulation **F2**

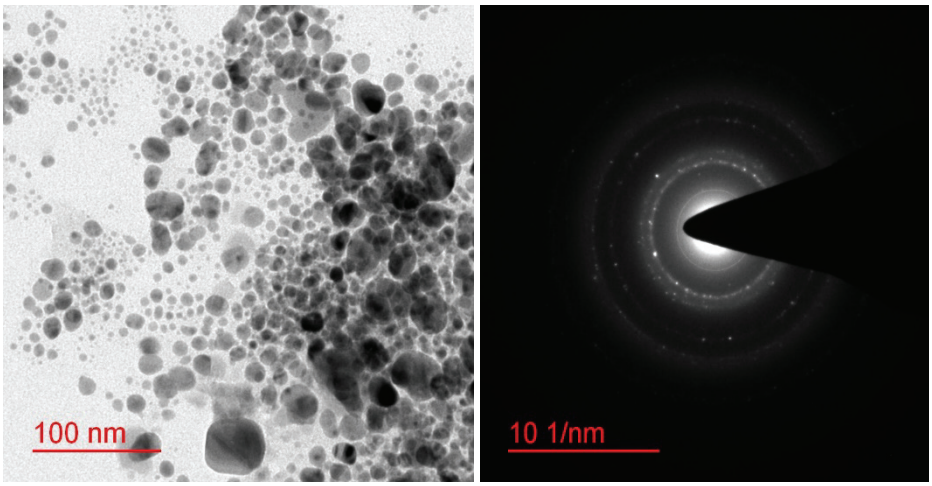

Fig. S-4. HR-TEM and SAED images of the AgNPs formulation **F4**

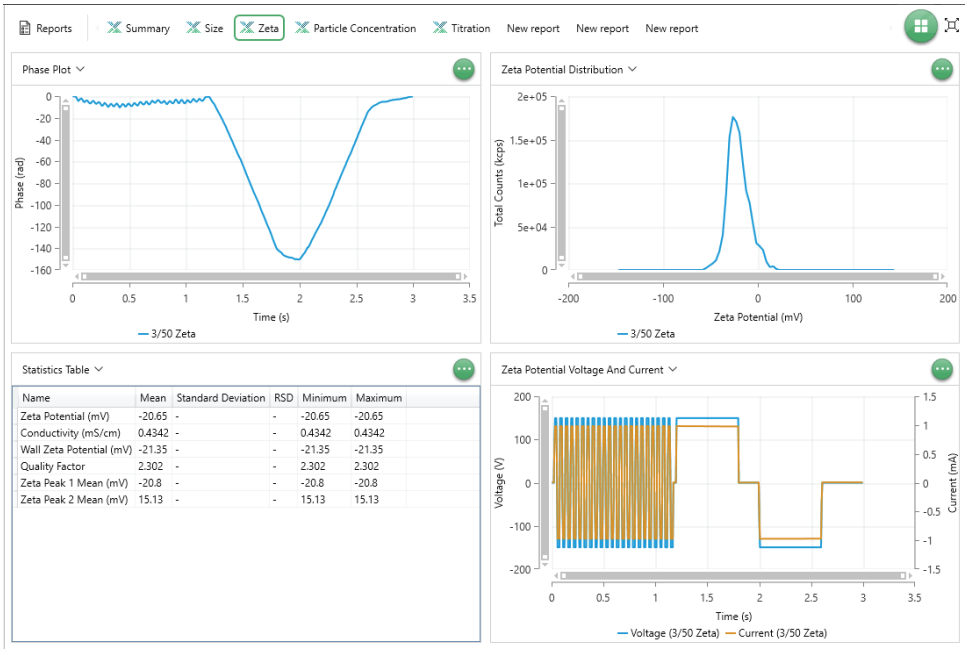

Fig. S-5. Zeta potential of the AgNPs formulation **F3**

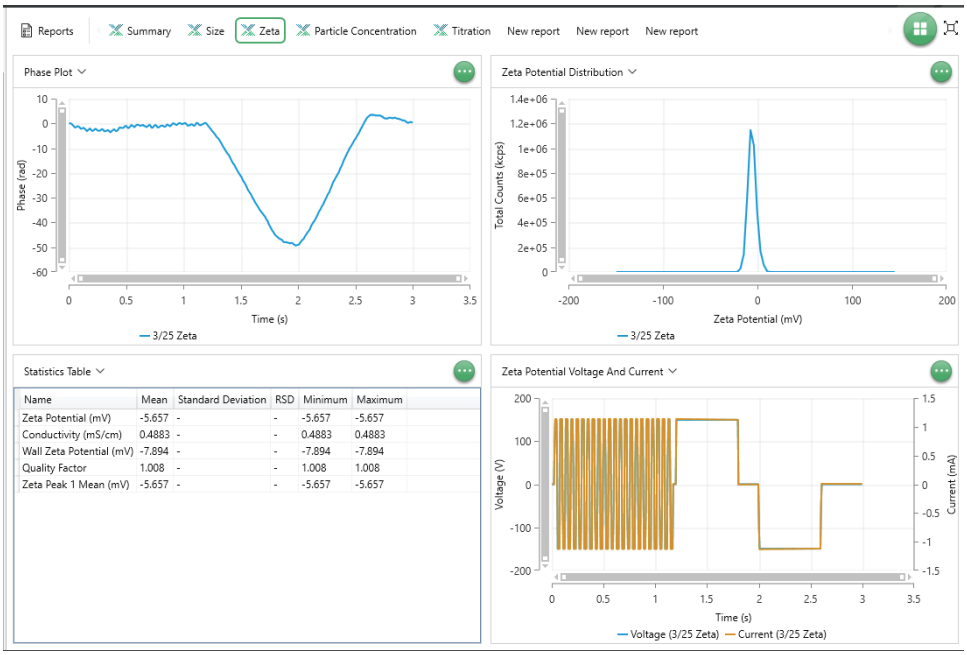

Fig. S-6. Zeta potential of the AgNPs formulation **F4**

Fig. S-7. Hydrodynamic particle size of the AgNPs formulation **F3**

Fig. S-8. The hydrodynamic particle size of the AgNPs formulation **F4**.