

**COMPARATIVE STUDIES OF ULTRASONIC ACOUSTICAL
PARAMETERS, ANTIBACTERIAL ACTIVITY AND BONDING
NATURE OF HERBAL AND ALLOPATHIC COUGH SYRUPS**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

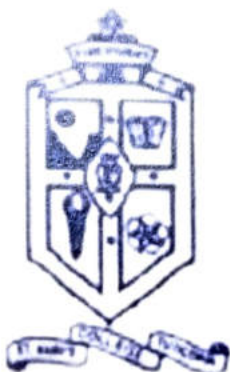
Submitted by

A. CATHERINE JYOTHSANA

Reg. No: 18SPPH01

Under the supervision and guidance of

Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled **“COMPARATIVE STUDIES OF ULTRASONIC ACOUSTICAL PARAMETERS, ANTIBACTERIAL ACTIVITY AND BONDING NATURE OF HERBAL AND ALLOPATHIC COUGH SYRUPS”** is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

A.CATHERINE JYOTHSANA

Register No: 18SPPH01

Signature of the Guide

Signature of the SSC Coordinator

Signature of the Director
Director

Self Supporting Courses
St. Mary's College (Autonomous)
Thoothukudi - 628 001.

Signature of the Principal

Principal
St. Mary's College (Autonomous)
Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, **“COMPARATIVE STUDIES OF ULTRASONIC ACOUSTICAL PARAMETERS, ANTIBACTERIAL ACTIVITY AND BONDING NATURE OF HERBAL AND ALLOPATHIC COUGH SYRUPS”** submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date: 21-10-2019



A. CATHERINE JYOTHSANA

Signature of the student

ACKNOWLEDGEMENT

"GIVE THANKS TO THE LORD FOR HE IS GOOD"

First of all, I thank the Lord Almighty for his blessing and grace to complete this comprehension work.

I am deeply indebted to our Principal **Dr. Sr. A. S. J. LUCIA ROSE M.Sc., PGDCA., M. Phil., Ph. D.** for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Sr. F. MARY JOYCE BABY M.A., M.Phil.,** for her support in my work.

I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, Department of Physics for her inspirational words and encouragement to complete this project.

I owe my deep gratitude to **Dr. J. POONGODI M.Sc., M. Phil., Ph.D.** Associate Professor, Department of Physics Kamaraj College, who took keen interest on our project work and guided us all along, till the completion of our project work by providing all the necessary information for developing a good project, although she had busy schedule.

I would like to express my sincere gratitude to my guide **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,** Assistant Professor, Department of Physics (SSC) for the continuous support, patience, motivation, and immense knowledge. Her guidance had encouraged me to do this project successfully.

I am grateful to my parents and my sister who have provided me through moral and emotional support to complete my work. An endeavor over a long period can be successful only with the advice and supports of many well-wishers. I take this opportunity to express my gratitude and appreciations to all these people.

Finally I am thankful and fortunate enough to get support from my seniors, friends and my classmates who extended their help regarding my project.

IONIC CONDUCTIVITY STUDY OF P(VP-CO-AC) ELECTROLYTE FOR LITHIUM BATTERY APPLICATION

A project report submitted to

DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS),THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

S.EPSIBA

Reg.NO:18SPPH02

Under the supervision and guidance of

Mrs. L. SMILA M.Sc., M.Phil,



DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS),THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

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S.J.PSIIIA

Register No. 18SPP1402




Signature of the Guide



Signature of the SSC

Coordinator




Signature of the Director

Director

Self Supporting Courses

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Thoothukudi - 628 001.




Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.



Signature of the Examiner

DECLARATION

I hereby state that the project entitled, "**IONIC CONDUCTIVITY STUDY OF P(VP-CO-AC) ELECTROLYTE FOR LITHIUM BATTERY APPLICATION**" is submitted to **ST.MARY'S COLLEGE (AUTONOMOUS),THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI** for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

S. Epsiba
S.EPSIBA

Date: 22.10.19

Signature of the student

ACKNOWLEDGEMENT

“GIVE THANKS TO THE LORD FOR HE IS GOOD”

First of all, I thank the Lord Almighty for his blessing and grace to complete this comprehension work.

I deeply indebted to our Principal **Rev. Dr. Sr.A. S. J. LUCIA ROSE M.Sc., PGDCA., M.Phil., Ph.D.** for the encouragement she bestowed upon us.

