



SHRIMATI INDIRA GANDHI COLLEGE

(Nationally Accredited at “A” Grade (3rd Cycle) by NAAC)

Chatram Bus Stand, Tiruchirappalli – 620002.

1.3.2

**Supporting Document for Project
work**

Microbiology

K. Chitra devi M.Sc., M.Phil., DMLT.,PGDBI.,

Assistant professor

Department of Microbiology,

Shrimati Indira Gandhi College,


Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Comparison of poultry manure with fish waste on the *Bacillus*" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P20391401	ABINAYA. A
P20391402	AISWARIA. J
P20391403	AKSHAYA.G
P20391404	ASIYA MARIAM. M
P20391405	BHUVANESWARI. S


Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.


K. Chitra devi M.Sc.,M.Phil.,DMLT.,PGDBI.,
Assistant professor
Department of Microbiology,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “Antibiogram activities of *Staphylococcus aureus* from mastitis sample” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P20391406	DHANAPRIYA. S
P20391407	DIVYA. R
P20391408	GAYATHRI. J
P20391409	GAYATHRI. R
P20391410	KEERTHANA. S


Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Dr.A. Winny Fred Crossia M.Sc., M.Phil., PhD.,(ICAR-NET)

Assistant professor

Department of Microbiology,

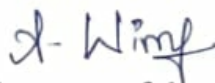
Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Determination of bacterial count from mobile phone" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P20391411	LIZZY. J
P20391412	MAHALAKSHMI. P
P20391413	MANISHA KOIRALA. P
P20391414	NITHYA. V
P20391415	PARAMESWARI. V


Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
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Tiruchirappalli - 620 002.

Dr.A. Winny Fred Crossia M.Sc., M.Phil., PhD.,(ICAR-NET)

Assistant professor

Department of Microbiology,

Shrimati Indira Gandhi College,


Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Isolation of bacteria from the hand nails and thumb impression" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P20391416	PAVITHRA. R
P20391417	PRIYADHARSHINI. R
P20391418	RANJITHA. R
P20391419	SALINI. N
P20391420	SARANYA. S


Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
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Tiruchirappalli - 620 002.

Ms.A. Padmavathi M.Sc., M.Phil., SET

Assistant professor

Department of Microbiology,

Shrimati Indira Gandhi College,


Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “Determination of bacterial count from e-waste samples” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P20391421	SELVA PRIYA. R
P20391422	SEVANTHI. V
P20391423	SINDHUJA. S
P20391424	SUBASRI. R

A. Padmavathi
Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Ms.A.Padmavathi M.Sc., M.Phil., SET

Assistant professor

Department of Microbiology,

Shrimati Indira Gandhi College,

Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “A study on the cleaning protocol of glassware’s in the microbiological laboratory” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P20391425	THABITHAL GRACY. S
P20391426	THENMOZHI. R
P20391427	VISHNUPRIYA. K
P20391428	YOGESHWARI. K

A. Padmavathi
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Signature of the Head of the Department

The Head
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Dr.A.Winny Fred Crossia,M.Sc., M.Phil., PhD., ICAR-NET
Assistant professor,
Department of Microbiology
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Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Isolation of pigmented halophiles from pickles " has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21391050	Dhivya .T
P21391051	Gomathi Tamil
P21391052	Gowsalya. M
P21391053	Jayalakshmi. S
P21391054	Kavitha. P


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Ms.A.Padmavathi,M.Sc., M.Phil., SET

Assistant professor,

Department of Microbiology

Shrimati Indira Gandhi College,


Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled “Isolation of fungi from the refrigerated tomato ” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21391055	Keerthana. S
P21391056	Kiruthiga. K
P21391057	Kokila. M
P21391058	Mythili. D
P21391059	Paul Selsiya .S


Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

Dr.N.Shanmugapriya,M.Sc., M.Phil.,Ph.D

Assistant professor

Department of Microbiology

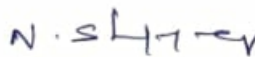
Shrimati Indira Gandhi College,


Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Isolation of fungi from the indoor air " has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21391060	Pothumponnu. A
P21391061	Priyanka.V
P21391062	Ruckmani.D
P21391063	Sandhiya. S
P21391064	Sarah Lois .J


Signature of the Guide


Signature of the Head of the Department

The Head
Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirapalli - 620 002.

