

# **DETERMINATION OF LYCOPENE CONTENT IN VARIOUS FRUITS**

*Project report submitted in partial fulfillment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

Submitted By

**Aneena Siby**

Reg.No:200021025104

**Georgina Martin**

Reg.No:200021025113

**Aleena Fine**

Reg. No: 200021025123

Under the guidance of

**DR. KOCHURANI GEORGE**

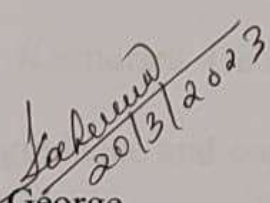
**DEPARTMENT OF CHEMISTRY,**

**ALPHONSA COLLEGE, PALA**

March 2023

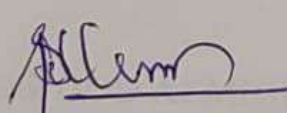
## CERTIFICATE

This is to certify that the project report entitled "*Determination of Lycopene content in various fruits*" is an authentic record of the project work carried out together by **Aneena Siby, Aleena Fine and Georgina Martin** in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.

  
20/3/2023  
Dr. Kochurani George  
Assistant Professor,  
Department of Chemistry,  
Alphonsa College, Pala.

Countersigned by,

Dr. Sr. Jilly James

  
Head, Department of Chemistry,

Alphonsa College, Pala.

Pala

20 March 2023

# **EFFECT OF VARIOUS SALTS ON FIRST ORDER KINETICS**

*Project report submitted in partial fulfillment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

**Submitted By**

**Anaina Sabu**

**Reg.No:200021025124**

**Bhavya M S**

**Reg.No:200021025128**

**Catherine Liju**

**Reg.No:200021025111**

**Under the guidance of**

**DR. KOCHURANI GEORGE**

**DEPARTMENT OF CHEMISTRY,**

**ALPHONSA COLLEGE, PALA**

**March 2023**

## CERTIFICATE

This is to certify that the project report entitled "*Effect of various salts on first order kinetics*" is an authentic record of the project work carried out together by **Ms Anaina Sabu, Ms. Bhavya M S and Ms Catherine Liju** in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.

*George Kochurani*  
20/3/2023

Dr. Kochurani George  
Assistant Professor,  
Department of Chemistry,

Countersigned by,

Sr. Jilly James

*Jilly James*

Head, Department of Chemistry,

Phonsa College, Pala.

la

March 2023



# LOW COST AND FAST PRODUCTION OF NANOSILICA FROM RICE HUSK ASH

*Project report submitted in partial fulfillment  
of the requirement for the award of the degree of  
Bachelor of Science in Chemistry*