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I wish to express my special thanks of gratitude to the Head of Department of physics(SSC), **Mrs. P. PADMAVATHI M.Sc.,M.Phil.,SET** for her support and encouragement to complete this project.

I would also thank **Dr. D. NAGARAJAN M.Sc., M.Phil, Ph.D.,** Principal , Kamaraj College, Thoothukudi, for his kind permission to do the project in his institution.

I owe my deep gratitude to **Dr. X. Helan Flora M.Sc., M.Phil., Ph.D.**, Assistant Professor, Department of Physics, Kamaraj College, who took keen interest on our project work and guided us all along, till the completion of our project work by providing all necessary information for developing a good project, although she had busy schedule.

I would like to express my sincere gratitude to my guide **Mrs. L. SMILA M.Sc., M.Phil.** Assistant Professor, Department of Physics (SSC) for her continuous support, patience, motivation and immense knowledge. Her guidance has encouraged me to do this project successfully.

I am grateful to my parents who have provided me through moral and emotional support to complete my work.

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**STUDIES ON GROWTH AND VARIOUS CHARACTERIZATION
OF KDC SINGLE CRYSTALS BY SLOW EVAPORATION
METHOD**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

A. HELINA SILUVAI STEFFY

Reg. No: 18SPPH03

Under the supervision and guidance of

Ms. R.NISHANTHINI M.Sc., M.Phil.,



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A⁺' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled **“STUDIES ON GROWTH AND VARIOUS CHARACTERIZATION OF KDC SINGLE CRYSTALS BY SLOW EVAPORATION METHOD”** is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

A.HELINA SILUVAI STEFFY

Register No: 18SPPH03

R. Nishanthini

Signature of the Guide

P. Anuradha

Signature of the SSC Co-Ordinator

Joyce

Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Lucia Rose

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

J. P. P. P. P.
24/11/2019

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, **“STUDIES ON GROWTH AND CHARACTERIZATION OF KDC SINGLE CRYSTALS BY SLOW EVAPORATION METHOD”** submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI,** affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI,** for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date: 21.10.2019

A. Helina Siluvai Steffy
A. HELINA SILUVAI STEFFY

Signature of the student

ACKNOWLEDGEMENT

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I am deeply indebted to our Principal Rev. **Dr. Sr. A. S. J. LUCIA ROSE M. Sc., PGDCA., M. Phil., Ph. D.,** for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Rev. Sr. F. MARY JOYCE BABY** for her support in my work.

I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, for her inspirational words and encouragement to complete this project.

I would also thanks **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,** SSC Coordinator, Department of Physics, St. Mary's College for her kind permission to do the project in this Institution.

I wish to record my sincere thanks to my guide and mentor **Ms. R. NISHANTHINI M.Sc., M.Phil.,** Assistant Professor, Department of Physics, St. Mary's College, for her efficient, guidance and encouragement in the successful completion of this project.

I have a pleasure to thanks **Mrs. N. SELVALAKSHMI M.Sc., M.Phil.** for her valuable time to spend complete the experimental part of my project work.

It is my pleasure to extend my thanks to **Dr. P. PANDI M.Sc., M.Phil., Ph.D.** Assistant Professor, Department of Physics, Madura College, Madurai, and **Ms. S. RAMA SUNDARI M.Sc., M.Phil.,** Assistant Professor, Department of Physics, St. Mary's college, for their help to successful completion of my project work.

I am grateful to my parents and my sister who have provided me through moral and emotional support to complete my work. An endeavor over a long period can be successful only with the advice and supports of many well-wishers. I take this opportunity to express my gratitude and appreciations to all these people.

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**A STUDY OF ANTIBACTERIAL ACTIVITY OF ZINGIBER
OFFICINALE EXTRACT AT VARIOUS CONCENTRATIONS**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

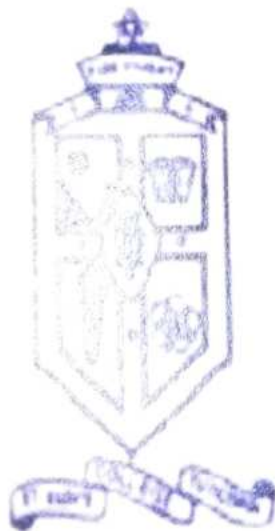
Submitted by

C. INFANT FRANCITA FONSEKA

Reg. No: 18SPPH04

Under the supervision and guidance of

Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

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C. INFANT FRANCITA FONSEKA

Register No: 18SPPH04

Signature of the guide

Signature of the SSC Coordinator

Signature of the Director

Director

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St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

