

Dr. Jose K Xavier  
Associate Professor



Research & Post Graduate  
Department Of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

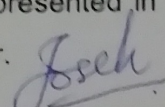
St. Thomas College, Pala

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

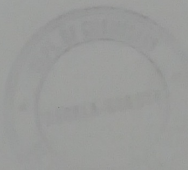
### CERTIFICATE

This is to certify that the project report entitled "DETERIORATION OF MARBLE AND CONCRETE STRUCTURES ON EXPOSURE TO ACID RAIN" is an authentic record of the project work carried out by Mr. A M GOPIKRISHNAN (Reg. No. 160021034977) under my supervision and guidance during the period 2018-2019 in partial fulfilment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

  
Jose K Xavier

(Supervising Teacher)

Department of Chemistry

  
Counter Signed by,

Dr. Sunny Kuriakose

Head, Department of Chemistry

St. Thomas College,

Pala

Valued By:



**Jithin Prakash P A**  
Assistant Professor

E-mail: jithinprakashstc@yahoo.in



Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**SYNTHESIS AND CHARACTERIZATION OF Zn –Al LAYERED DOUBLE HYDROXIDE**” is an authentic record of the project work carried out by **Mr. Abhijith Paul Sabu (Reg.No. 160021034978)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

**Jithin Prakash P A**

(Supervising Teacher)

Assistant Professor

St. Thomas College Pala

Countersign by,

**Dr. Sunny Kuriakose**

Head of the Department of Chemistry

St. Thomas College Pala



**Jithin Prakash P A**  
Assistant Professor

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Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

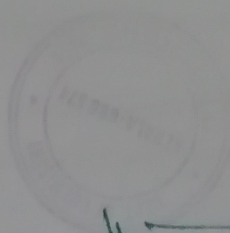
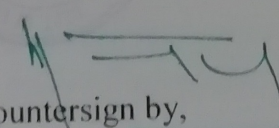
This is to certify that the project report entitled “**SYNTHESIS AND CHARACTERIZATION OF Zn –Al LAYERED DOUBLE HYDROXIDE**” is an authentic record of the project work carried out by **Mr. Ajil Jose (Reg.No. 160021034961)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

**Jithin Prakash P A**

(Supervising Teacher)

Assistant Professor

St. Thomas College Pala

  
  
Countersign by, \_\_\_\_\_

**Dr. Sunny Kuriakose**

Head of the Department of Chemistry

St. Thomas College Pala



JOGY ALEX

Associate professor



Research & PG Dept. of Chemistry

[DST FIST Sponsored Department]

St. Thomas College, Palai

**CERTIFICATE**

This is to certify that the project report entitled "MICRO OVEN ASSISTED REACTIONS" is an authentic and credible work carried out by Mr. AKASH JOSEPH under my supervision and guidance during the period 2016-19 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

Palai

(Supervising Teacher)

Countersigned by,

Dr. SUNNY KURIAKOSE  
Head of Department of Chemistry

Valued by:

Date:



**TojoJoseph**  
Assistant Professor



Research & P. G. Department of Chemistry  
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[CENTRE WITH 'POTENTIAL FOR EXCELLENCE'] Pala -686574,  
Kerala

## CERTIFICATE

This is to certify that the project report entitled "ASSAY OF TABLETS – PARACETAMOL, ASPIRIN & INDOCID" is an authentic record of the project work carried out by **Mr. Akhil Mohanan (Reg.No. 160021034980)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

**TOJO JOSEPH**

(Supervising Teacher)

Countersigned by

**Dr. SUNNY KURIAKOSE**

(Head, Department of Chemistry,  
St. Thomas College, Pala)

Valued by :

Date :



## CERTIFICATE

*This is to certify that the project report entitled "Study of adulteration in food stuffs" is an authentic record of the project work carried out by Mr. Akhil p Thomas under my supervision and guidance during 2018-2019 in partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Chemistry of the Mahatma Gandhi University, Kottayam. The work presented in this project report has not been submitted for any degree or diploma earlier.*