*Submitted by*

**Aleena Jose**

Reg.No. 200021025102

**Devika P M**

Reg.No. 200021025112

**Nicey Sunil**

Reg.No. 200021025128

*Under the Guidance of*

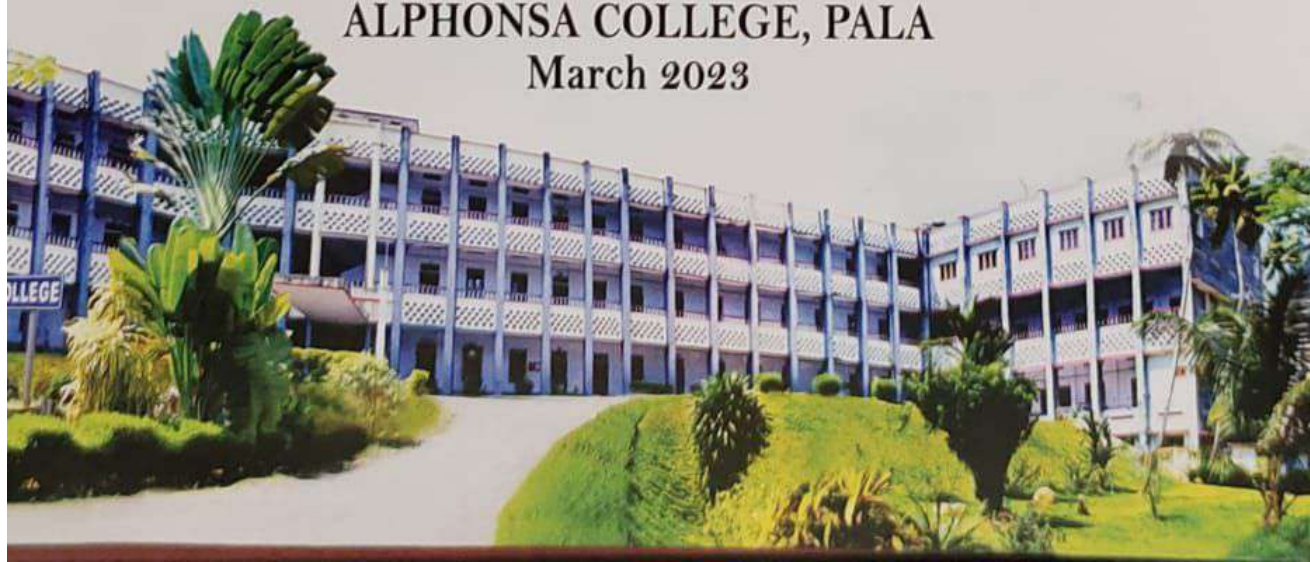
**Dr. Sr. Jilly James**



DEPARTMENT OF CHEMISTRY

ALPHONSA COLLEGE, PALA

March 2023



## CERTIFICATE

This is to certify that the project report entitled "*Low Cost and Fast Production of Nanosilica from Rice Husk Ash*" is an authentic record of the project work carried out by **Kum. Aleena Jose, Devika P M and Nicey Sunil**, in partial fulfillment of the project work, for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, under my guidance and supervision during 2022-2023.



**Dr. Sr. Jilly James**

Head, Department of Chemistry,

Alphonsa College, Pala.



# **DETERMINATION OF DIRT CONTENT, ASH CONTENT VOLATILE MATTER, NITROGEN CONTENT AND PLASTICITY RETENTION INDEX OF CRUMB RUBBER**

*Project report submitted in partial fulfillment  
of the requirement for the award of the degree of  
Bachelor of Science in Chemistry*

