## THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

Dr. N. L. Singh Professor of Physics Tel. 0265 -2795339

Mobile: +919426409840

E-mail: nl.singh-phy@msubaroda.ac.in



**Department of Physics** 

Faculty of Science The M. S. University of Baroda Vadodara - 390 002 Gujarat, India.

## **CERTIFICATE**

This is to certify that the thesis entitled "Study of optical, structural and dielectric properties of swift heavy ion irradiated biodegradable polymeric materials" submitted by Mr. Gnansagar B. Patel, for the award of Doctor of Philosophy in Physics to The Maharaja Sayajirao University of Baroda, Vadodara includes the original research work carried out by him under my guidance and supervision in Department of Physics. The research work presented in the thesis is original work of the candidate and is worth consideration for the award of above said degree. The results embodied in this thesis have not been submitted to any other university or institute for the award of any degree.

Date: Sth Hor., 9030

Prof. N. L. Singh Research Guide,

Department of Physics



Prof. S.K. Mukherjee

Murmin 2000

Head,

Department of Physics

Offg. Head Physics Department