**Dr. Thomas V. Mathew**  
(Supervising Teacher)  
Assistant Professor  
Department of Chemistry  
St. Thomas College, Palai



Countersigned by

**Dr. Sunny Kuriakose**  
Head of the Department of Chemistry  
St. Thomas College, Palai

Place: Palai

Date:



AMAL JOSE BABY

Assistant Professor

Member: American Chemical Society

Member: Board of Studies, Kerala University



Research & P. G. Department of  
Chemistry

[DST FIST SPONSORED DEPARTMENT]

St. Thomas College, Pala

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**SYNTHESIS OF ZnO NANOPARTICLES BY SOL GEL METHOD**” is an authentic record of the project work carried out by **Mr.AKSHAY M Y (Reg. No. 160021034982)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

AMAL JOSE BABY

(Supervising Teacher)

~~Head, Department of Chemistry~~

St. Thomas College, Pala)

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Email:amaljosets@gmail.com

COUNTERSIGNED BY

DR.SUNNY KURIAKOSE

Valued by:

Head of Department of Chemistry

Date:



**Jithin Prakash P A**  
Assistant Professor

E-mail: jithinprakashstc@yahoo.in



Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**SYNTHESIS AND CHARACTERIZATION OF Zn –Al LAYERED DOUBLE HYDROXIDE**” is an authentic record of the project work carried out by **Mr. Anand Ravi (Reg.No. 160021034983)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

**Jithin Prakash P A**

(Supervising Teacher)

Assistant Professor

St. Thomas College Pala

Countersign by,

**Dr. Sunny Kuriakose**

Head of the Department of Chemistry

St. Thomas College Pala



**Manjesh Mathew**  
Assistant Professor



**Research & P. G.**  
Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**  
[CENTRE WITH POTENTIAL FOR EXCELLENCE]  
Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled "**EXTRACTION AND CHARACTERISATION OF NICOTINE FROM TOBACCO**" is an authentic work carried out by **Mr. ARAVIND SIBI** under my supervision and guidance during the period 2016 - 2019 in partial fulfillment of the **Degree of Bachelor of Science** under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala  
April, 2019

**Prof. Manjesh Mathew**

(Supervising Teacher)

Countersigned by

**Dr. SUNNY KURIAKOSE**  
(Head Department of Chemistry  
St. Thomas College, Pala)



Manjesh Mathew  
Assistant Professor



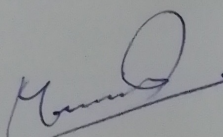
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Department of Chemistry  
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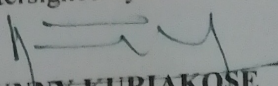
St. Thomas College, Pala  
[CENTRE WITH POTENTIAL FOR EXCELLENCE]  
Pala -686574, Kerala

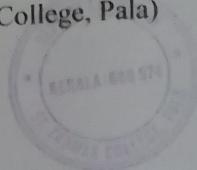
## CERTIFICATE

This is to certify that the project report entitled "**EXTRACTION AND CHARACTERISATION OF NICOTINE FROM TOBACCO**" is an authentic work carried out by **Mr. ARUN P JOSE(160021034968)** under my supervision and guidance during the period 2016 - 2019 in partial fulfillment of the **Degree of Bachelor of Science** under the **Faculty of Science, Mahatma Gandhi University , Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala  
April, 2019

  
**Prof. Manjesh Mathew**  
(Supervising Teacher)

Countersigned by  
  
**Dr. SUNNY KURIAKOSE**  
(Head Department of Chemistry  
St. Thomas College, Pala)





**Tojo Joseph**  
Assistant Professor



Research & P. G. Department of Chemistry  
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[CENTRE WITH POTENTIAL FOR EXCELLENCE] Pala -686574,  
Kerala

### CERTIFICATE

This is to certify that the project report entitled "**ASSAY OF TABLETS – PARACETAMOL , ASPIRIN AND INDOCID**" is an authentic record of the project work carried out by **Mr. Aswin Tomy (Reg.No. 160021034997)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

**TOJO JOSEPH**

(Supervising Teacher)

