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**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
(Affiliated to Periyar University, Salem and Approved by AICTE, New Delhi)  
An ISO 9001:2015 Certified Institution  
Recognised under section 2(f) and 12(B) of the UGC Act 1956  
Accredited by NAAC  
Tiruchengode – 637 205, Namakkal dt., Tamilnadu



### **1.3.2 Experimental Learning through Project-work/Internship**

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7	MONISHA G
8	MONISHA S
9	NIVETHA P
10	SRIPRIYADHARSHINI G
11	SUGANYA S
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Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,  
Head, Department of Microbiology


PG and Research Department of Microbiology  
Sengunthar Arts and Science College  
Tiruchengode – 637 205  
Tamilnadu, India

Date: 20.04.2021

### CERTIFICATE

This is to certify that the dissertation entitled on "Isolation and Identification of Polyhydroxybutyrate(PHB) Producing Bacterial from Sewage soil" done by B. Aravindh (Reg.No.19PAM1047) during academic year 2020-2021 in partial fulfillment for Master Of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

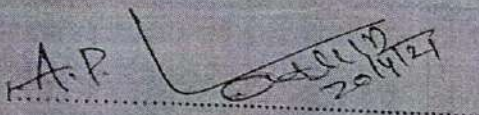
  
Guide

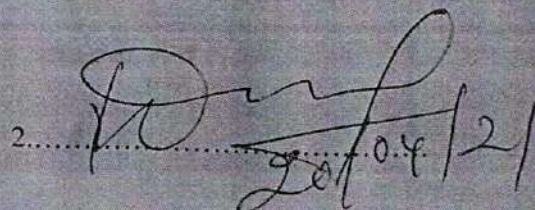
Dr. A. P. VENKATACHALAM  
HEAD  
DEPARTMENT OF MICROBIOLOGY,  
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TIRUCHENGODE - 637 205, (TN).

Dr. A. P. VENKATACHALAM

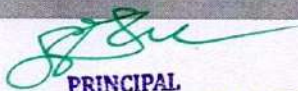
Submitted for the viva-voice examination held on 20.04.2021

Examiners:

  
20/4/21

  
20/04/21


ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

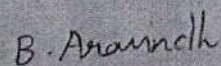


### DECLARATION

I hereby declare that the dissertation entitled on "**Isolation and Identification of Polyhydroxybutyrate(PHB) Producing Bacterial from Sewage soil**" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of **Master Of Science In Applied Microbiology**, is recorded of original work done by me under the guidance of **Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D., Assistant Professor PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode**, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.


  
Counter Signed By Guide

Dr. A. P. Venkatachalam M.Sc., M.Phil., Ph.D.,

  
Signature of the Candidate

B. Aravindh

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Dr. VENKATACCHALAM M.Sc., M.Phil., Ph.D.,  
Professor

PG and Research Department of Microbiology,  
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Tiruchengode - 637 205,  
Tamilnadu, India.


DATE: 20/04/2021

### CERTIFICATE

This is to certify that the dissertation entitle **PRODUCTION OF CELLULOSE BY ACETOBACTER** done by Mr. M. DEVAKUMAR, Reg. No. 19PAM1048 during academic year 2019-2021 in partial fulfillment for Master of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
HEAD OF THE DEPARTMENT

Dr. P. VENKATACHALAM  
HEAD  
DEPARTMENT OF MICROBIOLOGY,  
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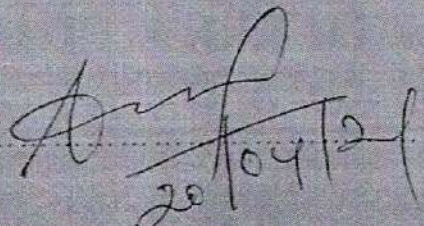
  
GUIDE

Ms. T. NIVEDHARSHINI M.Sc. M.Phil.

Submitted for the viva - voce examination held on 20/04/2021

Examiners:

1.   
20/04/21

2.   
20/04/21

ATTESTED

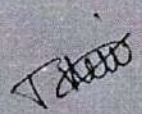


PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.




## DECLARATION

I hereby declare that the dissertation entitled **PRODUCTION OF CELLULOSE BY ACETOBACTER** submitted to the Periyar University Salem, Tamilnadu, India, in partial fulfillment of Master of Science in Applied Microbiology, is a record of original work done by me under the guidance of Dr. A.P.Venkatachalam, head of the Department, PG & Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode, and it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to any candidate of any University.


  
COUNTER SIGNED BY GUIDE

(Ms. T. NIVEDHARSHINI M.sc. M.Phil.)

  
SIGNATURE OF THE CANDIDATE

(M.DEVAKUMAR)

ATTESTED



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Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,  
Head, Department of Microbiology

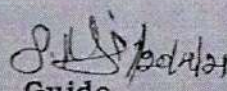
PG and Research Department of Microbiology  
Sengunthar Arts and Science College  
Tiruchengode - 637 205  
Tamilnadu, India

Date: 20.04.21

### CERTIFICATE

This is to certify that the dissertation entitled on "Antibacterial activity of essential oils against bacteria isolated from wound sepsis" done by Mr. S. Gowrishankar, Reg.No.19PAM1049 during academic year 2020-2021 in partial fulfillment for Master Of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

  
Guide

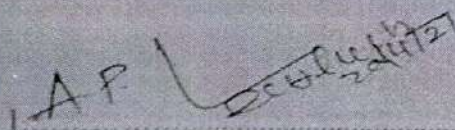
(Dr. A. P. VENKATACHALAM)

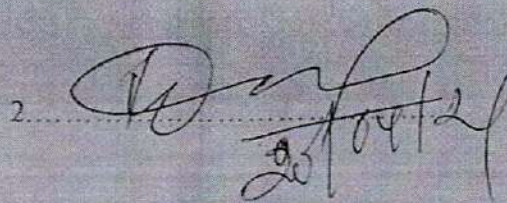
(Dr. S. NAVAMANI)

HEAD  
DEPARTMENT OF MICROBIOLOGY,  
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Submitted for the viva-voice examination held on 20.04.21

Examiners:

1.   
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2.   
20/04/21

ATTESTED


  
PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

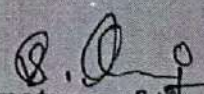


### DECLARATION

I hereby declare that the dissertation entitled on "**Antibacterial activity of essential oils against bacteria isolated from wound sepsis**" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of **Master Of Science In Applied Microbiology**, is recorded of original work done by me under the guidance of **Dr. S. NAVAMANI, M.Sc., P.h.D Assistant Professor PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode**, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.

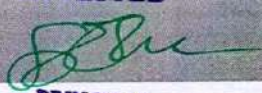
  
Counter Signed By Guide

**Dr. S. NAVAMANI M.Sc., Ph.D.,**

  
Signature of the Candidate

**Mr.S. GOWRISHANKAR**

**ATTESTED**



**PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**



Dr. P. ASHOK KUMAR M.Sc., Ph.D.,  
Professor

PG and Research Department of Microbiology,  
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Tiruchengode - 637 205,  
Tamilnadu, India

DATE: 20.04.2021

### CERTIFICATE

This is to certify that the dissertation entitle **NAIT OF MELANGE OF MICROBES AND MICROBIAL CONSORTIUM FROM DYE EFFLUENTS IN BIODEGRADATION OF AZO DYES** done by **Mr. R.J. HARISHUDHAN**, Reg. No. 19PAM1051 during academic year 2019-2021 in partial fulfillment for Master of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
HEAD OF THE DEPARTMENT

Dr. P. VENKATACHALAM M.Sc. M.Phil, Ph.D.,


HEAD  
DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE,  
TIRUCHENGODE - 637 205, (TN).

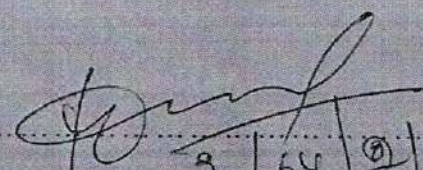
  
GUIDE

Dr. P. ASHOK KUMAR M.Sc., Ph.D.,

Submitted for the viva – voce examination held on 20.04.2021

Examiners:

1.   
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2.   
20/04/21

ATTESTED

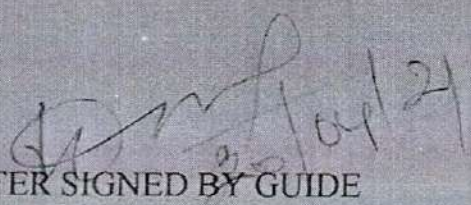


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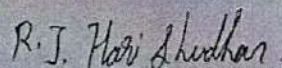


## DECLARATION

I hereby declare that the dissertation entitled **NAIT OF MELANGE OF MICROBES AND MICROBIAL CONSORTIUM FROM DYE EFFLUENTS IN BIODEGRADATION OF AZO DYES** submitted to the Periyar University Salem, Tamilnadu, India, in partial fulfillment of **Master of Science in Applied Microbiology**, is a record of original work done by me under the guidance of **Dr. P. ASHOK KUMAR M.Sc., Ph.D., Asst. Professor PG & Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode**, and it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to any candidate of any University.

