Manuscript ID : 00001-63883

Source ID : 00000552

European Journal of Biomedical and Pharmaceutical Sciences

Volume 8, Issue 3, February 2021, Pages 212-218, Page Count - 7

CHARACTERISATION OF SYNTHESIS OF SILVER NANOPARTICLES FROM BARK EXTRACT OF BUTEA MONOSPERMA VAR. LUTEA AND THEIR ANTICANCER ACTIVITY ON HELA CELL LINE

Vibha Bhingradiya [(1)] Nainesh Modi [(2)*]

[(1)] Department of Botany, Bioinformatics and Climate Change Impact Management, University School of Science, Gujarat University, Ahmedabad, India.
[(2)] Associate Professor, Department of Botany, Bioinformatics and Climate Change Impacts Management, School of sciences, Gujarat University, Ahmedabad, India.

Abstract

Butea monosperma var. lutea is commonly known as the yellow flame of the forest. It is a medium-sized dry season-deciduous tree growing to 49 ft tall but taller than well-known Butea monosperma. The synthesis of AgNPs using bark extract of Butea monosperma var. lutea, which is used at room temperature as both a reducing and capping agent. The mixture for the reaction turned brownish yellow after about 24 h and an intense surface plasmon resonance (SPR) band at around 406 nm clearly indicates the formation of silver nanoparticles. The presence of stabilizing silver nanoparticles is shown by a UV - Visible spectrophotometry. For nanoparticles, surface. Fourier Transform-Infrared (FT-IR) spectroscopy showed that the nanoparticles were capped with the compounds present in the plant extract. Moreover, these biologically synthesized nanoparticles have also shown an outstanding cytotoxic impact on HeLa cells line by MTT assay.

Author Keywords

Silver Nanoparticles, Bark Extract, UV - Visible Spectroscopy, FTIR, HeLa Cell Line, MTT

Acknowledgement

I am deeply indebted and wish to express my sincere gratitude to my guide Dr. Nainesh R. Modi, Associate Professor, Department of Botany, Bioinformatics and Climate Change Impact Management, School of Sciences, Gujarat University, Ahmedabad. for his invaluable guidance, encouragement, critical comment and constant inspiration through the course of this work. The lessons I have learned during my time in the department will go with me throughout my career. His dedication and enthusiasm for Botanical inquiries has played an integral role in shaping the manner with which I perceive and address the fundamental questions that concern and processes for that I am truly thankful.

ISSN Print:
Source Type: Journals
Publication Language: English
Abbreviated Journal Title: EJBPS
Publisher Name: Dr. K. M. Girhepunje - EJBPS
Major Subject: Life Sciences
Subject area: Plant Science

ISSN Online: 2349-8870
Document Type: Journal Article
DOI: https://doi.org/10.17605/OSF.IO/93EP7
Access Type: Open Access
Resource Licence: CC BY-NC
Subject Area classification: Agricultural and Biological Sciences
Source: SCOPEDATABASE

Reference