



A  
Project Report on

**SYNTHESIS OF CAFFEIC ACID-g-XANTHAN GUM  
BASED HYDROGELS AND CHARACTERIZATION  
OF THEIR ANTIOXIDANT AND SOL GEL  
TRANSITION PROPERTIES**

*Submitted by*

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Under the joint guidance of

**DR. HRIDAY BERA**

**(ASSOCIATE PROFESSOR)**

**&**

**Dr. PARTHASARATHI PANDA**

**(ASSISTANT PROFESSOR)**

In partial fulfilment of the Requirement for the Degree of  
**Master of Pharmacy in Pharmaceutics**

Submitted to

**Maulana Abul Kalam Azad University of Technology  
West Bengal**

**Dr. B. C. Roy College of Pharmacy and Allied Health Sciences  
Durgapur, 713206**

**Academic Year: 2022 – 2023**



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## DECLARATION

I hereby declare that the Project entitled “**Synthesis of Caffeic acid-g-Xanthan gum-based hydrogels and characterization of their antioxidant and sol gel transition properties**” in partial fulfilment of the requirement for the award of Master of Pharmacy submitted to **Maulana Abul Kalam Azad University of Technology, West Bengal**, is an authentic record of bona fide work carried out by me, under the guidance of **Dr. Hriday Bera** and Co-guidance under **Dr. Parthasarathi Panda**.

The matter embodied in this Project has not been submitted for the award of any other degree or diploma to any University / Institution.

*Anik Layek*


Signature

Name of Candidate: Anik Layek

Roll no: 18920321012

Date : 22/05/2023

Place : Durgapur

  
Prof. (Dr.) Samir Kumar Samanta  
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# CERTIFICATE

This is to certify that the Project entitled "Synthesis of Caffeic acid-g-Xanthan gum-based hydrogels and characterization of their antioxidant and sol gel transition properties" by Anik Layek in partial fulfilment for the MASTER OF PHARMACY (PHARMACEUTICS) under MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY is a record of the original research work under our supervision and up to our satisfaction. To our knowledge, neither this thesis nor any part of it has been submitted for any other academic award anywhere before. The thesis is forwarded to Controller of Examination MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY for assessment.



Signature of Guide

Name of Guide: Dr. Hriday Bera

Date:

22/5/23

Place: Durgapur



Signature of Co-Guide

Name of Co-Guide: Dr. Parthasarathi Panda

Date:

22/5/2023

Place: Durgapur



PROF (DR.) SAMIR KUMAR SAMANTA

(PRINCIPAL)

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Signature

Name of External Examiner: Dr. Kajal Ghosal

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