  
COUNTER SIGNED BY GUIDE

(Dr. P. ASHOK KUMAR M.Sc., Ph.D.,)

  
SIGNATURE OF THE CANDIDATE

(R.J. HARISHUDHAN)

ATTESTED



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SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



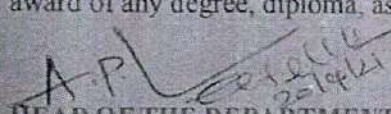
Dr. A.P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,  
Head of Dept.,

PG & Research Department of  
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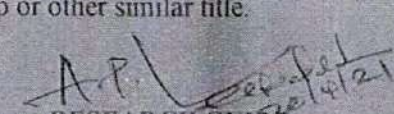
Date: 20/04/2021

CERTIFICATE

This dissertation is a record of work entitled "STUDIES ON ANTAGONISTIC ACTIVITY USING MYCORRHIZA ASSOCIATED ACTINOMYCETES FOR MANAGEMENT OF PLANT PATHOGENIC FUNGUS" done by Mr. A. MURUGAN, RegNo: 19PAM1052, during the academic year 2020-2021, in partial fulfillment for Master of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed the basis for the award of any degree, diploma, associate ship, fellowship or other similar title.

  
HEAD OF THE DEPARTMENT  
Dr. A.P. Venkatachalam,  
M.Sc., M.Phil., Ph.D.

HEAD  
DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE,  
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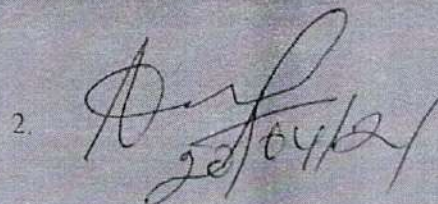
  
RESEARCH GUIDE  
Dr. A.P. Venkatachalam,  
M.Sc., M.Phil., Ph.D.

Submitted for the viva - voce examination held on

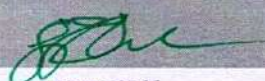
20/04/2021

Examiners

1.   
A.P. Venkatachalam  
20/04/21

2.   
20/04/21

ATTESTED



PRINCIPAL  
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## DECLARATION

I hereby declare that the dissertation entitled "STUDIES ON ANTAGONISTIC ACTIVITY USING MYCORRHIZA ASSOCIATED ACTINOMYCETES FOR MANAGEMENT OF PLANT PATHOGENIC FUNGUS" submitted to periyar University, Salem, in partial fulfillment of Master of Science in Applied Microbiology is a record of original work done by me under the guidance of Dr. A.P. VENKATACHALAM, PG & Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode and it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to any candidate of any university.

  
COUNTER SIGNED BY

GUIDE  
(Dr. A.P. VENKATACHALAM)

SIGNATURE OF THE CANDIDATE

(Mr. A. MURUGAN)

Place Tiruchengode

Date 20-4-21

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Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,

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PG and Research Department of

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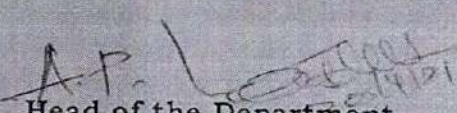
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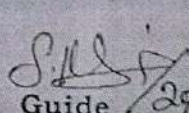
Tamilnadu, India

Date: 20 - 04 - 2021

### CERTIFICATE

This is to certify that the dissertation entitled on "Phytochemical Analysis And Antibacterial Activity Of Ocimum Sanctum Against Pathogenic Organisms" done by I. Agadheeswari (Reg.No.19PAM1053) during academic year 2019-2020 in partial fulfillment for Master Of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

  
Guide 20/4/2021

Dr. A. P. VENKATACHALAM

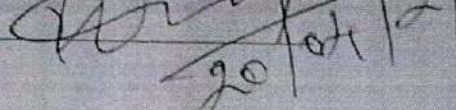
Dr. S. NAVAMANI

HEAD  
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TIRUCHENGODE - 637 205, (TN).

Submitted for the viva-voice examination held on 20 - 04 - 2021

Examiners:

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20/04/21

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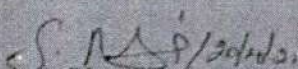


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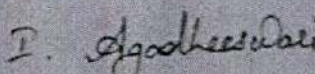


### DECLARATION

I hereby declare that the dissertation entitled on "Phytochemical Analysis And Antibacterial Activity Of Ocimum Sanctum Against Pathogenic Organisms" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of Master Of Science In Applied Microbiology, is recorded of original work done by me under the guidance of. Dr. S. NAVAMANI, M.Sc., P.h.D Assistant Professor PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.


  
Counter Signed By Guide

Dr. S. NAVAMANI M.Sc., Ph.D.,

  
Signature of the Candidate

I. Agadheeswari

ATTESTED

  
PRINCIPAL  
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TIRUCHENGODE - 637 205.



Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,

Head, Department of Microbiology

PG and Research Department of  
Microbiology.

Sengunthar Arts and Science college


Tiruchengode - 637 205

Tamilnadu, India

Date: 20.04.2021


### CERTIFICATE

This is to certify that the dissertation entitled on "*Procreation Of Silver Nanoparticles By Using Actinomyces sp And Apprais Its Antibacterial Activity*" done by G. Monisha (Reg.No.19PAM1054) during academic year 2020-2021 in partial fulfillment for Master Of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

Dr. A. P. VENKATACHALAM

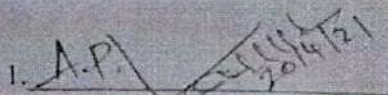
HEAD  
DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE  
TIRUCHENGODE - 637 205, (TN)

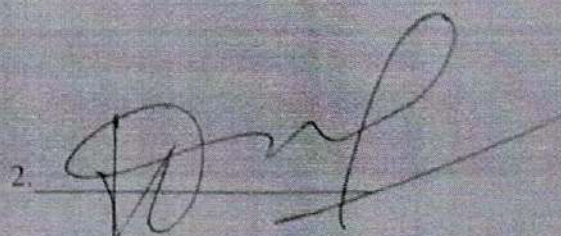
  
Guide

Dr.A.P.VENKATACHALAM


Submitted for the viva-voice examination held on 20.04.2021

Examiners:

1.   
A.P. Venkatachalam

2. 


ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

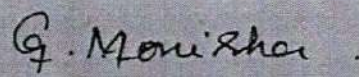


### DECLARATION

I hereby declare that the dissertation entitled on "Procreation Of Silver Nanoparticles By Using Actinomyces sp And Apprais Its Antibacterial Activity" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of Master Of Science In Applied Microbiology, is recorded of original work done by me under the guidance of Dr. A.P.Venkatachalam, M.Sc., M.phill., P.h.D Assistant professor, Head of the Department, PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.

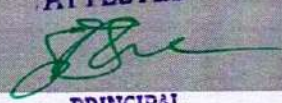
  
Counter Signed By Guide

Dr. A.P.VENKATACHALAM

  
Signature of the Candidate

G.MONISHA

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Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,

Head, Department of Microbiology

PG and Research Department of Microbiology

Sengunthar Arts and Science College

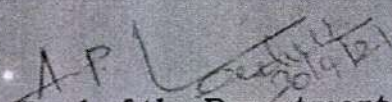
Tiruchengode - 637 205


Tamilnadu, India

Date: 20-04-2021

### CERTIFICATE

This is to certify that the dissertation entitled on "Antimicrobial activity of Spices against *Listeria Monocytogenes*" done by Miss. S. MONISHA Reg.No.19PAM1055 during academic year 2020-2021 in partial fulfillment for Master Of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

  
Guide

(Dr. A. P. VENKATACHALAM)

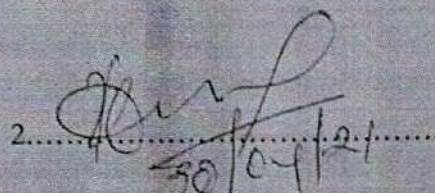
(Miss. T. NIVEDHARSHINI)

HEAD  
DEPARTMENT OF MICROBIOLOGY,  
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TIRUCHENGODE - 637 205, (TN).


Submitted for the viva-voice examination held on 20-04-2021.

Examiners:

1.   
A.P. Venkatachalam  
20/04/21

2.   
T. Nivedharshini  
20/04/21

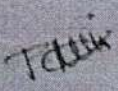
ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.




### DECLARATION

I hereby declare that the dissertation entitled on "Antimicrobial activity of Spices against *Listeria Monocytogenes*" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of Master Of Science In Applied Microbiology, is recorded of original work done by me under the guidance of Miss. T. NIVEDHARSHINI M.Sc., M.Phil., Assistant Professor PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.

  
Counter Signed By Guide

Miss.T. NIVEDHARSHIBNI M.Sc., M.Phil.,

  
Signature of the Candidate

Miss. S. MONISHA

ATTESTED



PRINCIPAL

**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TIRUCHENGODE - 637 205.**



Dr. A.P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,  
Head of Dept.,

PG & Research Department of  
Microbiology Sengunthar Arts  
and Science College,  
Tiruchengode- 637 205,  
Tamilnadu, India,

Date: 20/4/21

CERTIFICATE

This dissertation is a record of work entitled "AN ELUCUBRATION OF PRODUCTION OF HYDROLYTIC ENZYMES BY BACTERIA FROM MARINE SPONGES IN AN ALKALINE ENVIRONMENT" done by Miss. P. NIVETHA, RegNo: 19PAM1056, during the academic year 2020-2021, in partial fulfillment for Master of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed the basis for the award of any degree, diploma, associate ship, fellowship or other similar title.

HEAD OF THE DEPARTMENT

Dr. A.P. Venkatachalam,  
M.Sc., M.Phil., Ph.D.

HEAD

DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE,  
TIRUCHENGODE - 637 205, (T.N).

RESEARCH GUIDE

Dr. P. ASHOK KUMAR,  
M.Sc., Ph.D.