24/11/2019

DECLARATION

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Station: Thoothukudi

Date: 21-10-2019

C. Infant Francita Fonseka

C. INFANT FRANCITA FONSEKA

Signature of the candidate

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I also thank **Dr. J. ANTONY RAJAM M.Sc. M.Phil., SET., Ph.D.** (Coordinator), Department of Chemistry for her untiring help, guidance and encouragement in the successful completion of the project.

I would like to express my sincere gratitude to my guide **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,** Assistant Professor, Department of Physics (SSC) for the continuous support, patience, motivation, and immense knowledge. Her guidance had encouraged me to do this project successfully.

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Finally I am thankful and fortunate enough to get support from my seniors, friends and my classmates who extended their help regarding my project.

**ANALYSIS OF ALFVEN WAVES PRODUCED DURING THE
FLIP IN MAGNETIC FIELD**

A project report submitted to
DEPARTMENT OF PHYSICS
ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to
MANONMANIAM SUNDARANAR UNIVERSITY
TIRUNELVELI

In partial fulfillment of the requirements for the award of
MASTER OF SCIENCE IN PHYSICS

Submitted by

X. JERINA

Reg. No: 18SPPH05

Under the supervision and guidance of
Dr.S. ANTONY DHIVYATHARSHINI M.Sc., B.Ed., M.Phil., Ph.D.



DEPARTMENT OF PHYSICS
ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.
(Re-accredited with 'A+' Grade by NAAC)
2019-2020

CERTIFICATE

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X. JERINA

Register No: 18SPPH05

Signature of the Guide

Signature of the SSC Coordinator

Signature of the Director

Director

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Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

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Station: Thoothukudi

Date: 21.10.2019

X. Jerina

X. JERINA

Signature of the student

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I would like to thank wholeheartedly **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.**, SSC Coordinator, Department of physics, for her insightful comments and encouragement.

I would like to express a very special thanks to my guide **Dr.S.ANTONY DHIVYA THARSHINI M.Sc., B.Ed., M.Phil., Ph.D**, Assistant Professor, Department of Physics (SSC) for the continuous support, patience, motivation, and immense knowledge. Her guidance has encouraged me to do this project successfully.

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**SYNTHESIS OF ZnSe THIN FILM BY SILAR TECHNIQUE AND ITS
CHARACTERIZATION FOR STRUCTURAL AND OPTICAL
PROPERTIES**

A project report submitted to

DEPARMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI

In partial fulfilment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

J. JOSEIL MAJORAE

Reg.No:18SPPH06

Under the supervision and guidance of

Ms. A. Nirmala Shirley M. Sc., B. Ed., M. Phil.



DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled “**SYNTHESIS AND CHARACTERIZATION OF ZnSe THIN FILM BY SILAR METHOD**” is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfilment of requirement for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

J. JOSEIL MAJORAE

Reg. No: 18SPPH06

Signature of the Guide

Signature of the Coordinator

Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

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Station: Thoothukudi

Date: 21.10.2019


J. JOSEIL MAJORAE

Signature of the student

ACKNOWLEDGEMENT

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I wish to express my sincere thanks to our Director of SSC **Rev. Sr. F. Mary Joyce Baby M. A., M. Phil** for her support in my work.

I would like to express my sincere thanks to our Head of Department of Physics **Dr. S. Euchrista Immaculate Sylvia M. Sc., M. Phil., Ph. D** for her encouragement to complete my project.

I am thankful to our Coordinator of Department of Physics **Ms. P. PADMAVATHI M. Sc., M. Phil., SET** for encouraging me to perform this project.

I express my sincere respect and gratitude to my guide **Ms. A. Nirmala Shirley M. Sc., B. Ed., M. Phil** whose words of advice have revitalized me to complete my project successfully.

I thank my parents and friends who have extended their helping hands towards me to complete my project successfully.

**THE STUDY OF MAGNETOHYDRODYNAMIC WAVES
GENERATED IN THE SOLAR ATMOSPHERE**

A project report submitted to
DEPARTMENT OF PHYSICS
ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to
MANONMANIAM SUNDARANAR UNIVERSITY
TIRUNELVELI.