Countersigned by

**Dr. SUNNY KURIAKOSE**

(Head, Department of Chemistry,  
St. Thomas College, Pala)

Valued by :

Date :



**Manjesh Mathew**  
Assistant Professor



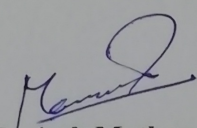
**Research & P. G.**  
Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**  
[CENTRE WITH POTENTIAL FOR EXCELLENCE]  
Pala -686574, Kerala


## CERTIFICATE

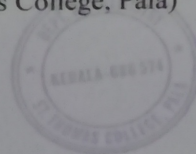
This is to certify that the project report entitled "**EXTRACTION AND CHARACTERISATION OF NICOTINE FROM TOBACCO**" is an authentic work carried out by **Mr. ATHUL DOMINIC (160021034984)** under my supervision and guidance during the period 2016 - 2019 in partial fulfillment of the **Degree of Bachelor of Science** under the **Faculty of Science, Mahatma Gandhi University , Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala  
April, 2019

  
**Prof. Manjesh Mathew**  
(Supervising Teacher)

Countersigned by

  
**Dr. SUNNY KURIAKOSE**  
(Head Department of Chemistry  
St. Thomas College, Pala)





**JOGY ALEX**

Associate professor



Research & PG Dept. of Chemistry

[DST FIST Sponsored Department]

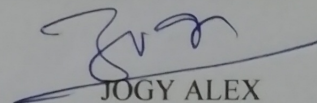
StThomas College, Palai

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**CERTIFICATE**

This is to certify that the project report entitled “**MICRO OVEN ASSISTED REACTIONS**” is an authentic and credible work carried out by **Mr. BIBIN JOSEPH** under my supervision and guidance during the period 2016-19 in partial fulfilment of the degree of **Bachelor of Science in Chemistry** under the **Faculty of Science, Mahatma Gandhi University, Kottayam.**

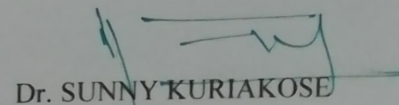
Palai



JOGY ALEX

(Supervising Teacher)

Countersigned by,



Dr. SUNNY KURIAKOSE

Head of Department of Chemistry

Valued by:

Date:



**Manjesh Mathew**  
(Assistant Professor)



Research & P. G. Department of Chemistry  
[DST FST SPONSORED DEPARTMENT]

## ST THOMAS COLLEGE PALA

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

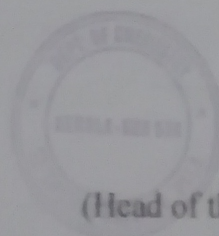
Pala -686574, Kerala

### CERTIFICATE

*This is to certify that the project report entitled "**EXTRACTION, ISOLATION, ANTI-BACTERIAL AND ANTI-FUNGAL ASSAY OF CEREBRA ODOLLAM LEAF**" is an authentic record of the project work carried out by Mr. **BINNU BOBAN** (Reg.No. 160021034962) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.*

Pala

**MANJESH MATHEW**  
(Supervising Teacher)



**Dr. SUNNY KURIAKOSE**  
(Head of the Department of Chemistry)



**DR SAJEEV MARTIN GEORGE**  
Chemistry

Assistant Professor

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Email: martin.v.george@gmail.com



Research & P. G. Department of

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled "**JAHN – TELLER EFFECT STUDY OF SCHWEIZER'S REAGENT**" is an authentic record of the project work done by Mr. DEEPAK JAMES (Reg. No. 160021034986) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

Pala

28-03-2019

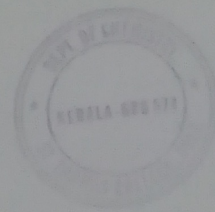
**Dr SAJEEV MARTIN GEORGE**

(Supervising Teacher)