Submitted for the viya - voce examination held on 20/4/21

Examiners

1. A.P. Venkatachalam  
20/4/21

2. Dr. P. Ashok Kumar  
20/4/21

ATTESTED



PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



## DECLARATION

I hereby declare that the dissertation entitled "AN ELUCIBRATION OF PRODUCTION OF HYDROLYTIC ENZYMES BY BACTERIA FROM MARINE SPONGES IN AN ALKALINE ENVIRONMENT" submitted to Periyar University, Salem, in partial fulfillment of Master of Science in Applied Microbiology is a record of original work done by me under the guidance of Dr. P. ASHOK KUMAR M.Sc., Ph.D., PG & Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode and it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to any candidate of any university.

COUNTER SIGNED BY

GUIDE

(Dr. P. ASHOK KUMAR M.Sc., Ph.D.,)

p. Nivetha

SIGNATURE OF THE CANDIDATE

(Miss. P. NIVETHA)

Place : Tiruchengode

Date: 20.4.21

ATTESTED

  
PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



Dr. A.P. VENKATACHALAM M.Sc, M.Phil., Ph.D,  
Head of Dept.,

PG & Research Department of  
Microbiology Sengunthar Arts  
and Science College,  
Tiruchengode- 637 205,  
Tamilnadu, India.

Date: 20.04.2021

CERTIFICATE

This dissertation is a record of work entitled "ASSESSING THE PLASTIC DEGRADING ABILITY OF BACTERIA ISOLATED FROM POLYETHYLENE DEGRADING SOIL SITE" done by Miss. G. SRIPRIYADHARSHINI, RegNo: 19PAM1057, during the academic year 2020-2021, in partial fulfillment for Master of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed the basis for the award of any degree, diploma, associate ship, fellowship or other similar title.

  
HEAD OF THE DEPARTMENT

Dr. A.P. Venkatachalam,  
M.Sc., M.Phil., Ph.D.

RESEARCH GUIDE

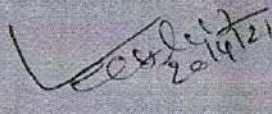
Dr. A.P. Venkatachalam,  
M.Sc., M.Phil., Ph.D.

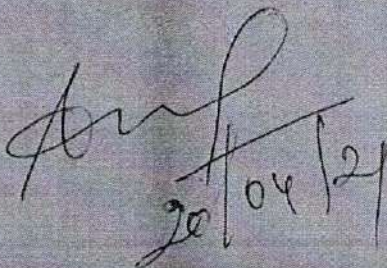
HEAD  
DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE,  
TIRUCHENGODE - 637 205, (T.N.)

Submitted for the viva - voce examination held on

G. Sripriyadharshini (20.4.21)

Examiners

1.   
A.P. Venkatachalam

2.   
20/04/21

ATTESTED




PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

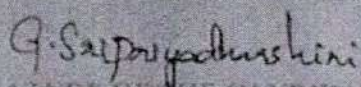


## DECLARATION

I hereby declare that the dissertation entitled "ASSESSING THE PLASTIC DEGRADING ABILITY OF BACTERIA ISOLATED FROM POLYETHYLENE DEGRADING SOIL SITE" submitted to Periyar University, Salem, in partial fulfillment of Master of Science in Applied Microbiology is a record of original work done by me under the guidance of Dr. A.P. VENKATACHALAM, PG & Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode and it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to any candidate of any university.

  
COUNTER SIGNED BY

GUIDE  
(Dr. A.P. VENKATACHALAM)

  
SIGNATURE OF THE CANDIDATE

(Miss. G. SRIPRIYADHARSHINI)

Place Tiruchengode

Date 20-04-2021

ATTESTED



PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,

Head, Department of Microbiology

PG and Research Department of Microbiology

Sengunthar Arts and Science College


Tiruchengode – 637 205


Tamilnadu, India

Date: 20.04.2021

**CERTIFICATE**

This is to certify that the dissertation entitled on "**Evaluation of Antimicrobial Activity and Phytochemical Analysis of Honey and Sweet Orange Against Human Pathogens**" done by **S.SUGANYA (Reg.No.19PAM1058)** during academic year 2020-2021 in partial fulfillment for **Master Of Science in Applied Microbiology**, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

  
Guide

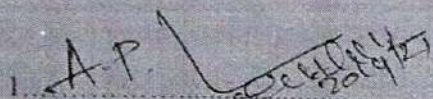
Dr. A. P. VENKATACHALAM

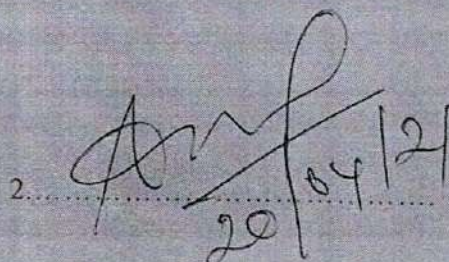
HEAD  
DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE,  
TIRUCHENGODE - 637 205, (TN),

Dr. S. NAVAMANI


Submitted for the viva-voice examination held on 20.04.2021

Examiners:

1.   
20/04/21

2.   
20/04/21


ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



### DECLARATION

I hereby declare that the dissertation entitled on "**Evaluation of Antimicrobial Activity and Phytochemical Analysis of Honey and Sweet Orange Against Human Pathogens**" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of **Master Of Science In Applied Microbiology**, is recorded of original work done by me under the guidance of **Dr. S. NAVAMANI, M.Sc., P.h.D Assistant Professor PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode**, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.

  
Counter Signed By Guide

Dr. S. NAVAMANI M.Sc., Ph.D.,

Signature of the Candidate

S. suganya

S. SUGANYA

ATTESTED



PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205




Dr. A. P. VENKATACHALAM M.Sc., M.Phil., Ph.D.,

Head, Department of Microbiology  
PG and Research Department of Microbiology  
Sengunthar Arts and Science College  
Tiruchengode 637 205  
Tamilnadu, India

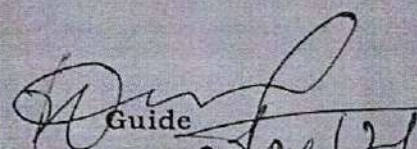
Date: 20-4-2021

### CERTIFICATE

This is to certify that the dissertation entitled on "PHYTOCHEMICAL ANALYSIS AND ANTIBACTERIAL ACTIVITY OF HONEY AGAINST PATHOGEN FROM THROAT AND WOUND INFECTION" done by V.VISHALI (Reg.No.19PAM1059) during academic year 2020-2021 in partial fulfillment for Master Of Science in Applied Microbiology, Sengunthar Arts and Science College, Tiruchengode under my supervision. This work has not previously formed on the basis for the award of any degree, diploma, associateship, fellowship or other similar title.

  
Head of the Department

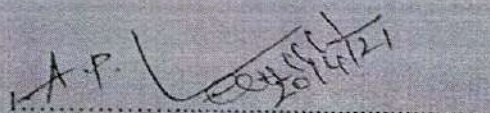
Dr. A. P. VENKATACHALAM  
HEAD  
DEPARTMENT OF MICROBIOLOGY,  
SENGUNTHAR ARTS & SCIENCE COLLEGE,  
TIRUCHENGODE - 637 205, (TN).

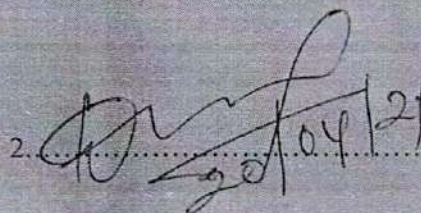
  
Guide  
20/04/21

Dr.P. ASHOK KUMAR


Submitted for the viva-voice examination held on 20-4-2021

Examiners:

  
20/04/21

  
20/04/21

ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



### DECLARATION

I hereby declare that the dissertation entitled on "PHYTOCHEMICAL ANALYSIS AND ANTIMICROBIAL ACTIVITY OF HONEY AGAINST PATHOGEN FROM THROAT AND WOUND INFECTION" submitted to Periyar University, Salem, Tamilnadu, India. In partial fulfillment of Master Of Science In Applied Microbiology, is recorded of original work done by me under the guidance of Dr. P.ASHOK KUMAR, M.Sc., P.h.D Assistant Professor PG and Research Department of Microbiology, Sengunthar Arts and Science College, Tiruchengode, and it has not previously formed the basis for the award of degree, diploma, associateship, fellow ship, or other similar title to any candidate of any university.

Counter Signed By Guide

Dr. P.ASHOK KUMAR M.Sc., Ph.D.,

Signature of the Candidate

V.VISHALI

V-Vishali

ATTESTED

  
PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.