*Submitted by*

**Akshara K**

Reg.No. 200021025101

**Ann Maria Jose**

Reg.No. 200021025105

**Rintu Sebastian**

Reg.No. 200021025119

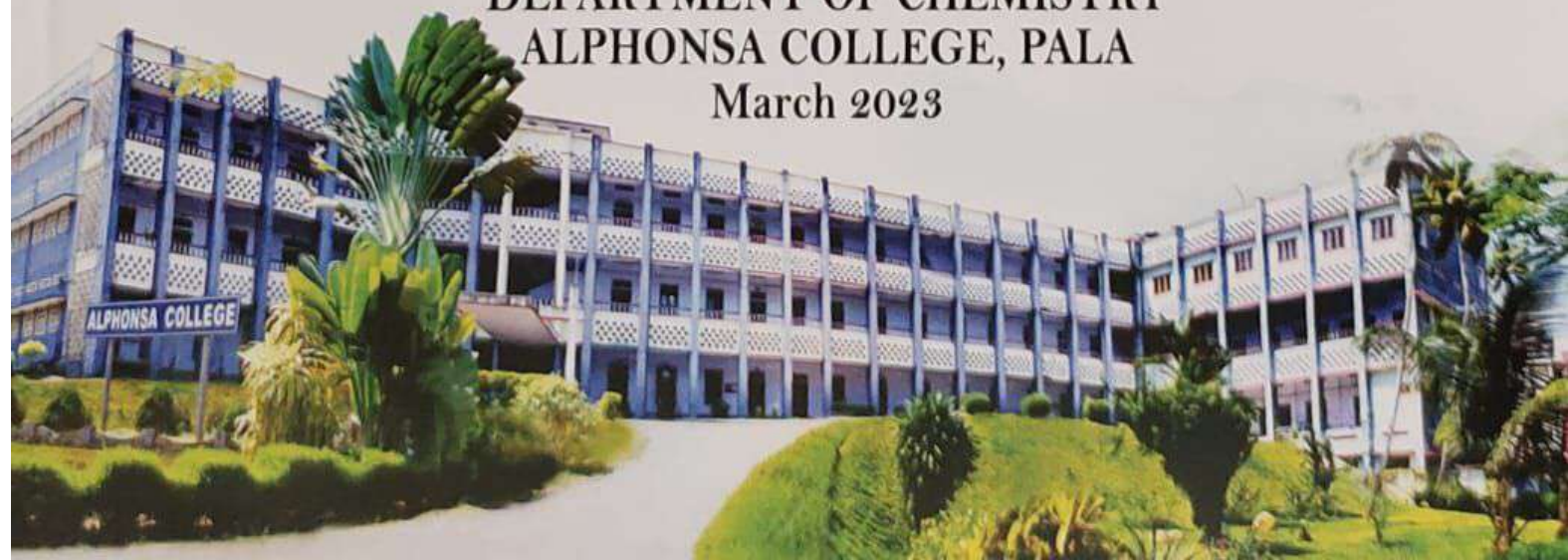
*Under the Guidance of*

**Dr. Sr. Jilly James**



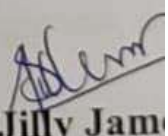
**DEPARTMENT OF CHEMISTRY  
ALPHONSA COLLEGE, PALA**

**March 2023**



## CERTIFICATE

This is to certify that the project report entitled "*Determination of Moisture Content, Ash Content, Volatile Matter, Nitrogen Content and Plasticity Retention Index of Crumb Rubber*" is an authentic record of the project work carried out by **Kum Akshara K, Ann Maria Jose and Rintu Sebastian**, in partial fulfillment of the project work, for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, under my guidance and supervision during 2022-2023.

  
**Dr. Sr. Jilly James**

Head, Department of Chemistry

Alphonsa College, Palakkad



# **ADSORPTION OF METHYLENE BLUE DYE USING JACK FRUIT LEAF POWDER**

*Project report submitted in partial fulfillment  
of the requirement for the award of the degree of  
Bachelor of Science in Chemistry*

*Submitted by*

**Abita Cherian**

Reg.No. 200021025099

**Anjana Sasikumar**

Reg.No. 200021025126

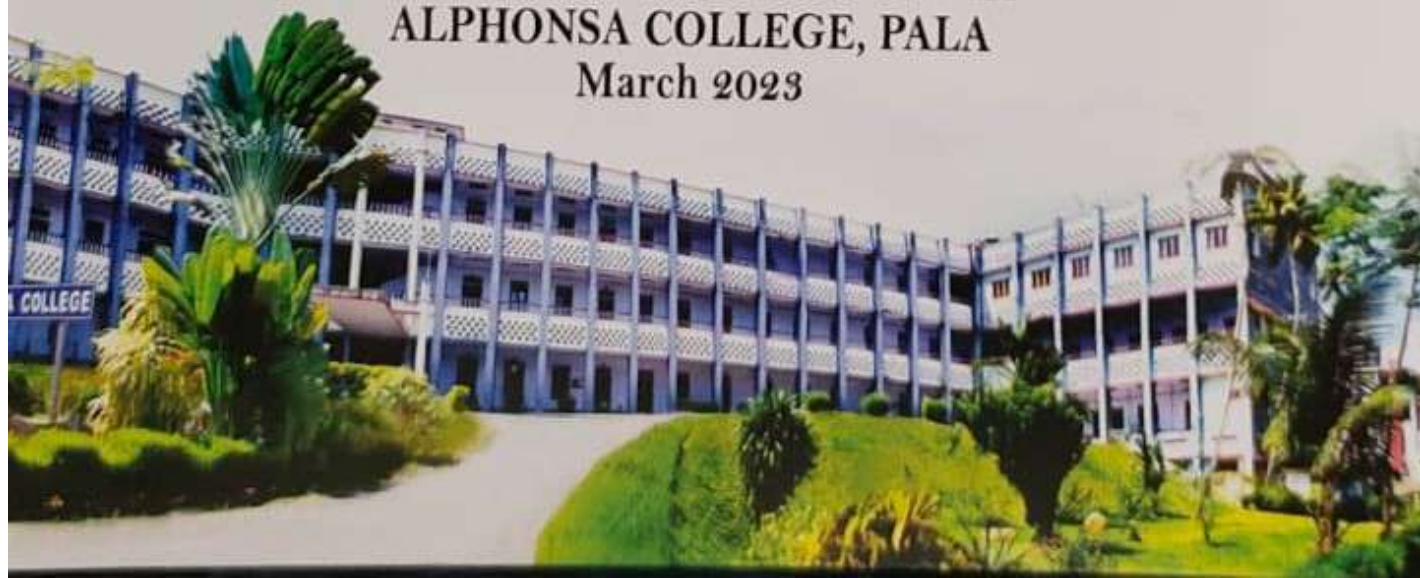
*Under the Guidance of*

**Dr. Sr. Jilly James**



**DEPARTMENT OF CHEMISTRY  
ALPHONSA COLLEGE, PALA**

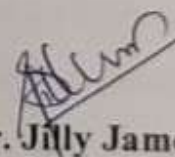
**March 2023**



## ACKNOWLEDGEMENT

## CERTIFICATE

This is to certify that the project report entitled "*Adsorption of Methylene Blue Dye using Jack Fruit Leaf Powder*" is an authentic record of the project work carried out by **Kum. Abita Cherian and Kum. Anjana Sasikumar**, in partial fulfillment of the project work, for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University, under my guidance and supervision during 2022-2023.