In partial fulfillment of the requirements for the award of
MASTER OF SCIENCE IN PHYSICS

Submitted by
M. JOSEPHINE GLADIYA

Reg. No: 18SPPHO7

Under the supervision and guidance of
Dr.S. ANTONY DHIVYA THARSHINI M.Sc., B.Ed., M.Phil., Ph.D



DEPARTMENT OF PHYSICS
ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

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M. JOSEPHINE GLADIYA

Register No: 18SPPH07

Signature of the Guide

Signature of the SSC Coordinator

Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

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Station: Thoothukudi

Date: 21.10.2019

Josephine Gladiya.M

M. JOSEPHINE GLADIYA

Signature of the student

ACKNOWLEDGEMENT

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**A STUDY ON THE SPECTROSCOPIC PROPERTIES
OF BIOSAMPLES**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

R. KISENIYA

Reg. No: 18SPPHO9

Under the supervision and guidance of

Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled “**A STUDY ON THE SPECTROSCOPIC PROPERTIES OF BIOSAMPLES**” is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

R. KISENIYA

Register No: 18SPPHO9

Signature of the Guide

Signature of the SSC Coordinator

Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, **“A STUDY ON THE SPECTROSCOPIC PROPERTIES OF BIOSAMPLES”** is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date: 21.10.19

R. Kiseniya
R. KISENIYA

Signature of the student

ACKNOWLEDGEMENT

“GIVE THANKS TO THE LORD FOR HE IS GOOD”

First of all, I thank the Lord Almighty for his blessing and grace to complete this comprehension work.

I am deeply indebted to our Principal **Dr. Sr. A.S.J. LUCIA ROSE M.Sc., M.Phil., PGDCA., Ph.D.** for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Sr. F. MARY JOYCE BABY M.A., M.Phil.,** for her support in my work.

I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, Department of Physics, for her inspirational words and encouragement to complete this project.

I owe my deep gratitude to **Dr. J. POONGODI M.Sc., M.Phil., Ph.D.** Associate Professor, Department of Physics Kamaraj College, who took keen interest on our project work and guided us all along, till the completion of our project work by providing all the necessary information for developing a good project, although she had busy schedule.

I also thank **Mrs. S. IRUDHYA SAHAYA LANCY M.Sc., M.Phil.,** for her untiring help, guidance in results and discussion and encouragement in the successful completion of this project.

I would like to express my sincere gratitude to my guide **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,** Assistant Professor, Department of Physics (SSC) for the continuous support, patience, motivation, and immense knowledge. Her guidance had encouraged me to do this project successfully.

I am grateful to my parents and my sister who have provided me through moral and emotional support to complete my work.

An endeavor over a long period can be successful only with the advice and supports of many well-wishers. I take this opportunity to express my gratitude and appreciations to all these people.

Finally I am thankful and fortunate enough to get support from my seniors, friends and my classmates who extended their help regarding my project.

FTIR ANALYSIS OF ZnS AND ZnSe THIN FILMS BY SILAR METHOD

A project report submitted to

DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI

In partial fulfilment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

U. MANIMEGALAI

Reg. No: 18SPPH10

Under the supervision and guidance of

Mrs. A. Nirmala Shirley M.Sc., B.Ed., M.Phil.



DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

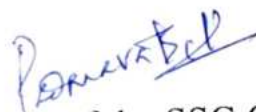
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U. MANIMEGALAI

Register No: 18SPPH10



Signature of the Guide



Signature of the SSC Coordinator



Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.



Signature of the principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.


24/10/2019

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, "**FTIR ANALYSIS OF ZnS AND ZnSe THIN FILMS BY SILAR METHOD**" submitted to **ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date: 21 10 2019



U. MANIMEGALAI

Signature of the student

ACKNOWLEDGEMENT

First of all, I thank God of all creations, for showering his divine mercy and grace in completing this project work successfully.

I wish to place on record my sincere and special thanks to our Principal **Rev. Dr. Sr. LUCIA ROSE M.Sc., PGDCA., M.Phil., Ph.D** for the encouragement she bestowed upon us.

I wish to express my thanks to our Director of SSC **Rev. Sr. F. Mary Joyce Baby M.A., M.Phil** for her support in my work.

I would like to express my sincere thanks of gratitude to the Head of the Department of physics **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D** for her inspirational words and encouragement to complete this project.