Dr.P.Priyadharsini M.Sc., M.Phil., PGDHT Ph.D, ICAR-NET,
Assistant Professor
Department of Microbiology
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Isolation of algae from the wet wood " has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
P21391065	Shalini. S
P21391066	Shiny Enangiline. S
P21391067	Sivapriyavarshini. S
P21391068	Yamuna.A



Signature of the Guide



Signature of the Head of the Department

The Head
Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.



Helikem Biotek Industrial Research Pvt Ltd.,

(REG. NO : TM27D0008296)

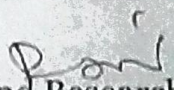
CIN: U73100TN2019PTC131687



Dr.A.RAJA M.Sc., M.Phil., Ph.D.,
Executive Director +91 99943 40197

CERTIFICATE

This is to certify that this dissertation entitled, '**Isolation of Lichens associated Lignolytic, peroxidase producing fungi and its efficacy on Coir effluent Treatment**' an independent research work done by **SALINI N (Reg.No. P20391419)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,

(REG. NO : TN27D0008296)

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Dr.A.RAJA M.Sc., M.Phil., Ph.D
Executive Director +91 99943 4019

CERTIFICATE

This is to certify that this dissertation entitled, '**Bio formulation of Turmeric oil nano composite and its effect on Prevention of vegetable spoilage**' an independent research work done by **PRIYADARSHINI R (Reg.No. P20391417)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,

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Dr.A.RAJA M.Sc., M.Phil., Ph.D.,
Executive Director +91 99943 40197

CERTIFICATE


This is to certify that this dissertation entitled, '**Isolation and Screening of Bio active compounds from root of *Anacyclus pyrethrum*- An Antioxidant, Anti-inflammatory and antibacterial study**' an independent research work done by **KEERTHANA S (Reg.No. P20391410)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)



CERTIFICATE

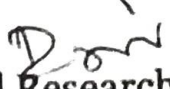
This is to certify that this dissertation entitled, '**Optimization of Carbon and agro waste for the production of Organic Acid from fungi isolated from paddy field**' an independent research work done by **BHUVANESWARI S (Reg.No. P20391405)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.

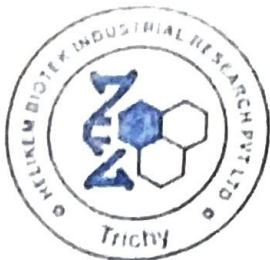

Director and Research advisor
(Dr.A.RAJA)



CERTIFICATE

This is to certify that this dissertation entitled, '**Isolation of Biosurfactant from Petrol bunk site and its hydrocarbon degradation potential**' an independent research work done by **DIVYA R (Reg.No. P20391407)** Second M.Sc., **MICROBIOLOGY, Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





DEPARTMENT OF PETROCHEMICAL TECHNOLOGY
UNIVERSITY COLLEGE OF ENGINEERING (BIT CAMPUS)
ANNA UNIVERSITY
TIRUCHIRAPPALLI - 620 024.

Dr. M.Arulmozhi, M.E., Ph.D.,
Professor

Date: 31.05.2022

CERTIFICATE

This is to certify that the work entitled "Bio-approach Zinc Oxide Nanoparticles Using *Sargassum muticum* Seaweed Extract and Antibacterial Activities Towards Pathogenic Bacteria" is a bonafide work of Miss. R. RANJITHA (Roll No. P20391418) for the degree of Master of Science in Microbiology is based on the result of studies carried out by her under my supervision in the Department of Petrochemical Technology, BIT Campus, Anna University, Tiruchirappalli as a partial fulfillment of the major project during the period from March 2022 to May 2022.

I further certify that no part of this dissertation has been submitted anywhere else for the award of any degree, diploma, associateship, fellowship or other similar titles to any candidates.