**Dr. Sr. Jilly James**

Head, Department of Chemistry,

Alphonsa College, Pala.

# **Natural Acid Catalysed Synthesis of Phenolic Schiff bases**

**Project report submitted in partial fulfillment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.**

**Submitted By**

**ANAINA SUNNY(Reg No:200021025103)**

**ANJANA JOSHY(Reg No:200021025125)**

**SHALUMOL K JOHNY (Reg No:200021025131)**

Under the Supervision of

**Dr. JESSICA ELIZABETH PHILIP**



Department of Chemistry


Alphonsa college, Pala

March 2023

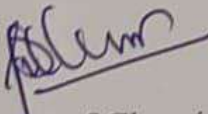


## CERTIFICATE

This is to certify that the project report entitled “**Natural Acid Catalysed Synthesis of Phenolic Schiff bases**” is an authentic record of the project work carried out by **Ms. Anaina Sunny, Ms. Anjana Joshy, Ms. Shalumol K Johny** in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.

  
Dr. Jessica Elizabeth Philip  
Supervising Teacher

Countersigned by,

Dr. Sr. Jilly James   
Head of the Department of Chemistry  
Alphonsa College, Pala

**Place:** Pala

**Date:** 20 March 2023



**A STUDY IN DETERMINING THE QUANTITY OF  
CALCIUM CARBONATE IN VARIOUS BRANDED  
TOOTHPASTES**

*Project report submitted in partial fulfillment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

Submitted By

MEENAKSHI KRISHNA Reg No: 200021025115

SAJITHA SUNNY Reg No: 200021025130

NIVYA AGNES JOY Reg No: 190021026237

Under the guidance of

**DIANA ELIZABETH JOSE**

**DEPARTMENT OF CHEMISTRY,  
ALPHONSA COLLEGE, PALA**

## CERTIFICATE

This is to certify that the project report entitled 'A STUDY IN DETERMINING THE QUANTITY OF CALCIUM CARBONATE IN VARIOUS BRANDED TOOTHPASTES' is an authentic record of the project work carried out by MEENAKSHI KRISHNA, SAJITHA SUNNY, NIVYA AGNES JOY in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.



**Ms. Diana Elizabeth Jose**

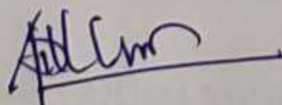
Assistant Professor,

Department of Chemistry,

Alphonsa College, Pala.

Countersigned by

**Dr. Sr. Jilly James**



Head, Department of Chemistry,

Alphonsa College, Pala.

Pala

19/03/2023





**A STUDY OF INFLUENCE OF MAGNESIUM ION ON  
THE STABILITY OF NATURAL RUBBER LATEX**

*Project report submitted in partial fulfillment  
of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

Submitted By

**AGNES JOSEPH, REG No:200021025100**

**BALENDHU BINUKUMAR, REG No:200021025109**

**BHAGYALAKSHMI SAJI, REG No:200021025127**

Under the guidance of

**Ms. DIANA ELIZABETH JOSE**


**DEPARTMENT OF CHEMISTRY,**

**ALPHONSA COLLEGE, PALA**

March 2023

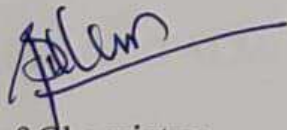
## CERTIFICATE

This is to certify that the project report entitled "A STUDY OF INFLUENCE OF MAGNESIUM ION ON THE STABILITY OF NATURAL RUBBER LATEX" is an authentic record of the project work carried out by AGNES JOSEPH, VALENDHU BINUKUMAR, BHAGYALAKSHMI SAJI in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.

  
Ms. Diana Elizabeth Jose  
Assistant Professor,  
Department of Chemistry,  
Alphonsa College, Pala.