I thank **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET (SSC)** Coordinator of Department of Physics for encouraging us to perform this project.

I express my sincere gratitude to my guide **Mrs. A. Nirmala Shirley M.Sc., B.Ed., M.Phil** whose words of experience and advice revitalized me to complete this project successfully.

I am thankful to my parents, friends and all those who helped me for their good support and help to carry out my research work successfully.

**GREEN SYNTHESIS OF Ag₂O NANOPARTICLES USING PIPER
LONGUM EXTRACT**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfilment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

A. MARY GEORGE SHEMONA

Reg. No: 18SPPH11

Under the supervision and guidance of

Mrs. L. SMILA M.Sc., M.Phil.



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled "**GREEN SYNTHESIS OF Ag₂O NANOPARTICLES USING PIPER LONGUM EXTRACT**" is submitted to **ST. MARY'S COLLEGE (AUTONOMOUS) THOOTHUKUDI**, in partial fulfilment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

A. MARY GEORGE SHEMONA

Register No : 18SPPH11



Signature of the Guide



Signature of the SSC Coordinator



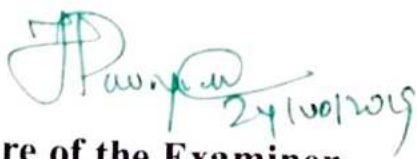
Signature of the Director
Director

Self Supporting Courses
St. Mary's College (Autonomous)
Thoothukudi - 628 001.



Signature of the Principal
Principal

St. Mary's College (Autonomous)
Thoothukudi - 628 001.



Signature of the Examiner

DECLARATION

I hereby state that the project entitled, "**GREEN SYNTHESIS OF Ag₂O NANOPARTICLES USING PIPER LONGUM EXTRACT**" submitted to **ST. MARY'S COLLEGE (AUTONOMOUS) THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date: 21/10/2019



A.MARY GEORGE SHEMONA

Signature of the student

ACKNOWLEDGEMENT

"I AM BLESSED AND I THANK GOD FOR EVERYTHING"

First of all, I owe my special gratitude to the Lord Almighty for blessing me with the successful completion of this project work.

I am deeply indebted to our Principal Rev. **Dr. Sr. S. LUCIA ROSE M. Sc., PGDCA., M. Phil., Ph.D.** for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Rev. Sr. F. MARY JOYCE BABY M.A., M.Phil.,** for her support in my work.

I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, Department of Physics, for her inspirational words and encouragement to complete this project.

I assure my words of thanks to **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET,** Assistant Professor, Department of Physics (SSC) for the continuous unstinted support to ensure the success of this project.

I would like to express my sincere gratitude to my guide **Mrs. L. SMILA M.SC., M.Phil.,** Assistant Professor, Department of Physics (SSC) for the continuous support, patience, motivation, and immense knowledge. Her guidance had encouraged me to do this project successfully.

I also thank **Dr. J. ANTONY RAJAM M.Sc., M.PHIL., SET., Ph.D.** coordinator, Department of Chemistry (SSC), for this untiring help, guidance and encouragement in the successful completion of this project.

I am grateful to my parents for their moral and emotional support to complete my work.

An endeavour over a long period can be successful only with the advice and supports of many well-wishers. I take this opportunity to express my gratitude and appreciations to all these people.

Finally, I am thankful and fortunate enough to get support from my seniors, friends and my classmates who extended their help regarding my project.

**PHYTO FABRICATION OF Ag_2O NANOPARTICLES
FROM QUERCUS INCANA EXTRACT**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfilment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

D.MONIKA

Reg. No: 18SPPH12

Under the supervision and guidance of

Mrs. L. SMILA M.Sc., M.Phil.



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

CERTIFICATE

This is to certify that this project work entitled **"PHYTO FABRICATION OF Ag₂O NANOPARTICLES FROM QUERCUS INCANA EXTRACT"** is submitted to **ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfilment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

D.MONIKA

Register No: 18SPPH12

Signature of the Guide

Signature of the SSC Coordinator

Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, **“PHYTO FABRICATION OF Ag_2O NANOPARTICLES FROM QUERCUS INCANA EXTRACT”** submitted to **ST. MARY’S COLLEGE (AUTONOMOUS) THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

STATION: THOOTHUKUDI

DATE : 21.10.19

D. Monika

D.MONIKA

REG NO: 18SPPH12

ACKNOWLEDGEMENT

"THANK GOD FOR HIS GOODNESS"

First of all, I owe my special gratitude to the Lord Almighty for blessing me with the successful completion of this project work.