**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
(Affiliated to Periyar University, Salem And Approved by AICTE, New Delhi )  
An ISO 9001:2015 Certified Institution  
Recognised Under Section 2(f) and 12(B) of UGC Act 1956 and Accredited by NAAC  
**TIRUCHENGODE – 637205**



**DEPARTMENT OF BIOCHEMISTRY  
INTERNSHIP TRAINING LIST (2020-21)**

S.No	Roll.No	Name	Training Centre
1	18B801	Boopathiraja.T	Lottus Clinical Lab
2	18B802	Dhanapal.M	SUBAM HOSPITAL
3	18B803	Dinesh.S	Mohan Hi tech lab
4	18B804	Gowtham.S	Bharath Diagnostic & Digital X- rays
5	18B805	Karthikeyan.S	Sri Mathurra Hospital
6	18B806	Kumaravel.P	Bharath Diagnostic & Digital X- rays
7	18B807	Manojkumar.P	Lottus Clinical Lab
8	18B808	Muthamizhan.V.J	Shri Santhi Hospital
9	18B809	Prathap.G	Vijaya multi speciality Hospital
10	18B811	Sathish kumar.M	Vijaya multi speciality Hospital
11	18B812	Sowndhararajan.N	Bharath Diagnostic & Digital X- rays
12	18B813	Sureshkumar.S	Mohan Hi tech lab
13	18B814	Udhayakumar.S	Lottus Clinical Lab
14	18B815	Vimalraj.A	Lottus Clinical Lab
15	18B816	Anuchiya.D	ANNAI THERESA, Research Diagnostic centre.
16	18B817	Devi shree.D	ANNAI THERESA, Research Diagnostic centre.
17	18B818	Gangadevi.E	MR Clinical Labs
18	18B820	Kavya.R	Bioline Lab
19	18B821	Kiruthika.A	Sri Sigamani Clinic
20	18B822	Mohanadevi.A	ANNAI THERESA, Research Diagnostic centre.
21	18B823	Mohanapriya.P	ANNAI THERESA, Research Diagnostic centre.
22	18B824	Nagalakshmi.P	Mohan Hi tech lab
23	18B825	Pavithra.G	Mohan Hi tech lab
24	18B826	Priyadarshini.K	Nihith Suvan Clinical Lab
25	18B827	Shanuja.S	Visaalam Hospitals.
26	18B828	Sowndarya.S	Dr.Murugesan Hospital & Kidney stone centre.
27	18B829	Tamilselvi.S	Mohan Hi tech lab
28	18B830	Vaishnadhi.R	Gemini Clinical Lab
29	18B831	Vaishnavi.K	Nihith Suvan Clinical Lab
30	18B832	Vasanthi.A	Rasi Clinical Lab

HOD

**ATTESTED**

PRINCIPAL

**SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**

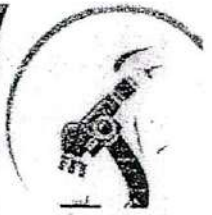
PRINCIPAL

**SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**



# LOTTUS CLINICAL LABORATORY

SALEM MAIN ROAD, VELLANDIVALASU, IDAPPADI - 637105



K.R.S. HOSPITAL

## CERTIFICATE




This is to Certified that mr/Mrs/Miss T. BOOPATHI has  
successfully Completed the Internship from  
2.2021 to 8.03.2021 in LOTTUS CLINICAL LABORATORY  
During the above period his/her conduct and character have been

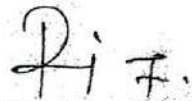
and



ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

LAB INCHARGE

  
C. RAJENDRAN, D.M.B.T.,  
LOTTUS LABORATORY,  
VELLANDIVALASU,  
IDAPPADI.

We wish all success in their carrier





# SUBAM HOSPITAL

D.NO.566B,OPP. TO BUS STAND,KAKAPALYAM MAIN ROAD,  
EDANGANASALAI, ELAMPILLAI SALEM-637502 PH.0427-249 2004

10.03.2021

## CERTIFICATE

This is to certify that MR.M.DHANAPAL, III B.Sc. Chemistry, SENGUNTHAR college of arts and science. Tiruchengode Has undergone an INTENSHP in our organization from 24.02.2021 to 10.03.2021

During the above training period, their conduct and characters were found to be good.

We wish him all success in his future endeavors.

With Regards

For SUBAM HOSPITAL

*L. Dhanapal*  
**SUBAM HOSPITAL**

OPP. BUS STAND  
Kakapalayam Main Road,  
Mottur, Edanganasalai,  
ELAMPILLAI - 637 502.

**ATTESTED**

*[Signature]*  
6/6/21  
**PRINCIPAL**

**SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**



TRAINING CERTIFICATE

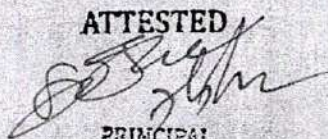
Here with, I certify that Mr.S.Dinesh., B.Sc., (3rd year) Biochemistry,  
Sengunthar arts and Science College, Tiruchengode (Reg.No 18UBC1158) has  
attended MOHAN HITECH LAB for Training from 22.06.2020 to 12.07.2020

With Regards,



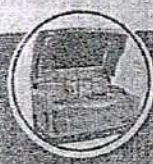
HOD Lab

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PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



Fully Automated  
Analyzer



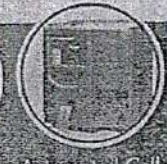
Bio Chemistry  
Analyzer



GF ECG  
Analyzer



Biothesiometry  
Analyzer



Automated Cell  
counter Analyzer





# Bharath Diagnostic & Digital X-Rays

71/13, Trichy Main Road, NAMAKKAL.

Ph: 04286-224005, 223305 Cell: 9344766677



சென்னை, 05.03.2021. கீழ்க்கண்டவர்களுக்கு இது 2001-2008 ஆண்டில் வழங்கி வந்திருக்கிறது.

DATE : 05.03.2021

## To Whom So Ever It May Concern

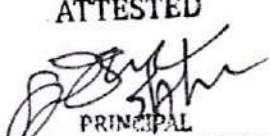
This is certify that Mr. S. GOWTHAM III<sup>rd</sup> year B.Sc(Bio-Chemistry) student of SENGUNTHAR ARTS AND SCIENCE COLLEGE, Tiruchengode. He successfully undergone vision and observation training in our laboratory, Namakkal. Accomplished an internship from 24<sup>th</sup> Feb 2021 to 05<sup>th</sup> Mar 2021.


He performance during the period was good.

We wish he all the success in him future endeavors'.

For BHARATH DIAGNOSTIC & DIGITAL X-RAYS

ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

  
BHARATH DIAGNOSTIC  
& T.P.E. GOGULRAJAN (Proprietor)  
71/13, Trichy Main Road,  
NAMAKKAL - 637 001.  
Cell : 93447 66677.

Respected Sir,  
Dear Sir,

S.Selvakumar, MSc  
Bio-Chemistry

T.P.E. Gogulrajan B.Sc., M.L.L.  
Lab In-charge

This lab is covered with NABL (NABL) External Quality Assessment Scheme (EQAS) Lab Permanent Membership No. 0104 / 2011.





# SREE MATHURRA HOSPITAL

Dr. Varadharajalu Street, Jothi Nagar, ATTUR - 636 102

Ph : 04282 - 250887, 251887

ayanthi Rajkumar, M.B.B.S.

Date : 15.03.2021.....

## CERTIFICATE

This is to certify that Mr.S.KARTHIKEYAN, S/O K.SIVAN,  
III B.Sc. Chemistry, SENGUNTHAR College Of Arts and Science,  
TIRUCHENGODE has undergone an INTERNSHIP in our  
organisation from 24.02.21 to 10.03.21.

During the above training period, his conduct and character  
was found to be good

We wish him all success in his future endeavours.

With regards,

For MATHURRA HOSPITAL

*S. Kalhinarayan*

SREE MATHURRA HOSPITAL  
Dr. Varathajalu Street,  
Jothi Nagar,  
Attur - (Tk), Salem (Dt).

ATTESTED

*[Signature]*

PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205





# Bharath Diagnostic & Digital X-Rays

71/13, Trichy Main Road, NAMAKKAL.

Ph: 04286-224005, 223305 Cell: 9344766677



நாமக்கல் மாவட்டத்தில் 10 ஆண்டுகளாக ISO 9001-2008 தரச்சான்று பெற்ற ஒரே பரிசோதனை நிலையம்

DATE : 05.03.2021

## To Whom So Ever It May Concern

This is certify that Mr. P.KUMARAVEL III<sup>rd</sup> year B.Sc(Bio-Chemsitry) student of SENGUNTHAR ARTS AND SCIENCE COLLEGE, Tiruchengode. He successfully undergone vision and observation training in our laboratory, Namakkal. Accomplished an internship from 24<sup>th</sup> Feb 2021 to 05<sup>th</sup> Mar 2021. He performance during the period was good.

We wish he all the success in him future endeavors'.

ATTESTED

PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205

For BHARATH DIAGNOSTIC & DIGITAL X-RAYS

BHARATH DIAGNOSTIC  
& DIGITAL X-RAYS, (Proprietor)  
T.P.E. GOGULRAJAN  
71/13, Trichy Main Road,  
NAMAKKAL - 637 001.  
Cell : 93447 66677.

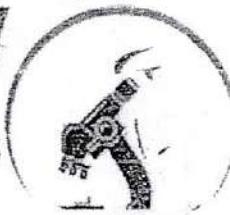
Revathy, M.Sc.,  
Micro Biologist

S.Selvakumar, M.Sc.,  
Bio Chemistry

T.P.E. Gogulrajan B.Sc., M.L.T.  
Lab In-Charge

This lab is covered with ACBI/CMC (VELLORE) External Quality Assessment Scheme (EQAS Lab Permanent Membership No.0104 / 2011)





**K.R.S.HOSPITAL**

## CERTIFICATE



This is to Certified that mr/Mrs/Miss P.MANOJKUMAR has  
successfully Completed the Internship from  
2.2021 to 8.03.2021 in **LOTTUS CLINICAL LABORATORY**  
During the above period his/her conduct and character have been  
satisfactory.



ATTESTED

PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

LAB INCHARGE

C. RAJENDRAN, D.M.E.T.,  
LOTTUS LABORATORY,  
VELLANDIVALASU,  
IDAPPADI.

We wish all success in their carrier





# SHRI SANTHI HOSPITAL

Sankari Main Road Konganapuram, Edappadi(TK)

Salem(DT)637102

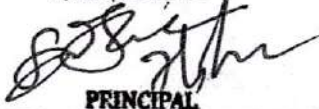
Cell:7339064005,Hos Reg No:Salmall 20200007839


## TRAINING CERTIFICATE

This is to certify that **Mr.V.J.MUTHAMIZHAN,S/O.Jayaraman** pursuing his **III-B.sc (Biochemistry)** in **Sengunthar Arts and Science college,Tiruchengode,Nammakal(DT)**.Under went Intenship in our hospital from **26.02.2021 To 12.03.2021**.He was very sincere and dedicated in his duties. His conduct and character are good.