Countersigned by,

**Dr.SUNNY KURIAKOSE**

Head of the Department





**JITHIN PRAKASH P.A**

Assistant Professor



Research & P. G. Department of Chemistry

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**STERILLIZATION OF WATER USING BLEACHING POWDER**” is an authentic record of the project work carried out by **Mr. EBY JAMES (Reg. No. 160021034988)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

**JITHIN PRAKASH P.A.**

(Supervising Teacher)

Assistant professor,

St. Thomas College, Pala

Countersign by,

**Dr.SUNNY KURIAKOSE**

(Head of the department)



Dr. SAJEEV MARTIN GEORGE  
Assistant Professor



Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]  
St. Thomas College, Pala  
[CENTRE WITH POTENTIAL FOR EXCELLENCE]  
Pala -686574, Kerala

### CERTIFICATE

This is to certify that the project report entitled "PHYTOCHEMICAL ANALYSIS OF MEDICINAL PLANTS IN OUR LOCALITY" is an authentic record of the project work carried out by Mr. HARIKRISHNAN M (Reg. No. 160021034969) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

Place: Pala

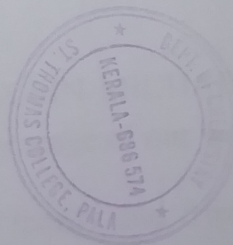
Date: 28/03/19

Dr. SAJEEV MARTIN GEORGE  
(Supervising Teacher)

Countersigned by,

Dr. SUNNY KURIAKOSE  
(Head of the Department)

Valued by:





AMAL JOSE BABY

Assistant Professor

Member: American Chemical Society

Member: Board of Studies, Kerala University



Research & P. G. Department of  
Chemistry

[DST FIST SPONSORED DEPARTMENT]

St. Thomas College, Pala

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**SYNTHESIS OF ZnO NANOPARTICLES BY SOL GEL METHOD**” is an authentic record of the project work carried out by **Mr. HENTRY MATHEW (Reg. No. 160021034998)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

AMAL JOSE BABY

(Supervising Teacher)

~~Head, Department of Chemistry~~

St. Thomas College, Pala)

Ph: +91-9961743248

COUNTERSIGNED BY

Email:amaljosets@gmail.com

DR.SUNNY KURIAKOSE

Valued by:

Head of Department of Chemistry



**DR SAJEEV MARTIN GEORGE**  
Chemistry

Assistant Professor

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Research & P. G. Department of

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled "**JAHN – TELLER EFFECT STUDY OF SCHWEIZER'S REAGENT**" is an authentic record of the project work done by Mr. JEFFIN JOSEPH (Reg. No. 160021034970 ) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

Pala

28-03-2019

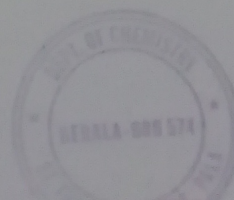
**Dr SAJEEV MARTIN GEORGE**

(Supervising Teacher)

Countersigned by,

**Dr.SUNNY KURIAKOSE**

Head of the Department





**AMAL JOSE BABY**

Assistant Professor

*Member: American Chemical Society*

*Member: Board of Studies, Kerala University*



Research & P. G. Department of  
Chemistry

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala - 686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**SYNTHESIS OF ZnO NANOPARTICLES BY SOL GEL METHOD**” is an authentic record of the project work carried out by **Mr. JEFIN K FRANCIS (Reg. No. 160021034990)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

Ph: +91-9961743248

Email:amaljosets@gmail.com

Countersigned by

Valued by:

Date:

**AMAL JOSE BABY**

(Supervising Teacher)

~~Head, Department of Chemistry~~

St. Thomas College, Pala

**Dr. SUNNY KURIAKOSE**

Head of Department of chemistry



Dr. SAJEEV MARTIN GEORG  
Assistant Professor



Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

St. Thomas College, Pala

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

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CERTIFICATE

This is to certify that the project report entitled "PHYTOCHEMICAL ANALYSIS OF MEDICINAL PLANTS IN OUR LOCALITY" is an authentic record of the project work carried out by Mr. JOSSIN P JOBY (Reg. No. 160021034963) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