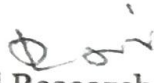
M. Arulmozhi
01-06-2022
(Dr. M. Arulmozhi)

Dr. M. ARULMOZHI, M.E., Ph.D.,
Professor
Dept. of Petrochemical Technology,
University College of Engineering (BIT Campus)
Anna University, Tiruchirappalli.



CERTIFICATE

This is to certify that this dissertation entitled, '**Bio formulation of Coffee seed extract Silver nano composite preparation and its effect on anthracnose Plant Disease**', an independent research work done by **ABINAYA A (Reg.No. P20391401)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,

(REG. NO : TN27D0008296)
CIN: U73100TN2019PTC131687

Dr.A.RAJA M.Sc., M.Phil., Ph.D
Executive Director +91 99943 4019

CERTIFICATE

This is to certify that this dissertation entitled, '**Isolation of Antiurolithic and antibacterial compound - an *in vitro* and *in silico* evaluation of secondary metabolite from Streptomyces sp**' an independent research work done by **LIZZY J (Reg.No. P20391411)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of **Master of Science in Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,

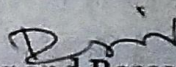
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CIN: U73100TN2019PTC131687

Dr.A.RAJA M.Sc., M.Phil., Ph.D.
Executive Director +91 99343 46197

CERTIFICATE

This is to certify that this dissertation entitled, '**Isolation of Endophytic Bacterium associated with root of *M.pudica* and its metabolites profiling**' an independent research work done by **NITHYA V (Reg.No. P20391414)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,


(REG. NO : TN27D0008296)

CIN: U73100TN2019PTC131687

Dr.A.RAJA M.Sc., M.Phil., Ph.D.
Executive Director +91 99943 401

CERTIFICATE

This is to certify that this dissertation entitled, 'Isolation of probiotic and pre biotic from Red algae (Rhodophyta) and its antibacterial activity' an independent research work done by **ASIYA MARIYAM M (Reg.No. P20391404)** Second M.Sc., Microbiology, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.



Director and Research advisor
(Dr.A.RAJA)





CERTIFICATE

This is to certify that this dissertation entitled, '**Extraction and Evaluation of Antibacterial, Antifungal and Antioxidant activity of Pumpkin seed oil**' an independent research work done by **SUBASRI R (Reg.No. P20391424)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli.** The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,


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CIN: U73100TN2019PTC131587

Dr A RAJA
Executive Director +91 99443 40197

CERTIFICATE

This is to certify that this dissertation entitled, 'Antioxidant and Anticancer potential of Secondary metabolites isolated from termite mound adopted Actinomycetes' an independent research work done by YOGESHWARI K (Reg.No. P20391428) Second M.Sc., Microbiology, Shrimati Indira Gandhi College, Tiruchirappalli. The entire research work has been carried out at Helikem Biotek Industrial Research Pvt Ltd for the award of Master of Science in MICROBIOLOGY. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


Director and Research advisor
(Dr.A.RAJA)





Helikem Biotek Industrial Research Pvt Ltd.,

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Dr.A.RAJA M.Sc. M.Phil. Ph.D.
Executive Director +91 99943 40197

TO WHOMSOEVER IT MAY CONCERN

This is to certify that R THENMOZHI a student of second M.Sc., Microbiology, Shrimati Indira Gandhi College, Tiruchirappalli has successfully completed a summer internship in the field of Molecular biology during 2ND MARCH 2022 to 12TH March 2022 under the guidance of Dr.A.RAJA.

Her internship activities include familiarization to RTPCR and their operations and process along with a RNA extraction, amplification and Data analysis as per ICMR guidelines.

During the period of her internship program with us, she had been exposed to different processes on RT-PCR diagnosis and was found diligent, hardworking and inquisitive.

We wish her every success in his life and career


For HELIKEM BIOTEK INDUSTRIAL RESEARCH
PVT LTD, TIRUCHIRAPPALLI.