I am deeply indebted to our Principal Rev. **Dr. Sr. A. S.J. LUCIA ROSE M. Sc., PGDCA., M. Phil., Ph. D.** for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Rev. Sr. F. MARY JOYCE BABY M.A., M.Phil.,** for her support in my work.

I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, for her inspirational words and encouragement to complete this project.

I assure my words of thanks to **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET,** Assistant Professor, Department of Physics (SSC) for the continuous unstinted support to ensure the success of this project.

I would like to express my sincere gratitude to my guide **Mrs. L. SMILA M.SC., M.Phil.,** Assistant Professor, Department of Physics (SSC) for the continuous support, patience, motivation, and immense knowledge. Her guidance had encouraged me to do this project successfully.

I also thank **Dr. J. ANTONY RAJAM M.Sc., M.Phil. SET, Ph.D.** for this untiring help, guidance and encouragement in the successful completion of this project.

I am grateful to my parents for their moral and emotional support to complete my work.

An endeavour over a long period can be successful only with the advice and supports of many well-wishers. I take this opportunity to express my gratitude and appreciations to all these people.

Finally, I am thankful and fortunate enough to get support from my seniors, friends and my classmates who extended their help regarding my project.

**DEPOSITION AND CHARACTERIZATION OF ZnS THIN
FILM BY SILAR METHOD**

A project report submitted to

DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI

In partial fulfilment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

T.MUTHU MARI

Reg.No: 18SPPH13

Under the supervision and guidance of

Ms.A.Nirmala Shirley M.Sc.,B.Ed.,M.Phil



DEPARTMENT OF PHYSICS

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled “**DEPOSITION AND CHARACTERIZATION OF ZnS THIN FILM BY SILAR METHOD**” is submitted to **ST.MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfilment of requirement for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by.

T.MUTHUMARI

Register No:18SPPH13



Signature of the Guide



Signature of the SSC Coordinator



Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

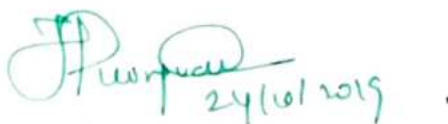


Signature of the principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.



Signature of the Examiner

DECLARATION

I hereby state that the project entitled, "**DEPOSITION AND CHARACTERIZATION OF ZnS THIN FILM BY SILAR METHOD**" submitted to **ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station :Thoothukudi

Date : 21.10.19

T. Muthumari

T.MUTHUMARI

Signature of the student

ACKNOWLEDGEMENT

First of all, I thank God of all creations, for showering his divine mercy and grace in completing this project work successfully.

I wish to place on record my sincere and special thanks to our Principal **Rev. Dr. Sr. LUCIA ROSE M.Sc., PGDCA., M.Phil., Ph.D.**, for the encouragement she bestowed upon us.

I wish to express my thanks to our Director of SSC, **Rev. Sr. F. Mary Joyce Baby M.A., M.Phil.**, for her support in my work.

I thank **Dr. S. Euchrista Immaculate Sylvia M.Sc., M.phil., Ph.D** the Head of the Department of Physics for encouraging me to perform this project.

I thank **Mrs. P. PADMAVATHI M.Sc., M.Phil., SET.,** SSC Coordinator, Department of Physics for encouraging me to perform this project.

I express my sincere gratitude to my guide **Ms. A. Nirmala Shirley M.Sc., B.Ed., M.Phil** whose words of experience and advice revitalized us to complete this project successfully.

I am thankful to my parents, friends and all those who helped me for their good support and help to carry out my research work successfully.

ARDUINO BASED ROBOTIC VEHICLE CONTROLLED BY ANDROID APPLICATION

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirement for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

K. NIVETHITHA

Reg. No: 18SPPH14

Under the supervision and guidance of

Dr. S. ANTONY DHIVYA THARSHINI M.Sc., B.Ed., M.Phil., Ph.D.



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled “**ARDUINO BASED ROBOTIC VEHICLE CONTROLLED BY ANDROID APPLICATION**” is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

K. NIVETHITHA

Register No: 18SPPH14



Signature of the Guide



Signature of the SSC Coordinator



Signature of the Director
Director

Self Supporting Courses
St. Mary's College (Autonomous)
Thoothukudi - 628 001.