Place: Pala

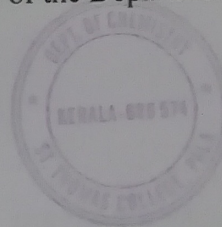
Date: 28/3/19

Dr. SAJEEV MARTIN GEORGE  
(Supervising Teacher)

Countersigned by,

Dr. SUNNY KURIAKOSE  
(Head of the Department)

Valued by:





**Manjesh Mathew**  
(Assistant Professor)



Research & P. G. Department of Chemistry  
[DST FST SPONSORED DEPARTMENT]

## ST THOMAS COLLEGE PALA

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

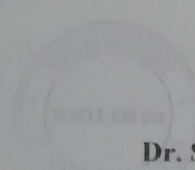
### CERTIFICATE

*This is to certify that the project report entitled "**EXTRACTION, ISOLATION, ANTI-BACTERIAL AND ANTI-FUNGAL ASSAY OF CEREBRA ODOLLAM LEAF**" is an authentic record of the project work carried out by Mr. **LINO SEBASTIAN** (Reg.No. 160021034971) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.*

Pala

**MANJESH MATHEW**

(Supervising Teacher)



**Dr. SUNNY KURIAKOSE**

(Head of the Department of Chemistry)



**AMAL JOSE BABY**  
Assistant Professor



Research & PG Dept. of Chemistry  
[DST FIST Sponsored Department]  
St. Thomas College, Palai

### CERTIFICATE

This is to certify that the project report entitled “**SYNTHESIS AND CHARACTERIZATION OF CdS NANOPARTICLES USING ETHANOL AS STABILIZING AGENT**” is an authentic and credible work carried out by **Mr. MAHESH P M** under my supervision and guidance during the period 2016-19 in partial fulfilment of the degree of **Bachelor of Science in Chemistry** under the **Faculty of Science, Mahatma Gandhi University, Kottayam.**

Palai

AMAL JOSE BABY  
(Supervising Teacher)

Countersigned by,

Dr. SUNNY KURIAKOSE  
Head of Department of Chemistry

Valued by:



Dr. SAJEEV MARTIN GEORGE  
Assistant Professor



Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]  
St. Thomas College, Pala  
[CENTRE WITH POTENTIAL FOR EXCELLENCE]  
Pala -686574, Kerala

CERTIFICATE

This is to certify that the project report entitled "PHYTOCHEMICAL ANALYSIS OF MEDICINAL PLANTS IN OUR LOCALITY" is an authentic record of the project work carried out by Mr. MELBIN MICHAEL (Reg. No. 160021034999) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

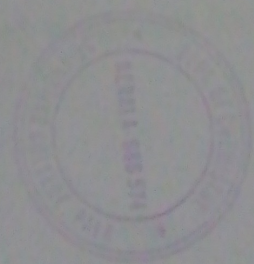
Place: Pala

Date: 1/04/2019

Dr. SAJEEV MARTIN GEORGE  
(Supervising Teacher)

Countersigned by,

Dr. SUNNY KURIAKOSE  
( Head of the Department )

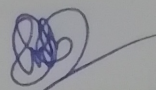


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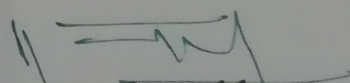
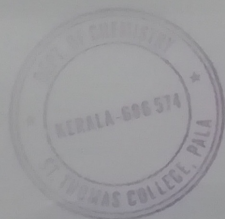


## CERTIFICATE

*This is to certify that the project report entitled "Study of adulteration in food stuffs" is an authentic record of the project work carried out by Mr. Minto tom under my supervision and guidance during 2018-2019 in partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Chemistry of the Mahatma Gandhi University, Kottayam. The work presented in this project report has not been submitted for any degree or diploma earlier.*



**Dr. Thomas V. Mathew**  
(Supervising Teacher)  
Assistant Professor  
Department of Chemistry  
St. Thomas College, Palai



Countersigned by

**Dr. Sunny Kuriakose**  
Head of the Department of Chemistry  
St. Thomas College, Palai

Place: Palai

Date: 05-04-2019



**TojoJoseph**  
Assistant Professor



Research & P. G. Department of Chemistry  
[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