We take this opportunity to thank him and wish him all the best for his future.

ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

  
15.3.2021  
Dr. S.K.P. Santhi, M.B.B.S.  
Regd. No: 42984  
Regd. Medical Practitioner  
KONGANAPURAM-637  
Edappadi (Tk), Salem



# VIJAYA

## Multi Speciality Hospital

An ISO 9001 : 2015 & ISO 10002:2014 Certified Hospital

#4/486-A, Pennagaram Main Road,  
DHARMAPURI - 636 703. Tamil Nadu.  
Phone : 04342-280108  
E.mail : admin@vijayahospitals.org  
E.mail : www.vijayahospitals.org

### TRAINING CERTIFICATE

This is to certify that G.PRATHAP S/o GOVINDHARAJ  
pursuing him **III-B.Sc(Bio-Chemistry)** in Sengunthar Arts and  
Science COLLEGE, Tiruchengode, Nammakal District. Training as  
a *Lab Assistant* in our hospital from **09.03.2021** to **22.03.2021**.

We found her sincere, hardworking, result oriented. He  
worked well as part of a team during her tenure. We take this  
opportunity to thank her and wish her all the best for her future.

Date : 23.03.2021

Place: DHARMAPURI

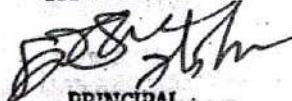
VIJAYA MULTI SPECIALITY HOSPITAL

No. 4/486-A, Pennagaram Main Road,

DHARMAPURI - 636 701.

Director

ATTESTED



PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

7 EMERGENCY  
938 0000 108

24 Hours Hospital | 75 Bedded Hospital | 3 Hi-tech Operation Theatre,  
ICU, NICU, Labour Ward, Digital X-Ray, Lab, Ultra Sound Scan, ESG, ESHO, TMT



# VIJAYA

Multi Speciality Hospital

An ISO 9001 : 2015 & ISO 10002:2014 Certified Hospital

#4/486-A, Pennagaram Main Road,  
DHARMAPURI - 636 703. Tamil Nadu.  
Phone : 04342-280108  
E.mail : admin@vijayahospitals.org  
Web : www.vijayahospitals.org

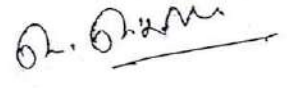
## TRAINING CERTIFICATE

This is to certify that **M.SATHISHKUMAR S/o MURUGESAN** pursuing him **III-B.Sc(Bio-Chemistry)** in **Sengunthar Arts and Science COLLEGE, Tiruchengode, Nammakal District**. Training as a **Lab Assistant** in our hospital from **14.02.2021 to 28.02.2021**.

We found her sincere, hardworking, result oriented. He worked well as part of a team during her tenure. We take this opportunity to thank her and wish her all the best for her future.

Date : 03-03-2021

Place: DHARMAPURI

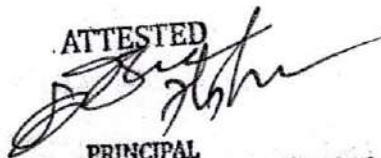
for 

Director

**VIJAYA MULTI SPECIALITY HOSPITAL**

No. 4/486-A, Pennagaram Main Road.  
DHARMAPURI-(Dt)-636 701.

ATTESTED



PRINCIPAL

**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TIRUCHENGODE - 637 205.**

**EMERGENCY**  
**38 0000 108**

24 Hours Hospital | 75 Bedded Hospital | 3 Hi-tech Operation Theatre,  
ICU, NICU, Labour Ward, Digital X-Ray, Lab, Ultra Sound Scan, ESG, ESHO, TMT





# Bharath Diagnostiic & Digital X-Rays

71/13, Trichy Main Road, NAMAKKAL.  
Ph: 04286-224005, 223305 Cell: 9344766677



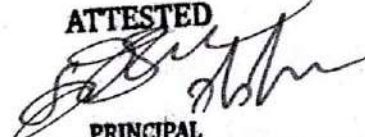
நாமக்கல் மாவட்டத்தில் 10 ஆண்டுகளாக ISO 9001-2008 தரச்சான்று பெற்ற ஒரே பரிசோதனை நிலையம்

DATE : 05.03.2021

## To Whom So Ever It May Concern

This is certify that Mr. N. SOWNDHARARAJAN III<sup>rd</sup> year B.Sc(Bio-Chemistry) student of SENGUNTHAR ARTS AND SCIENCE COLLEGE, Tiruchengode. He successfully undergone vision and observation training in our laboratory, Namakkal. Accomplished an internship from 24<sup>th</sup> Feb 2021 to 05<sup>th</sup> Mar 2021. He performance during the period was good.

We wish he all the success in him future endeavors'.

ATTESTED  
  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

For BHARATH DIAGNOSTIIC & DIGITAL X-RAYS

T.P.E. Gogulraajan  
BHARATH DIAGNOSTIC  
& DIGITAL X-RAYS (Proprietor)  
71/13, Trichy Main Road,  
NAMAKKAL - 637 001.  
Cell : 93447 66677.

thy. M.Sc.,  
Biologist

S.Selvakumar, M.Sc.,  
Bio Chemistry

T.P.E. Gogulraajan B.Sc., M.L.T.  
Lab In-Charge

Lab is covered with ACBI/CMC (VELLORE) External Quality Assessment Scheme (EQAS Lab Permanent Membership No.0104 / 2011)



TRAINING CERTIFICATE

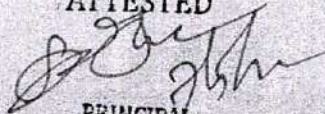
Here with, I certify that Mr.S.Suresh Kumar., B.Sc., (3rd year) Biochemistry,  
Sengunthar arts and Science College, Tiruchengode (Reg.No 18UBC1168) has  
attended MOHAN HITECH LAB for Training from 22.06.2020 to 12.07.2020

With Regards,



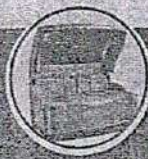
HOD Lab

ATTESTED

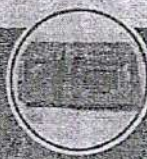


PRINCIPAL

SERGUNTHAR ARTS & SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



Fully Automated  
Analyzer



Bio Chemistry  
Analyzer



GE ECG  
Analyzer



Biothesiometry  
Analyzer

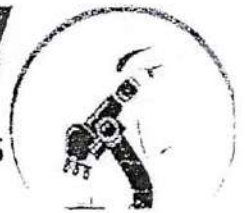


Automated Cell  
counter Analyzer



# LOTTUS CLINICAL LABORATORY

SALEM MAIN ROAD, VELLANDIVALASU, IDAPPADI - 637105



**K.R.S. HOSPITAL**

## CERTIFICATE



is to Certified that mr/Mrs/Miss S.UDHAYA KUMAR has  
essfully Completed the Internship from  
2021 to 8.03.2021 in **LOTTUS CLINICAL LABORATORY**  
the above period his/her conduct and character have been



ATTESTED

PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

LAB INCHARGE

C. RAJENDRAN, D.M.B.T.,  
LOTTUS LABORATORY,  
VELLANDIVALASU,  
IDAPPADI.

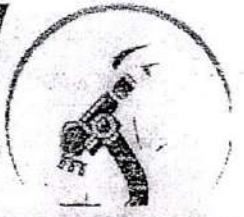
wish all success in their carrier





# LOTTUS CLINICAL LABORATORY

SALEM MAIN ROAD, VELLANDIVALASU, IDAPPADI - 637105



**K.R.S.HOSPITAL**

## CERTIFICATE



is to Certified that mr/Mrs/Miss A.VIMAL RAJ has  
essfully Completed the Internship from  
2021 to 8.03.2021 in **LOTTUS CLINICAL LABORATORY**  
the above period his/her conduct and character have been



ATTESTED

PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

LAB INCHARGE

C. RAJENDRAN, D.M.B.T.,  
LOTUS LABORATORY,  
VELLANDIVALASU,  
IDAPPADI.

wish all success in their carrier



## TRAINING CERTIFICATE

NAME OF THE STUDENT: MISS.D.ANUCHIYA

QUALIFICATION : II - B.Sc.BIOCHEMISTRY

This is to certify that. MISS.D.ANUCHIYA, II - B.Sc.BIOCHEMISTRY

Student studying in SENGUNTHAR ARTS AND SCIENCE SCIENCE. She had undergone Training in our Lab From 20-08-2020 to 20-09-2020. Especially trained with fully automatic bio chemistry analyser, fully automatic cell counter, and fully automatic immunology thyroid analyser, For a Period of 1 month. During this training period with us, her learning and performance was good with obedient character.

ALL THE BEST FOR YOUR FUTURE !

**Annai Theresa**

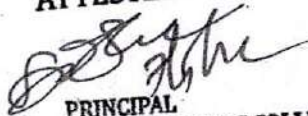
Research Diagnostic Center

556/753, Mettur Main Road,

Opp. CSI Church, BHAVANI - 638 301.

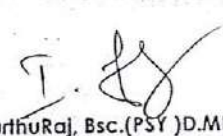
Cell: 98428 40715 Ph: 042562 1230

**ATTESTED**



PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



I. Lourtharaj, Bsc.(PSY) D.MLT.,  
Chief of Laboratory Service

3, Mettur Main Road,  
Church, BHAVANI-638 301, Erode Dt.  
Avinashi Road, TIRUPUR-641 602.