Director





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tbrds.res@gmail.com

ST No: 33AAMFT9621L1Z0

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CERTIFICATE

This to certify that the thesis entitles, "**Transcriptional regulatory protein ComA inhibition properties of Moringa oleifera aqueous leaf extract.**" is an independent research work done by **P. MANISHA KOIRALA** of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College**, Tiruchirappalli. The entire research work has been carried out at **TANBIO R and D Solution**, Vallam, Thanjavur - 613 403, for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

Dr. B. Purushothaman M.Tech., Ph.D

CEO and Scientist



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CERTIFICATE

This to certify that the thesis entitles, "In silico and In vitro approaches to predict the enolase inhibitory activity of *Acalypha indica* aqueous leaf extract." is an independent research work done by V. SEVENTHI of second year M.Sc., Microbiology, Shrimati Indira Gandhi College, Tiruchirappalli. The entire research work has been carried out at TANBIO R and D Solution, Vallam, Thanjavur – 613 403, for the award of Master of Science in MICROBIOLOGY. She has successfully completed the above entire project during the academic year February 2022 to May 2022.

Dr. B. Purushothaman M.Tech., Ph.D
CEO and Scientist



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CERTIFICATE

This to certify that the thesis entitles, "**In silico and In vitro approaches to predict the MepR efflux protein inhibitory activity of *Ocimum sanctum* aqueous leaf extract**" is an independent research work done by **R. SELVAPRIYA** of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College**, Tiruchirappalli. The entire research work has been carried out at **TANBIO R and D Solution**, Vallam, Thanjavur – 613 403, for the award of Master of Science in MICROBIOLOGY. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

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CEO and Scientist



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GST No: 33AAMFT9621L1Z0

CERTIFICATE

This to certify that the thesis entitles, “**MexAB – OprM efflux pump inhibitory activity of aqueous seed extract of *Moringa oleifera* – An In silico and In vitro approach**” is an independent research work done by **R. PAVITHRA** of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College**, Tiruchirappalli. The entire research work has been carried out at **TANBIO R and D Solution**, Vallam, Thanjavur – 613 403, for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

Dr. B. Purushothaman M.Tech., Ph.D

CEO and Scientist



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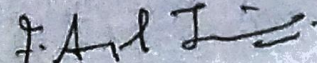
CIN No. : U73200TN2017PTC119079

Dr. E. Angel Jemima., M.Phil., Ph.D., DIWT.,
Chief Executive Officer.

24.05.2022
Thillai Nagar

Certificate of Completion

This is to certify that Ms. AISWARIA J, (Reg. No: P20351402) M.Sc., final year student of the Department of Microbiology, Shrimati Indira Gandhi College, Tiruchirapalli- 620002, has successfully completed her final year research project entitled "BIODEGRADATION OF INDUSTRIAL WASTE USING CYANOBACTERIAL SPECIES" under my guidance and supervision from 10th Mar 2022 to 24th May 2022 at Trichy Research Institute of Biotechnology Private Limited, Trichy – 620018. It is further certified that the dissertation or any part thereof has not been submitted elsewhere for any degree or diploma.



Authorized Signature

Dr. E. ANGEL JEMIMA, Ph.D.,
Chief Executive Officer
TRICHY RESEARCH INSTITUTE OF BIOTECHNOLOGY
No 107-D 2nd Floor 9th Cross (East),
Thillai Nagar, Trichy-620 018.



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GST No: 33AAMFT9621L1ZO

CERTIFICATE

This to certify that the thesis entitles, "**Cobalamin – Independent Methionine Synthase (MetE) inhibitory potential of aqueous flower extract of *Eclipta alba***" is an independent research work done by K. VISHNUPRIYA of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College**, Tiruchirappalli. The entire research work has been carried out at **TANBIO R and D Solution**, Vallam, Thanjavur – 613 403, for the award of Master of Science in MICROBIOLOGY. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

Dr. B. Purushothaman M.Tech., Ph.D
CEO and Scientist

CERTIFICATE

This to certify that the thesis entitles, "**Cadmium efflux protein inhibitory activity of *Ocimum basilicum* methanolic leaf extract -An In silico and In vitro approach**" is an independent research work done by **S. SARANYA** of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **TANBIO R and D Solution, Vallam, Thanjavur - 613 403**, for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.



