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**Evaluation of Antifungal, Antibacterial And Mechanical Properties of Modified Heat Cure Acrylic Resin Incorporated With Silver Nanoparticles Obtained By Green Synthesis Using Flower extract of *Nyctanthes Arbor – Tristis* – An In Vitro Study**

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**ABSTRACT**

**Background and Objectives:**

PMMA the most used material for fabricating dentures contributes to the proliferation as well as adherence of pathogens in patients with removable prostheses due to its properties like porosity, surface roughness, etc. This can be prevented by Silver nanoparticles (AgNPs) as there is no report of any organism building up resistance to them. Since conventional methods for nanoparticles synthesis remain exorbitant and synthetic, green synthesis was developed as a substitute in the synthesis of nanoparticles. Thus the purpose of this study is to describe an acrylic resin containing silver nanoparticles that can be used to produce dentures with significant antifungal and antibacterial properties for its appropriateness in clinical application


**Methodology:**

Silver nanoparticles were synthesized using flowers of *Nyctanthes Arbor – Tristis*. Characterization techniques were performed to characterize the formed nanoparticles. After the confirmation of formed nanoparticles antimicrobial and mechanical properties of modified PMMA was evaluated

**RESULTS:**

Formed nanoparticles were confirmed by characterization test. The test group exhibited a significant increase in antimicrobial properties and a significant decrease in its mechanical properties.

**CONCLUSION:** Flowers of *Nyctanthes Arbor – Tristis* has proven to be modest and effectual for synthesis of silver nanoparticles with a significant increase in antimicrobial properties.

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