Ph : 04256 - 231230

98428 40715  
Cell : 99653 08328

ISO 9001 - 2008 Certified Registered Quality System

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e-mail : lourtharaj123@gmail.com

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## TRAINING CERTIFICATE

NAME OF THE STUDENT: MISS D.DEVI SHREE

QUALIFICATION : III - B.Sc.BIOCHEMISTRY

This is to certify that. MISS D.DEVI SHREE, III - B.Sc.BIOCHEMISTRY  
Student studying in SENGUNTHAR ARTS AND SCIENCE COLLEGE,  
TIRUCHENGODE. She had undergone Training in our Lab From 25-02-2021 to  
16-03-2021. Especially trained with fully automatic bio chemistry analyser, fully  
automatic cell counter, and fully automatic immunology thyroid analyser, For a Period of  
20 days. During this training period with us, her learning and performance was good with  
obedient character.

ALL THE BEST FOR YOUR FUTURE!

**Annai Theresa**

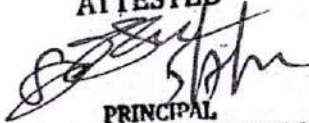
Research Diagnostic Center

556/753, Mettur Main Road,

Opp. CSI Church, BHAVANI - 638 301.

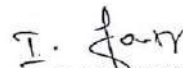
Call: 98428 40715 Ph: 042562 1230

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PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



I. LourthuRaj, BSc. (PSY) D.MLT.,

Chief of Laboratory Service

3, Mettur Main Road,  
CSI Church, BHAVANI-638 301, Erode Dt.

Avinashi Road, TIRUPUR-641 602.

e-mail : lourthuraj123@gmail.com

Ph : 04256 - 231230

☎ 98428 40715

Cell : 99653 08328

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**MR CLINICAL LABS**

98-A2, Salem Main Road, Opp Indian Bank, Kumarapalayam - 638183

TRAINING CERTIFICATE

This Is To Certify That Miss E.GANGA DEVI III B.Sc Biochemistry Student Training In Our Lab  
From 08.01.2021 to 23.01.2021. Especially Trained With Fully Automatic Cell Counter, And Semi  
Auto Analyzer.

**M.R. CLINICAL LABS**  
98-A2, Salem Main Road,  
Opp. Indian Bank,  
Kumarapalayam - 638 183.

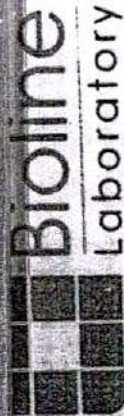
Chief of laboratory service

**ATTESTED**



**PRINCIPAL**  
**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TIRUCHENGODE - 637 205.**





430-1, Dombivli East, Mumbai  
R.S.Puram, Coimbatore-641 002  
Phone : 0422 - 4200098, 4306999  
E-mail : info@biolinelab.in  
www.biolinelab.com




Certificate No. BCC-2821  
NABL Accredited  
Laboratory



## CERTIFICATE OF TRAINING

This is to Certify that **Miss. Kavya R , Department of Biochemistry, Sengunthar Arts and Science College, Namakkal** has successfully completed Fifteen days training programme with hands-on and observations of various Clinical Biochemistry procedures including quality control of various parameters from 18.01.21 to 01.02.21 at Bioline Laboratory, Salem.

  
Dr. U. SenthilKumar  
Founder & CEO

ATTESTED



Dr. G.D.P.S. Augustus

Co-Ordinator - Training & Research

PRINCIPAL

**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
TIRUCHENGODE - 637 205.

www.biolinelab.com



Dr. V. Chandrasekar  
Director - Training & Research





# SRI SIGAMANI CLINIC

59, S.N.D. Road, TIRUCHENGODE - 637 211.

98431 - 39123  
90471 - 12205  
82485 - 65673

Dr. Mrs. D. ANURADHA M.B.B.S., D.G.O.,  
Senior Assistant Surgeon


Date 16/2/2021

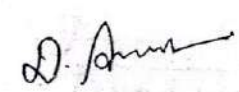
## TRAINING CERTIFICATE

NAME OF THE STUDENT : MISS.A.KIRUTHIGA

QUALIFICATION : III-B.Sc.BIOCHEMISTRY

This is to certify that MISS.A.KIRUTHIGA, III-B.Sc.BIOCHEMISTRY  
Student studying in SENGUNTHAR ARTS AND SCIENCE COLLEGE . She had  
Undergone Training in our Lab From 08.01.2021 to 16.02.2021. She is trained in  
Blood collecting with Fully automatic cell counter, semi analyzer , For a  
Period of 1 month.

**ATTESTED**  
  
**PRINCIPAL**  
**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TIRUCHENGODE - 637 205.**

  
Dr. D. ANURADHA, M.B.B.S. D.G.O.,  
Sri Sigamani Clinic,  
59, S. N. D. ROAD  
TIRUCHENGODE,  
Reg. No: 62553.



# Annai Theresa

Research Diagnostic Center  
Thyroid & Hormone Center

## TRAINING CERTIFICATE

NAME OF THE STUDENT: MISS.B.MOHANADEVI

QUALIFICATION : III - B.Sc.BIOCHEMISTRY

This is to certify that. MISS.B.MOHANADEVI, III - B.Sc.BIOCHEMISTRY  
Student studying in SENGUNTHAR ARTS AND SCIENCE COLLEGE,  
TIRUCHENGODE. She had undergone Training in our Lab From 25-02-2021 to  
16-03-2021. Especially trained with fully automatic bio chemistry analyser, fully  
automatic cell counter, and fully automatic immunology thyroid analyser, For a Period of  
20 days. During this training period with us, her learning and performance was good with  
obedient character.

ALL THE BEST FOR YOUR FUTURE !

### Annai Theresa

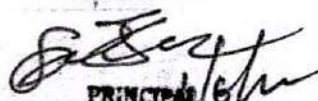
Research Diagnostic Center

5561753, Mettur Main Road,

Opp. CSI Church, BHAVANI - 638 301.

Call: 98428 40715 Ph: 042562 1211

ATTESTED



PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

I. Lourthu  
I. LourthuRaj, B.Sc.(PSY) D.MLT.,  
Chief of Laboratory Service

3, Mettur Main Road,  
Church, BHAVANI-638 301, Erode Dt.

Avinashi Road, TIRUPUR-641 602.

Ph : 04256 - 231230

© 98428 40715

Cell : 99653 08328

ECG · Micro Lab · Excellence in Diagnostics

E-mail: [lourthuraj123@gmail.com](mailto:lourthuraj123@gmail.com)

[www.annaitherasalab.com](http://www.annaitherasalab.com)

[annaitherasa like](#)



# Annai Theresa

Research Diagnostic Center

Thyroid & Hormone Center

## TRAINING CERTIFICATE

NAME OF THE STUDENT: MISS.P.MOHANAPRIYA

QUALIFICATION : II - B.Sc.BIOCHEMISTRY

This is to certify that. MISS.P.MOHANAPRIYA, II - B.Sc.BIOCHEMISTRY

Student studying in SENGUNTHAR ARTS AND SCIENCE SCIENCE. She had undergone Training in our Lab From 20-08-2020 to 20-09-2020. Especially trained with fully automatic bio chemistry analyser, fully automatic cell counter, and fully automatic immunology thyroid analyser, For a Period of 1 month. During this training period with us, her learning and performance was good with obedient character.

ALL THE BEST FOR YOUR FUTURE!

**Annai Theresa**

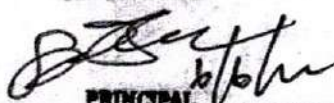
Research Diagnostic Center

556/753, Mettur Main Road,

Opp. CSI Church, BHAVANI - 638 301.

Cell: 98428 40715 Ph: 042562\*1230

ATTESTED



PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

I. Lourihuraj, Bsc.(PSY) D.MLT...  
Chief of Laboratory Service

53, Mettur Main Road,  
CSI Church, BHAVANI-638 301, Erode Dt.

Avinashi Road, TIRUPUR-641 602.

Ph : 04256 - 231230

98428 40715

Cell : 99653 08328

ECG · Micro Lab · Excellence in Diagnostics

Email: i.lourihuraj123@gmail.com

www.annaitherasalab.com

annaitherasa like



# MOHAN HIGHECH LAB

No.6, Maniyakarar Street, Opp Dr.Chandrasekaran Hospital,  
Attayampati, Salem District, Tamil Nadu.

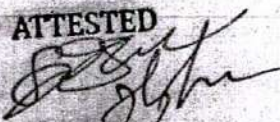
Mr.C.Mohan  
Cell: 8148568569

Date: 22/01/21

## TRAINING CERTIFICATE

MOHAN HIGH TECH Lab State that Miss  
P.NAGALAKSHMI, B.sc, (BIOCHEMISTRY) III- Year From  
Sengunthar Arts and Science College has been trained in our Lab In  
The Field of Laboratory, training for a Period of 15 days from  
08.01.2021 to 22.01.2021.

ATTESTED



PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

FOR PROPRIETOR

For Mohan Hitech Lab

Sole Proprietor



# MOHAN HIGHECH LAB

No.6, Maniyakarar Street, Opp Dr. Chandrasekaran Hospital,  
Attayampati, Salem District, Tamil Nadu.

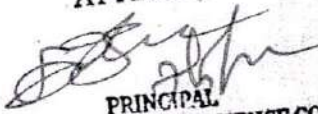
Mr.C.Mohan  
Cell: 81485 68569

Date:.....22/1/21.....