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This is to certify that this dissertation entitled, '**Extraction and Identification of antibacterial and antiviral compounds from polyherbal extract with spices- An *in vitro* and *in silico* analysis**' an independent research work done by **PARAMESWARI V (Reg.No. P20391415)** Second M.Sc., MICROBIOLOGY, **Shrimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


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This to certify that the thesis entitles, "**Insilico and Invitro approaches to predict the TriABC efflux protein inhibitory activity of aqueous leaf extract of *Eclipta alba***" is an independent research work done by **R. GAYATHRI** of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College**, Tiruchirappalli. The entire research work has been carried out at **TANBIO R and D Solution**, Vallam, Thanjavur - 613 403, for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

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This to certify that the thesis entitled, "**Antibacterial potential of sapin derived compound utrosolide B and its molecular docking.**" is an independent research work done by **N. DHANAPRIYA** of second year M.Sc., Microbiology, **Srimati Indira Gandhi College, Tiruchirappalli**. The entire research work has been carried out at **TANBIO R and D Solution, Vallam, Thanjavur - 613 403**, for the award of **Master of Science in MICROBIOLOGY**. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

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This is to certify that this dissertation entitled, '**Screening of Hemolysin inhibitors from phytochemical derived from Green pepper extract**' an independent research work done by **AKSHAYA G (Reg.No. P20391403)** Second M.Sc., **MICROBIOLOGY, Shrimati Indira Gandhi College, Tiruchirappalli.** The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **Microbiology.** She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


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This is to certify that this dissertation entitled, '**Isolation of Probiotic from Idli Batter associated with Antibacterial (*In Vitro*) and Antimycobacterial (*in silico*) Selectivity**' an independent research work done by **THABITHAL GRACY S (Reg.No. P20391425)** Second M.Sc., **MICROBIOLOGY, Shrimati Indira Gandhi College, Tiruchirappalli.** The entire research work has been carried out at **Helikem Biotek Industrial Research Pvt Ltd** for the award of Master of Science in **MICROBIOLOGY.** She has successfully completed the above entitle project during the academic period March 2022 to May 2022. Further we certify that the results embodied in this thesis have not previously formed on the basis of any degree, diploma, associateship, fellowship or similar other titles.


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Professor

Date: 31.05.2022

CERTIFICATE

This is to certify that the work entitled "**Facile green synthesis of zinc oxide nanoparticles using *Sargassum muticum* seaweed extract and its application for environmental dye remediation**" is a bonafide work of Miss. P. MAHALAKSHMI (Roll No. P20391412) for the degree of Master of Science in Microbiology is based on the result of studies carried out by her under my supervision in the Department of Petrochemical Technology, BIT Campus, Anna University, Tiruchirappalli as a partial fulfillment of the major project during the period from March 2022 to May 2022.

I further certify that no part of this dissertation has been submitted anywhere else for the award of any degree, diploma, associateship, fellowship or other similar titles to any candidates.

M. Arulmozhi
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This to certify that the thesis entitles, "**Glutathione transferase inhibitory potential of aqueous leaf extract of *Catharanthus roseus***" is an independent research work done by S. **SINDHUJA** of second year M.Sc., Microbiology, **Shrimati Indira Gandhi College**, Tiruchirappalli. The entire research work has been carried out at **TANBIO R and D Solution**, Vallam, Thanjavur – 613 403, for the award of Master of Science in **MICROBIOLOGY**. She has successfully completed the above entire project during the academic year **February 2022 to May 2022**.

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This is to certify that the project work entitled “ Fungal infections diagnosis
- Past, present and future ” has been carried out by the following students under my
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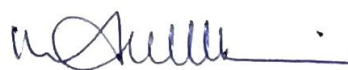
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This is to certify that the project work entitled “Biochemical determination of indicator organism from the canned fish ” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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This is to certify that the project work entitled “ Isolation of fungi from the shrimp ” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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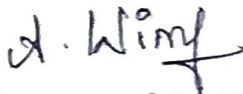
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This is to certify that the project work entitled “ Identification of fungi from the banana peel” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.