Countersigned by,

Dr. Sr. Jilly James

  
Head, Department of Chemistry,

Alphonsa College, Pala.

Pala

27-03-2023

# **Analysis of Chocolate: A Marvelous Natural product of Chemistry**

*Project report submitted in partial fulfillment of requirement for the award of the degree of Bachelor of Science in Chemistry.*

Submitted By

**AISWARYA K VIJAYAN (Reg.No: 200021025122)**

**LINITTA P EMMANUEL (Reg.No:200021025114)**

**NEHA SCARIA (Reg.No: 200021025117)**

Under the guidance of

**Dr. JESSICA ELIZABETH PHILIP**



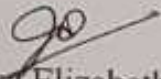
DEPARTMENT OF CHEMISTRY,  
ALPHONSA COLLEGE, PALA

**March 2023**

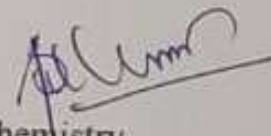


## CERTIFICATE

This is to certify that the project report entitled "**Analysis of Chocolate: A Marvelous Natural Product of Chemistry**" is an authentic record of the project work carried out by, **Aiswarya K.Vijayan , Linitta P Emmanuel, Neha Scaria** in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.

  
Dr. Jessica Elizabeth Philp  
Supervising Teacher

Countersigned by,

Dr. Sr. Jilly James   
Head, Department of Chemistry  
Alphonsa College, Pala

Place: Pala

Date: 20-03-2023

**BIOLOGICAL SYNTHESIS OF ZINC OXIDE  
NANOPARTICLES USING *CATHARANTHUS  
ROSEUS* LEAF EXTRACT AND  
ANTIBACTERIAL STUDIES**

*Project report submitted in partial fulfillment  
Of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

SUBMITTED BY

**ARCHA NAIR (Reg.No:200021025107)**

**BHAVANA SURESH (Reg.NO:200021025110)**

**ANNA JOSE (Reg.No:200021025106)**

UNDER THE GUIDENCE OF

**Dr. Sr. SHEENA VARGHESE**



**DEPARTMENT OF CHEMISTRY,  
ALPHONSA COLLEGE, PALA**

**March 2023**

## CERTIFICATE

This is to certify that the project report entitled "**Biological Synthesis of Zinc Oxide Nanoparticles using *Catharanthus Roseus* Leaf Extract And its Antibacterial Studies**" is an authentic record of the project work carried out by **Archa Nair, Bhavana Suresh, Anna Jose** in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 20222023



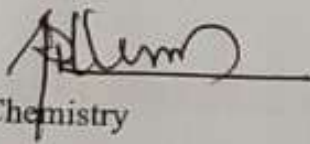
Dr. Sr. Sheena Varghese  
Supervising Teacher

Countersigned by,

Dr. Sr. Jilly James

Head, Department of Chemistry

Alphonsa College, Pala



Pala

27 March 2023

# **GREEN SYNTHESIS OF COBALT NANOPARTICLES USING ASPARAGUS RACEMOSUS ROOT EXTRACT AND EVALUATION OF ANTIFUNGAL ACTIVITY**

*Project report submitted in partial fulfillment  
Of requirement for the award of the degree of  
Bachelor of Science in Chemistry.*

SUBMITTED BY

**NANCY SIBY (Reg.No:200021025129)**

**SUSAN JOSEPH (Reg.No:200021025120)**

**MELITTA THERES MATHEW (Reg. No:200021025116)**

UNDER THE GUIDANCE OF

**Dr. Sr. SHEENA VARGHESE**



DEPARTMENT OF CHEMISTRY,  
ALPHONSA COLLEGE, PALA

March 2023



## CERTIFICATE

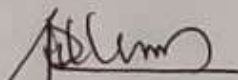
This is to certify that the project report entitled "**Green Synthesis of Cobalt Nanoparticles using Asparagus Racemosus Root Extract and Evaluation of Antifungal Activity**" is an authentic record of the project work carried out by **Nancy Siby, Susan Joseph, and Melitta Theres Mathew** in partial fulfillment of the project work for the award of the degree of Bachelor of Science in Chemistry of Mahatma Gandhi University under my guidance and supervision during 2022-2023.



Dr. Sr. Sheena Varghese  
Supervising Teacher

Countersigned by,

Dr. Sr. Jilly James



Head, Department of Chemistry

Alphonsa College, Pala

Pala

27 March 2023