## TRAINING CERTIFICATE

MOHAN HIGH TECH Lab State that Miss G.PAVITHRA,  
c, (BIOCHEMISTRY) III- Year From Sengunthar Art and Science  
lege has been trained in our Lab In The Field of Laboratory, training  
a Period of 15 days from 08.01.2021 to 22.01.2021.

ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

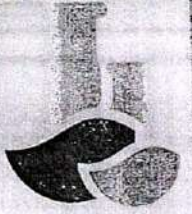
  
FOR PROPRIETOR  
For Mohan Hitech Lab

Sole Proprietor





# NIHITH SUVAN CLINICAL LABORATORY ADVEKA HOSPITAL



# 93-C1, West Street, K. Puthur, Poolampatty Main Road, Edappadi Tk, Salem Dt.  
Mobile : 80722 12123, 91590 12123 E-mail : advekahospital@gmail.com

## LABORATORY REPORTS

DATE: 02/03/2021

### TO WHOMSOEVER IT MAY CONCERN

This is certify that Miss. *PRIYADHARSHINI* studying III B.Sc,  
Biochemistry at *SENGUNTHAR ARTS & SCIENCE COLLEGE Tiruchengode*  
has attend our *NIHITH SUVAN LABORATORY* at *ADVEKA HOSPITAL*  
*DAPPADI (TK) SALEM (DK)* for Biochemistry laboratory training from  
5.02.2021 to 02.03.2021. She has attended 15 days regularly for his training  
programme.

*K. R. H.*  
Lab Technician

*V. Ramkumar*

Dr. V. RAMKUMAR,  
MS., FMAS., FIAGES.,  
Reg. No: 78530  
ADVEKA HOSPITAL  
EDAPPADI-637 101.

ATTESTED

*S. S. S.*

PRINCIPAL

SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



Keep our commitments to provide not just test results but accurate, reliable, pertinent and cost effective diagnostic information



# VISAALAM HOSPITALS

9-A, Sankagiri Bye - Pass Road, Near Bus Stand, Pallipalayam, ERODE - 638 006.  
Ph : 04288 - 247744 FAX : 247039 Cell : 99424 94959

Masilamani, MD., DNB., MNAMS.,  
ANTANAESTHESIOLOGIST  
AL CARE PHYSICIAN

Dr. Y. Thamizhselvi Masilamani, DGO., DNB., MNAMS.

CONSULTANT OBSTETRICIAN  
& GYNAECOLOGIST

Date : .....

## TRAINING CERTIFICATE

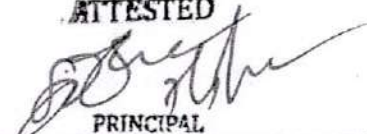
Date: 29/10/2020

I Dr.V.Masilamani state that Miss.S.Shanuja

B.Sc, Biochemistry II Year , from Senguthar Arts and Science  
college, had been trained in Our hospital in the field of Laboratory  
training for a period of 1 month, from 28/09/20 to 29/10/20

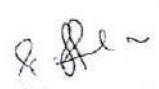
Yours Sincerely,

ATTESTED



PRINCIPAL

SENGUTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE 637 205.



Dr. V. MASILAMANI, M.D., D.N.B.(Anaes).,  
Consultant Anaesthesiologist & Critical Care Physician  
Reg. No: 52302  
VISAALAM HOSPITALS  
PALLIPALAYAM, ERODE-6.



# Dr. MURUGESAN HOSPITAL & KIDNEY STONE CENTRE

(Near Mahalakshmi Theatre), Sundara Vinayagar Koil Street,  
Kallakurichi - 606202. Tel: 04151-222014 / 226222

## TRAINING CERTIFICATE

Here With I am Certify to that **Miss S.Sowndarya.B.Sc.,BIO-Chemistry,sengunthar arts and science.Trichengode ( Reg.No 18UBC1183 )** has been attend the **MURUGESHAN HOSPITAL LAB** for training from **16-06-2020 to 01-07-2020** in our Lab .

Thanking you,

LAB Tech

ATTESTED



PRINCIPAL

**SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**



DOCTOR SIGNATURE.

**Dr.V.MURUGESAN**

**Reg No: 22114**

**DR. MURUGESAN HOSPITAL AND  
KIDNEY STONE CENTRE,  
SUNDARA VINAYAGAR KOIL STREET  
NEAR MAHALAKSHMI THEATER  
KALLAKURICHI-606202**



TRAINING CERTIFICATE

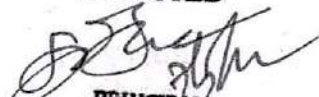
Here with, I Certify that Miss S.TamilSelvi.B.Sc., (2<sup>nd</sup> year) Biochemistry,  
Sengunthar arts and Science College, Tiruchengode ( Reg. No 18UBC1184 ) has attended  
MOHAN HITECH LAB for Training from 22.06.2020 to 12.07.2020

With Regards,



HOD Lab

ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.



Fully Automated  
Analyzer



Bio Chemistry  
Analyzer



GE ECG  
Analyzer



Biothesiometry  
Analyzer



Automated Cell  
counter Analyzer





# GEMINI CLINICAL BIO - CHEMICAL LABORATORY & DIGITAL X-RAYS

COMPUTERISED ADVANCED MEDICAL DIAGNOSTIC CENTRE  
WITH 3 CHANNEL COM. ECG FACILITY

162 /166, SECOND AGRAHARAM, ( OPP ) LAKSHMI VILAS BANK,  
SALEM - 636 001  
e-mail : geminilaboratory@gmail.com

☎ : 0427 - 226032

☎ : 97866506

## Working Hours

Week Days : 7.30 am to 9.30 p

Sunday : 7.30 am to 2.00 p

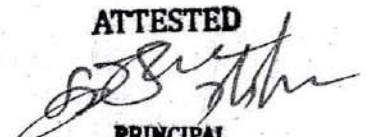
## CERTIFICATE

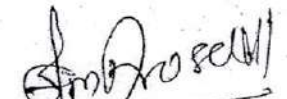
This is to Certify that Miss. R.Vaishnadhi D/O M.Ravi , doing her  
III year B.Sc (BioChemistry) at Sengunthar Arts and Science College,  
Thiruchengode, Namakkal, underwent Internship Course in our Laboratory for the  
period 12.03.2021 to 27.03.2021 (15 days).

Date : 27/03/2021

Salem.

ATTESTED

  
PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

  
(Sd) M. Ambrose  
GEMINI CLINICAL  
BIO-CHEMICAL LABORATORY  
162/166-2nd AGRAHARAM,  
SALEM - 636 001.





# NIHITH SUVAN CLINICAL LABORATORY ADVEKA HOSPITAL



# 93-C1, West Street, K. Puthur, Poolampatty Main Road, Edappadi Tk, Salem Dt.  
Mobile : 80722 12123, 91590 12123 E-mail : advekahospital@gmail.com

## LABORATORY REPORTS

DATE: 02/03/2021

### TO WHOMSOEVER IT MAY CONCERN

This is certify that Miss. *VAISHNAVI.K* studying III B.Sc, Biochemistry at *SENGUNTHAR ARTS & SCIENCE COLLEGE Tiruchengode* has attend our *NIHITH SUVAN LABORATORY* at *ADVEKA HOSPITAL IDAPPADI (TK) SALEM (DK)* for Biochemistry laboratory training from 15.02.2021 to 02.03.2021. She has attended 15 days regularly for his training programme.

*K. R. R.*  
Lab Technician

**ATTESTED**  
*[Signature]*  
**PRINCIPAL**  
**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TIRUCHENGODE - 637 205.**

*[Signature]*  
**Dr. V. RAMKUMAR,**  
**MS., FMAS., FIAGES.,**  
**Reg. No: 78530**  
**ADVEKA HOSPITAL**  
**EDAPPADI - 637 101.**



# RASI CLINICAL LABORATORY

Automated Bio-Chemistry & Haematology Analyser)

RASI SPECIALITY HOSPITAL  
77/1-1, Kokkarayanpettai Road,  
Valaraigate,  
Tiruchengode-637 214,  
Namakkal Dt.

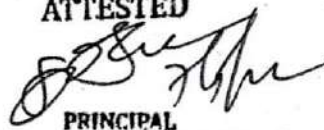
Date :13-03-2021

## TO WHOM SOEVER IT MAY CONCERN

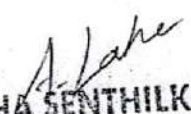
This is to certify that Miss. VASANTHA . A studying III B.Sc. Biochemistry at SENGUNTHAR ARTS & SCIENCE COLLEGE Tiruchengode has attended our RASI CLINICAL LABORATORY at RASI SPECIALITY HOSPITAL, TIRUCHENGODE (TK) NAMAKKAL (DT) for Biochemistry laboratory training from 25.02.2021 to 13.03.2021 she has attended 10 days regularly for her training programme

  
Lab Technician

ATTESTED

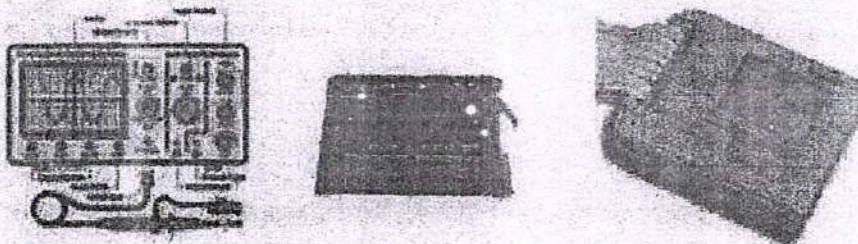
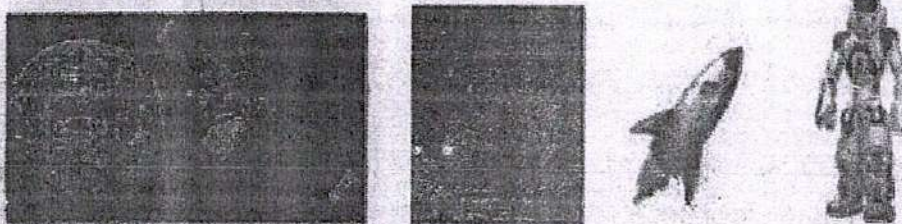
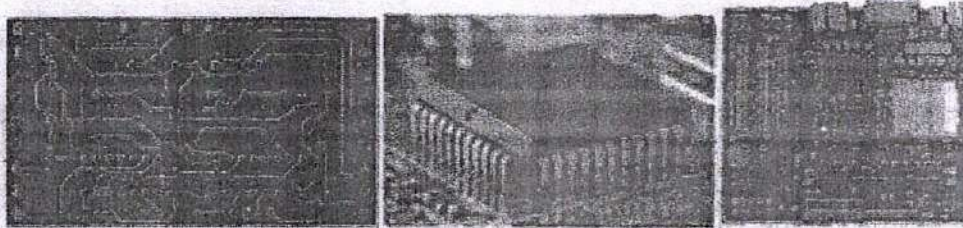
  
PRINCIPAL

SENGUNTHAR ARTS & SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.