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CB19S410146	R.Roja
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This is to certify that the project work entitled “Examination of turmeric for the fungal growth” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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This is to certify that the project work entitled "Isolation of bacteria from the human hair" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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CB19S410160	S.Sneka
CB19S410161	V.Sofia Dayal
CB19S410162	B.Sowmiya
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CB19S410166	P.Suganya
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CB19S410169	P.Thamarai

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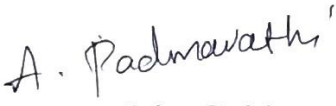
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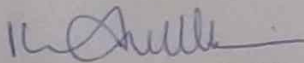
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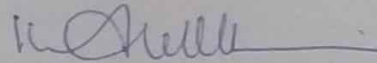
CERTIFICATE

This is to certify that the project work entitled "Pal depletion results in hypervesiculation and affects cell morphology and outer-membrane lipid asymmetry in bordetellae" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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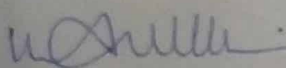
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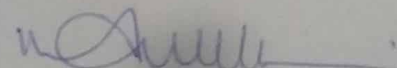
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This is to certify that the project work entitled "Effect of the combinatorial iron-chelation and oxidative stress on the growth of Aspergillus species" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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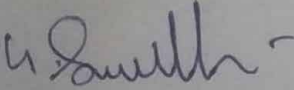
Assistant Professor

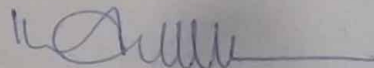
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This is to certify that the project work entitled "Assessment of soil analysis from the common outlet of tannery effluent" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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CB20S411294	ELAKKIYA. J
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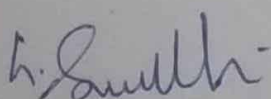
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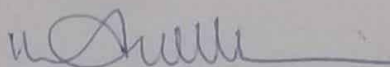
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This is to certify that the project work entitled "Microbial analysis on the garbage waste" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

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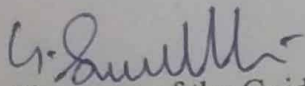
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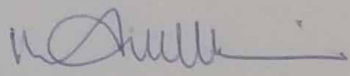
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Register No.	Name of the Student
CB20S411303	HEMA. R
CB20S411304	HEMALATHA. M
CB20S411305	HEMAMEENA. K
CB20S411306	ISHWARYA. D
CB20S411307	JAYASRI. K


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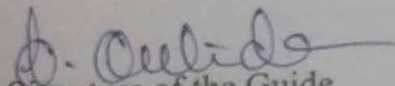
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Dept Of Microbiology
Shrimati Indira Gandhi College
Tiruchirapalli - 620 002.

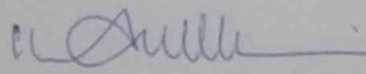
K. Chitradevi, M.Sc., M.Phil., PGDBI., DMLT
Assistant Professor,
Department of Microbiology,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002.

CERTIFICATE

This is to certify that the project work entitled "Vermiwash as a liquid biofertilizer" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411308	JAYAVARTHINI. A
CB20S411309	JENIFER GLADIS. D
CB20S411310	JOTHI. V
CB20S411311	KALAIVANI. K
CB20S411312	KALAIVANI. S


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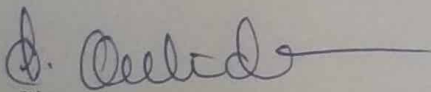
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Shrimati Indira Gandhi College
Tiruchirappalli - 620 002.

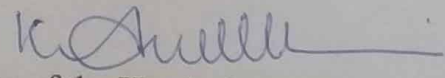
K. Chitradevi, M.Sc., M.Phil., PGDBI., DMLT
Assistant Professor,
Department of Microbiology,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002.