Signature of the Principal
Principal

St. Mary's College (Autonomous)
Thoothukudi - 628 001.



Signature of the Examiner

DECLARATION

I hereby state that the project entitled, “**ARDUINO BASED ROBOTIC VEHICLE CONTROLLED BY ANDROID APPLICATION**” submitted to **ST.MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date : 21.10.19


K. NIVETHITHA

Signature of the student

ACKNOWLEDGEMENT

“GIVE THANKS TO THE LORD FOR HE IS GOOD”

First of all, I thank the Lord Almighty for his blessing and grace to complete this comprehension work.

I wish to express my sincere thanks to our Principle **Rev. Dr. Sr. S. LUCIA ROSE M.sc., PGDCA., M.Phil., Ph.D.**, for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Rev. Sr. F. MARY JOYCE BABY MA., M.Phil.**, for her support in my work.

I am extremely grateful to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department of Physics, for her inspirational words and kind support to complete this project.

I would like to thank whole heartedly **Mrs. P. PADMAVATHI M.SC., M.Phil., SET.**, SSC Coordinator, for her insightful comments and encouragement.

I would like to express a very special gratitude to my guide **Dr. S. ANTONY DHIVYA THARSHINI M.Sc., B.Ed., M.Phil., Ph.D.**, Assistant Professor, Department of Physics (SSC) for the

continuous support, patience, motivation, and immense knowledge. Her guidance had encouraged me to do this project successfully.

I am grateful to my parents who have provided me through moral and emotional support to complete my work.

An endeavor over a long period can be successful only with the advice and support of many well wishers. I take this opportunity to express my gratitude and appreciations to all these people.

Finally, my heartfelt thanks to my sister, friends and all those who helped me for their good support and help to carry out research work successfully.

**BIOFABRICATION OF NiO NANOPARTICLES FROM GLIRICIDIUM
SEPIUM AND TERMINALIA ARJUNA EXTRACT**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfilment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

K.STELLA PIONA LEON

Reg. No: 18SPPH16

Under the supervision and guidance of

Mrs. L. SMILA M.Sc., M.Phil.



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

(2019-2020)

CERTIFICATE

This is to certify that this project work entitled **"BIO FABRICATION OF NiO NANOPARTICLES FROM GLIRICIDIUM SEPIUM AND TERMINALIA ARJUNA EXTRACT"** is submitted to **ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

K. STELLA PIONA LEON

Register No: 18SPPH16



Signature of the Guide



Signature of the SSC Coordinator



Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

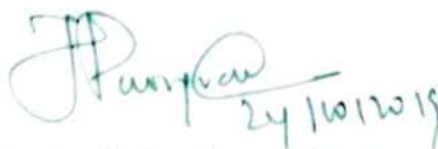


Signature of the principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.



Signature of the Examiner

DECLARATION

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Station: Thoothukudi

K.STELLA PIONA LEON

Date: 21.10.2019



Signature of the student

ACKNOWLEDGEMENT

"THANK GOD FOR HIS BLESSINGS"

First of all, I owe my sincere gratitude to the Lord our God almighty for being with me all through the time while doing this work and for helping me to complete it.

I owe special thanks to our principal **Rev. Dr .Sr. A.S.J. LUCIA ROSE M.Sc.,PGDCA., M.Phil.,Ph.D.** for her support in my work.

I also wish to thank our Director of SSC, **Rev. Sr. F. MARY JOYCE BABY MA.,M.Phil.**, her encouragement she bestowed upon us.

With great honor ,I acknowledge my gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIYA M.Sc., M.Phil., Ph.D.** Head of the Department , Department of Physics for her kindness.

I assure my sincere word of thanks to **Mrs.P.PADMAVATHI M.Sc., M.Phil., SET**, coordinator , Department of Physics , (SSC) for her tiredless support for the completion of the project.

I also thank **Dr. J. ANTONY RAJAM M.Sc., M.PHIL., SET., Ph.D.** co-ordinator, Department of Chemistry, (SSC) for this untiring help, guidance and encouragement in the successful completion of this project.

At this moment I like to extend my gratitude to my guide **Mrs.L.SMILA M.Sc.,M.PHIL.**, Assistant Professor , Department of Physics (SSC) for her guidance, continuous support, patience and knowledge. Her guidance have helped me to complete the project.