  
Dr. A. LATHA SENTHILKUMAR  
M.B.B.S., DGO, DNB  
RASI SPECIALITY HOSPITAL  
77/1-1, Kokkarayanpettai Road,  
Valaraigate,  
TIRUCHENGODE-637 214.



**PERIYAR UNIVERSITY  
SALEM – 636 011**



**B.Sc, ELECTRONICS AND COMMUNICATION**

**SYLLABUS AND REGULATIONS  
UNDER CHOICE BASED CREDIT SYSTEM**

**EFFECTIVE FROM THE ACADEMIC YEAR 2017 – 2018 & ONWARDS**

**ATTESTED**

A handwritten signature in green ink, likely of the Principal, is written over the word 'ATTESTED'.

**PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**



**7. PROJECTWORK OR ONE CORE PAPER:**

A Candidate can submit SOFTWARE or HARDWARE or HARDWARE cum SOFTWARE based project and has to demonstrate the Project with Project Report in the University Project Viva Voce Examination conducted at the end of the sixth semester.

**MARK DISTRIBUTION FOR PROJECT REPORT: 80 MARKS**

**MARK DISTRIBUTION FOR VIVA VOCE : 20 MARKS**

Instead of Project Work ; Core Paper – IX “BIOMEDICAL INSTRUMENTS ” may be offered in the VI th Semester.

**8. PASSING MINIMUM :**

A candidate shall be declared to have passed the examination only if the candidate secures a minimum of 40% in the University examination and with an overall total of 40 out of 100.

**9. RESTRICTIONS TO APPEAR FOR THE EXAMINATIONS**

Candidates who fail in any of the course of Part I , II , III , IV & Part V of UG Degree examinations shall complete the course concerned within 5 years from the date of admission to the said programme and should they fail to do so, they shall take the examination in the revised syllabus prescribed for the immediate next batch of candidates.

If there is no change in the syllabus they shall appear for the examination in that course with the syllabus in vogue until there is a change in the syllabus. In the event of removal of that course consequent to change of regulation and / or curriculum after 5-year period, the candidates shall have to take up an equivalent course in the revised syllabus as suggested by the Chairman and fulfill the requirements as per the regulation curriculum for the award of the degree.

**10. IMPROVEMENT OF MARKS IN THE SUBJECTS ALREADY PASSED**

Candidates desirous of improving the marks awarded in a passed subject in their first attempt shall reappear once within a period of subsequent two semesters. The improved marks shall be considered for classification but not for ranking. When there is no improvement, there shall not be any change in the original marks already awarded.

**11. CLASSIFICATION OF SUCCESSFUL CANDIDATES**

A candidate who passes all the examinations in Part I to Part V securing following CGPA and Grades shall be declared as follows for Part I or Part II or Part III.

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**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**THRUCHENGODE - 637 208.**



**S. RAVIKULMAR M.S. DIPLOMA P.G.O.C.A.**  
**H.O.D.**  
**Dept. of Electronics & Communication.**  
**Sengunthar Arts & Science College.**  
**THRUCHENGODE - 637 205.**





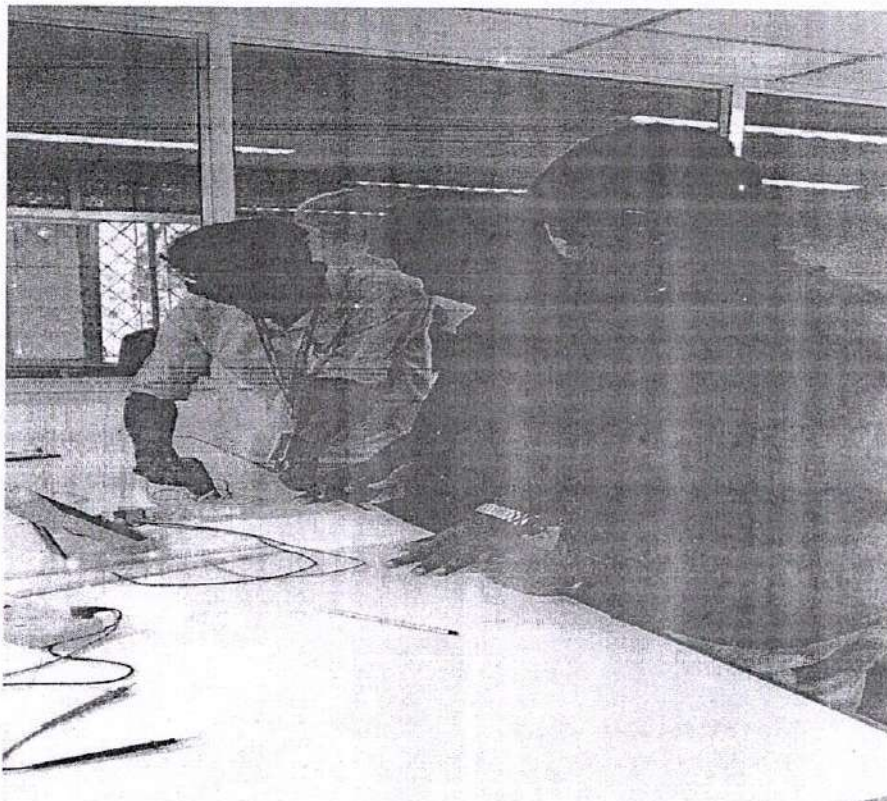
Since 1991

**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
(Affiliated to Periyar University, Salem and Approved by AICTE, New Delhi)  
An ISO 9001:2015 Certified Institution  
Recognised under section 2(f) and 12(B) of the UGC Act 1956  
Accredited by NAAC  
Tiruchengode – 637 205, Namakkal dt., Tamilnadu



**EXPERIMENTAL LEARNING-2020-2021**

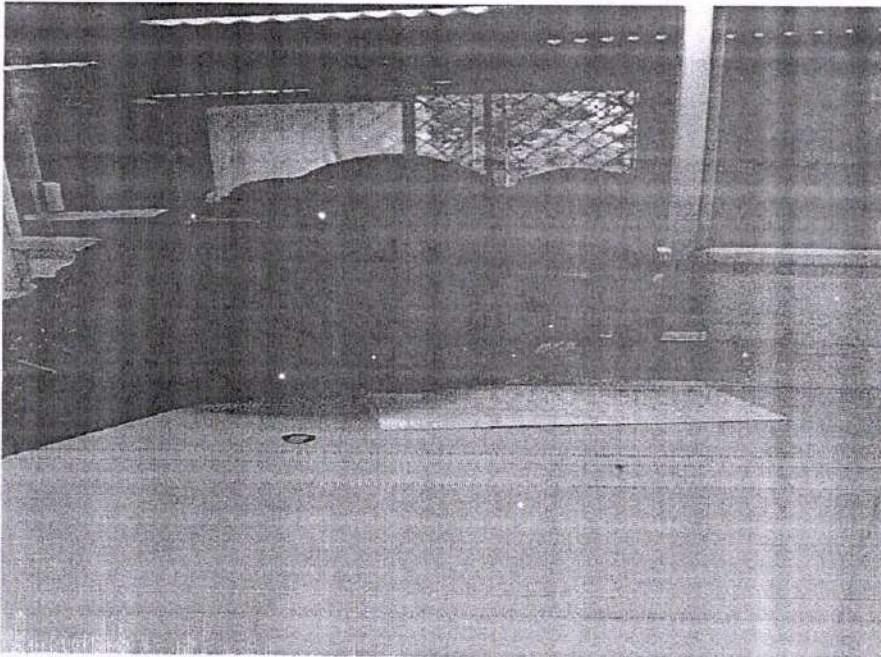
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION**



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**PRINCIPAL**  
**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TIRUCHENGODE - 637 205.**





**ATTESTED**

**PRINCIPAL**  
**SENGUNTHAR ARTS AND SCIENCE COLLEGE**  
**TRICHY - 637 205.**





**ATTESTED**

*[Signature]*

**PRINCIPAL  
SENGUNTHAR ARTS AND SCIENCE COLLEGE  
TIRUCHENGODE - 637 205.**

*[Signature]*  
**S. RAVIKUMAR M.Sc. M.Phil. P.G.D.C.A.**

**H.O.D.  
Dept. of Electronics & Communication,  
Sengunthar Arts & Science College,  
TIRUCHENGODE - 637 205.**