

ABSTRACT BOOK



Preparation and Evaluation of Silver Nanoparticles for Antidiabetic Activity Using Ginger and Garlic Extract

Malokar Aboli, Bobade Kailash, Sabale Vidya

Dadasaheb Balpande College of Pharmacy, Besa, Nagpur, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (MS), INDIA-440037

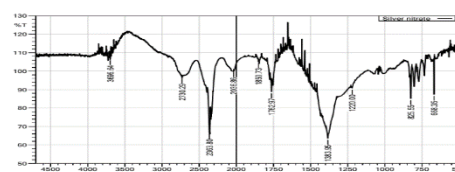
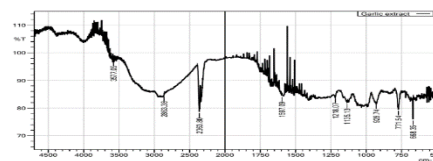
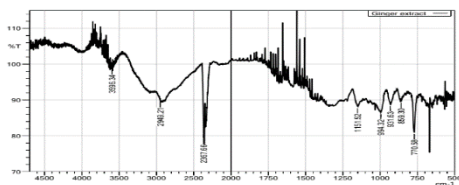
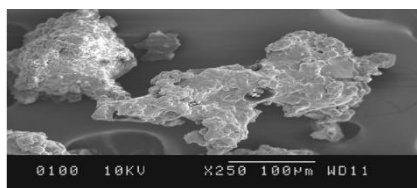
Presenting Author email: malokar.aboli@gmail.com

Keywords: Antidiabetic activity, Silver nanoparticles, Ginger, Garlic.

Aim and objectives: The present investigation was aimed to prepare and evaluate silver nanoparticles for antidiabetic activity using ginger and garlic extract to improve capability of yeast cells to uptake more glucose.

Methodology: The silver nanoparticles were prepared by green synthesis and further characterized to classify biomolecules in plant extracts (Fig. 1). The increase in the concentration of synthesized silver nanoparticles showed increased capability of yeast cell to uptake more glucose.

Results and Discussion: The prepared silver nanoparticles were spherical in shape with a size ranging from 70-90nm and uniformly distributed (Fig. 2). Glucose uptake capacity was >47% at 1mg/mL silver nanoparticles concentration. When 5mg/mL of silver nanoparticles were used glucose uptake capacity reached almost 68%.



Conclusion: The findings of investigation suggest that by increasing the concentration of silver nanoparticles will increase the capability of yeast cells to uptake more glucose.

References:

1. Jegadeeswaran P, Shivaraj R, Venkatesh R. Green synthesis of silver nanoparticles from extract of *Padina tetrastomatica* leaf. *Digest J of Nanometer and Biostructures*.2012;7(3):991-8.
2. Shankar SS, Ahmad A, Sastry M. Geranium leaf assisted biosynthesis of silver nanoparticles. *Biotechnol progress*. 2003;19(6):1627-31.
3. Song JY, Kim BS. Rapid biological synthesis of silver nanoparticles using plant leaf extracts. *Bioprocess and biosystems engineering*. 2009;32(1):79-84.

Acknowledgements:

First and foremost, I would like to express my sincere gratitude to my research guide Dr. Vidya Sabale ma'am and our principal Dr. Ujjwala Mahajan ma'am for giving me this opportunity. Secondly I would also like to thank my parents and friends who supported me.