Ph: +91-8129772864  
Email: tojojosef@gmail.com

[CENTRE WITH POTENTIAL FOR EXCELLENCE] Pala -686574,  
Kerala

## CERTIFICATE

This is to certify that the project report entitled "ASSAY OF TABLETS – PARACETAMOL, ASPIRIN & INDOCID" is an authentic record of the project work carried out by **Mr. Naveen jomathew** (Reg.No. 160021035000) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala  
04-03-2019

**TOJO JOSEPH**  
(Supervising Teacher)

Countersigned by

**Dr. SUNNY KURIAKOSE**  
( Head, Department of Chemistry,  
St. Thomas College, Pala)

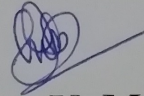
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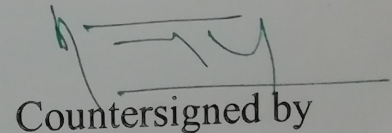


## CERTIFICATE

*This is to certify that the project report entitled "Study of adulteration in food stuffs" is an authentic record of the project work carried out by Mr.Nidhin suresh under my supervision and guidance during 2018-2019 in partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Chemistry of the Mahatma Gandhi University, Kottayam. The work presented in this project report has not been submitted for any degree or diploma earlier.*



**Dr.Thomas V. Mathew**  
(Supervising Teacher)  
Assistant Professor  
Department of Chemistry  
St.Thomas College, Palai



Countersigned by

**Dr.Sunny Kuriakose**  
Head of the Department of Chemistry  
St.Thomas College, Palai

Place:Palai

Date:05-04-2019



**TOJO JOSEPH**

Assistant Professor

Ph: +91-8129772864

Email: tojojocef@gmail.com



Research & P.G .Department of Chemistry

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOREXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**GREEN SYNTHESIS AND CHARACTERISATION OF IRON NANOPARTICLE USING GREEN TEA EXTRACT**” is an authentic record of the project work done by Mr. NIJAZ NAZAR (Reg. No. 160021034993) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

PALA

DATE : 01/03/2019

**TOJO JOSEPH**

(Supervising Teacher)

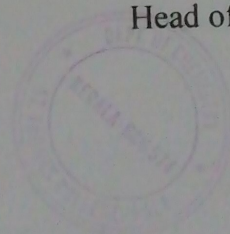
Countersigned by,

**Dr. SUNNY KURIAKOSE**

Head of the Department

Valued by:

Date:





**Dr. Jose K Xavier**  
Associate Professor



Research & Post Graduate

Department Of Chemistry

[DST FIST SPONSORED DEPARTMENT]

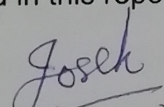
ST. THOMAS COLLEGE, PALA

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

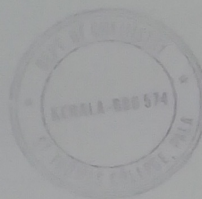
## CERTIFICATE

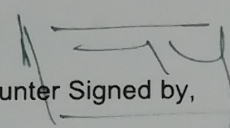
This is to certify that the project report entitled "DETERIORATION OF MARBLE AND CONCRETE STRUCTURES ON EXPOSURE TO ACID RAIN" is an authentic record of the project work carried out by Mr. NIKHIL V P (Reg. No. 160021034974) under my supervision and guidance during the period 2018-2019 in partial fulfilment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

  
Jose K Xavier

(Supervising Teacher)

Department of Chemistry



  
Counter Signed by,

Dr. Sunny Kuriakose

Head, Department of Chemistry

St. Thomas College, Pala

Valued By:

Date :



**AMAL JOSE BABY**  
Assistant Professor



Research & PG Dept. of Chemistry  
[DST FIST Sponsored Department]  
St. Thomas College, Palai