I am grateful to my family members for their moral support and to my brother for his economical support to complete my work in a great way.

I also take this opportunity to thank all my well-wishers.

Last but not the least I thank my dear friends for their support in the completion of the project.

**LABORATRY INVESTIGATION OF ULTRASONIC ACOUSTICAL
PARAMETERS ON *BRASSICA NIGRA* EXTRACT AT VARIOUS
TEMPERATURE**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

P. UMARANI

Reg. No: 18SPPH17

Under the supervision and guidance of

Mrs. P. PADMAVATHI M.Sc., M. Phil., SET.,



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A+' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled “**LABORATORY INVESTIGATION OF ULTRASONIC ACOUSTICAL PARAMETERS ON *BRASSICA NIGRA* EXTRACT AT VARIOUS TEMPERATURE** ” is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

P.UMARANI

Register No: 18SPPH17

Signature of the Guide

Signature of the SSC Coordinator

Signature of the Director

Director

Self Supporting Courses

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Principal

Principal

St. Mary's College (Autonomous)

Thoothukudi - 628 001.

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, **“LABORATRY INVESTIGATION OF ULTRASONIC ACOUSTICAL PARAMETERS ON BRASSICA NIGRA EXTRACT AT VARIOUS TEMPERATURE”** submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

Station: Thoothukudi

Date: 21.10.2019

P.umarani

P.UMARANI

Signature of the student

ACKNOWLEDGEMENT

"GIVE THANKS TO THE LORD FOR HE IS GOOD"

First of all, I thank the Lord Almighty for his blessing and grace to complete this comprehension work.

I am deeply indebted to our Principal **Dr. Sr. A.S.J. LUCIA ROSE** M. Sc., M. Phil., B. Ed., Ph. D. for the encouragement she bestowed upon us.

I wish to express my sincere thanks to our Director of SSC, **Sr. F.MARY JOYCE BABY M.A., M.Phil.,** for her support in my work.

I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, Department of Physics for her inspirational words and encouragement to complete this project.

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**SYNTHESIS AND CHARACTERIZATION OF KDP SINGLE
CRYSTALS BY SLOW EVAPORATION METHOD**

A project report submitted to

DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

Affiliated to

MANONMANIAM SUNDARANAR UNIVERSITY

TIRUNELVELI.

In partial fulfillment of the requirements for the award of

MASTER OF SCIENCE IN PHYSICS

Submitted by

R. VIMALA

Reg. No: 18SPPH18

Under the supervision and guidance of

Ms. R.NISHANTHINI M.Sc., M.Phil.,



DEPARTMENT OF PHYSICS

ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI.

(Re-accredited with 'A⁺' Grade by NAAC)

2019-2020

CERTIFICATE

This is to certify that this project work entitled **“SYNTHESIS AND CHARACTERIZATION OF KDP SINGLE CRYSTALS BY SLOW EVAPORATION METHOD”** is submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, in partial fulfillment of requirements for the award of **MASTER OF SCIENCE IN PHYSICS** and is a record of work done during the year 2019-2020 by

R. VIMALA

Register No: 18SPPH18



Signature of the Guide



Signature of the SSC Co-Ordinator




Signature of the Director
Director

Self Supporting Courses
St. Mary's College (Autonomous)
Thoothukudi - 628 001.



Signature of the Principal
Principal

St. Mary's College (Autonomous)
Thoothukudi - 628 001.



24/10/2020

Signature of the Examiner

DECLARATION

I hereby state that the project entitled, **“SYNTHESIS AND CHARATERIZATION OF KDP SINGLE CRYSTALS BY SLOW EVAPORATION METHOD”** submitted to **ST. MARY’S COLLEGE (AUTONOMOUS), THOOTHUKUDI**, affiliated to **MANONMANIAM SUNDARANAR UNIVERSITY TIRUNELVELI**, for the award of the Degree of Master of Science in Physics is my unique work and no part of this project has been submitted for any Degree, Diploma or other similar titles.

R.vimala
R.VIMALA

Station: Thoothukudi

Date: 22.10.19

Signature of the student

ACKNOWLEDGEMENT

“GIVE THANKS TO THE LORD FOR HE IS GOOD”

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I would like to express my special thanks of gratitude to **Dr. S. EUCHRISTA IMMACULATE SYLVIA M.Sc., M.Phil., Ph.D.** Head of the Department, for her inspirational words and encouragement to complete this project.

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