### CERTIFICATE

This is to certify that the project report entitled **“SYNTHESIS AND CHARACTERIZATION OF CdS NANOPARTICLES USING ETHANOL AS STABILIZING AGENT”** is an authentic and credible work carried out by **Mr. RICHU REJI** under my supervision and guidance during the period 2016-19 in partial fulfilment of the degree of **Bachelor of Science in Chemistry** under the **Faculty of Science, Mahatma Gandhi University, Kottayam.**

Palai

AMAL JOSE BABY  
(Supervising Teacher)

Countersigned by,

Dr. SUNNY KURIAKOSE  
Head of Department of Chemistry

Valued by:

Date:



**JITHIN PRAKASH P.A**

Assistant Professor



Research & P. G. Department of Chemistry

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**STERILLIZATION OF WATER USING BLEACHING POWDER**” is an authentic record of the project work carried out by **Mr. ROMAL JOJO (Reg. No. 160021035001)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

**JITHIN PRAKASH P.A.**

(Supervising Teacher)

Assistant professor,

St. Thomas College, Pala

Countersign by,

Dr.SUNNY KURIAKOSE

(Head of the department)

Valued by:

Date:



**JOGY ALEX**

Associate Professor



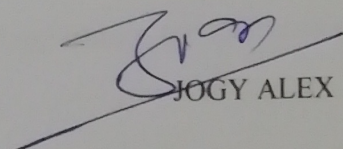
Research & PG Dept. of Chemistry  
[DST FIST Sponsored Department]

St. Thomas College, Palai

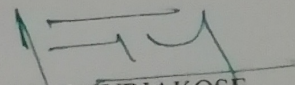
**CERTIFICATE**

This is to certify that the project report entitled "**MICRO OVEN ASSISTED REACTIONS**" is an authentic and credible work carried out by **Mr. SAJITH SATHEESH** under my supervision and guidance during the period 2016-19 in partial fulfilment of the degree of **Bachelor of Science in Chemistry** under the **Faculty of Science, Mahatma Gandhi University, Kottayam.**

Palai

  
JOGY ALEX  
(Supervising Teacher)

Countersigned by,

  
Dr. SUNNY KURIAKOSE  
Head of Department of Chemistry

Valued by:

Date:



**Dr. Jose K Xavier**  
Associate Professor

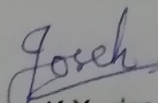


Research & Post Graduate  
Department Of Chemistry  
[DST FIST SPONSORED DEPARTMENT]  
St. Thomas College, Pala  
[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

### CERTIFICATE

This is to certify that the project report entitled "DETERIORATION OF MARBLE AND CONCRETE STRUCTURES ON EXPOSURE TO ACID RAIN" is an authentic record of the project work carried out by Mr. Sarath Sivadas (Reg. No. 160021034994) under my supervision and guidance during the period 2018-2019 in partial fulfilment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.

  
Jose K Xavier

(Supervising Teacher)

Department of Chemistry

Counter Signed by,

Dr. Sunny Kuriakose

Head, Department of Chemistry

St. Thomas College, Pala

Valued By:

Date:



**DR SAJEEV MARTIN GEORGE**  
Chemistry

Assistant Professor

Ph: +91-9446126840

Email: martin.v.george@gmail.com



Research & P. G. Department of

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled "**JAHN – TELLER EFFECT STUDY OF SCHWEIZER'S REAGENT**" is an authentic record of the project work done by Mr. SHIBAS S (Reg. No. 160021034995) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

Pala

28-03-2019

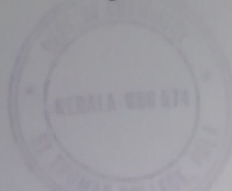
**Dr SAJEEV MARTIN GEORGE**

(Supervising Teacher)

Countersigned by,

**Dr. SUNNY KURIAKOSE**

Head of the Department







**TOJO JOSEPH**

Assistant Professor

Ph: +91-8129772864

Email: tojojocef@gmail.com

Research & P.G .Department of Chemistry

[DST FIST SPONSORED DEPARTMENT]

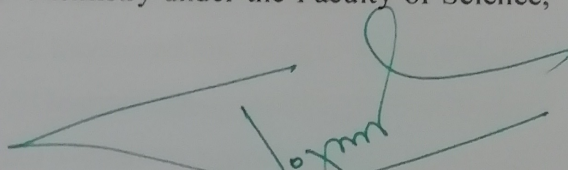
**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOREXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

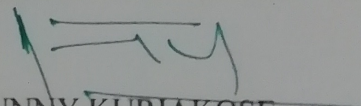
This is to certify that the project report entitled “**GREEN SYNTHESIS AND CHARACTERISATION OF IRON NANOPARTICLE USING GREEN TEA EXTRACT**” is an authentic record of the project work done by Mr. TOM MATHEW (Reg. No. 160021034965) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

  
TOJO JOSEPH  
(Supervising Teacher)

PALA

DATE : 02/04/2019

Countersigned by,

  
Dr. SUNNY KURIAKOSE

Head of the Department

Valued by:

Date:



**JITHIN PRAKASH P.A**

Assistant Professor



Research & P. G. Department of Chemistry

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRAL CENTRE WITH POTFOR EXCELLENCE]

Pala -686574, Kerala

## CERTIFICATE

This is to certify that the project report entitled “**STERILLIZATION OF WATER USING BLEACHING POWDER**” is an authentic record of the project work carried out by **Mr. Tony baby (Reg. No. 160021035002)** under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of **Bachelor of Science** in Chemistry under the **Faculty of Science, Mahatma Gandhi University, Kottayam**. The work presented in this report has not been submitted for any other degree or diploma earlier.

Pala

04-03-2019

**JITHIN PRAKASH P.A.**

(Supervising Teacher)

Assistant professor,

St. Thomas College, Pala

Countersign by,

**Dr.SUNNY KURIAKOSE**

(Head of the department)

Valued by:

Date:



**TOJO JOSEPH**

Assistant Professor

Ph: +91-8129772864

Email: tojojocéf@gmail.com



Research & P.G .Department of Chemistry

[DST FIST SPONSORED DEPARTMENT]

**St. Thomas College, Pala**

[CENTRE WITH POTENTIAL FOREXCELLENCE]

Pala -686574, Kerala

### CERTIFICATE

This is to certify that the project report entitled “**GREEN SYNTHESIS AND CHARACTERISATION OF IRON NANOPARTICLE USING GREEN TEA EXTRACT**” is an authentic record of the project work done by Mr. VINEETH KRISHNAN (Reg. No. 160021034976) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam.

PALA

DATE : 05-04-2019

TOJO JOSEPH

(Supervising Teacher)

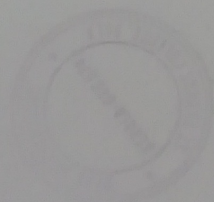
Countersigned by,

Dr. SUNNY KURIAKOSE

Head of the Department

Valued by:

Date:





**Manjesh Mathew**  
(Assistant Professor)



Research & P. G. Department of Chemistry  
[DST FST SPONSORED DEPARTMENT]

## ST THOMAS COLLEGE PALA

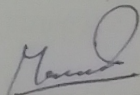
[CENTRE WITH POTENTIAL FOR EXCELLENCE]

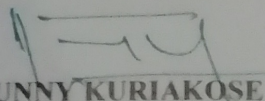
Pala -686574, Kerala

### CERTIFICATE

*This is to certify that the project report entitled "EXTRACTION, ISOLATION, ANTI-BACTERIAL AND ANTI-FUNGAL ASSAY OF CEREBRA ODOLLAM LEAF" is an authentic record of the project work carried out by Mr. VIPINRAJ P R (Reg.No. 160021034996) under my supervision and guidance during the period 2018-2019 in partial fulfillment of the degree of Bachelor of Science in Chemistry under the Faculty of Science, Mahatma Gandhi University, Kottayam. The work presented in this report has not been submitted for any other degree or diploma earlier.*

Pala

  
**MANJESH MATHEW**  
(Supervising Teacher)

  
**Dr. SUNNY KURIAKOSE**  
(Head of the Department of Chemistry)