CERTIFICATE

This is to certify that the project work entitled "Isolation of bacteria from the food waste" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411313	KAYALVIZHI. R
CB20S411314	KEERTHI. M
CB20S411315	KIRUBA. S
CB20S411316	LOGA VENI. S
CB20S411317	MADHUMITHA. M


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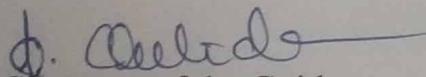
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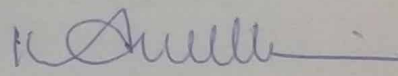
Ms. K. Chitradevi, M.Sc., M.Phil., PGDBI., DMLT
Assistant Professor,
Department of Microbiology,
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Tiruchirappalli-620 002.

CERTIFICATE

This is to certify that the project work entitled "Isolation of fungi from the bakery product" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411318	MANJULADEVI. M
CB20S411319	MOHANAPRIYA. S
CB20S411321	NAGALEELAVATHY. R
CB20S411322	NITHINI DHARSHINI. S


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Ms.K.Chitradevi M.Sc., M.Phil., PGDBI., DMLT

Department of Microbiology,

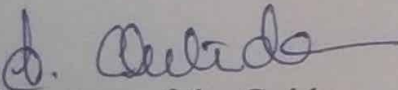
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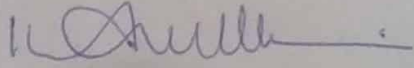
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Isolation of microorganisms from the different water samples" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411323	NITHYA SREE.C
CB20S411324	PRAVEENA. S
CB20S411325	PRAVEENA.P
CB20S411326	PRIYADHARSHINI.R
CB20S411327	RAGHAVI.P


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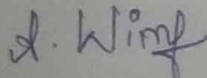
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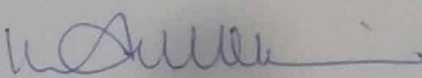
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Department of Microbiology,
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CERTIFICATE

This is to certify that the project work entitled "Assessment of the microbial load from the pharmaceutical effluent" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411328	RAJALAKSHMI. R
CB20S411329	RAJESHWARI. K
CB20S411331	RAMYA.J
CB20S411332	RETHINA PRABA. A
CB20S411333	SARANYA. V


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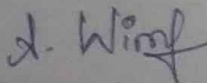
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Tiruchirappalli - 620 002.

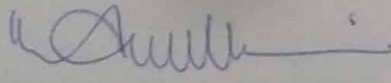
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Department of Microbiology,
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Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Isolation and determination of fungi from the dried fish" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411334	ARTHI. A
CB20S411336	SEETHALAKSHMI. P
CB20S411337	SWETHA. S
CB20S411338	SHENBAGAM. S
CB20S411339	SISVARAGHAVI. A


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Dr.K.Sivasankari M.Sc., M.Phil., PhD
Department of Microbiology,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Preliminary studies on the biodegradation of coir pith" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411340	SIVASANKARI. R
CB20S411341	SIVASANKARI. M
CB20S411342	SNEKHA.M
CB20S411343	SOWMIYA. M
CB20S411344	SOWMIYA. S

K. Sivasankari
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The Head
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Dr.K.Sivasankari M.Sc., M.Phil., PhD
Department of Microbiology,
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CERTIFICATE

This is to certify that the project work entitled "Cyanobacterial degradation of different agrowaste" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411345	SUGANTHI. R
CB20S411347	VETRIKANI. B
CB20S411349	SUNANTHA. S
CB20S411351	VALARMATHI. S
CB20S411352	VARSHA.S

K. Sivasankari
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Ms.A.Padmavathi M.Sc., M.Phil., SET
Department of Microbiology,
Shrimati Indira Gandhi College,
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Corn waste as an alternative for the microbial growth" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411353	VARSHA. V
CB20S411354	VARSHINI. M
CB20S411355	VIDHYASRI. S
CB20S411356	CLAIRE JOFIEL.E
CB20S411357	CYNDRELLA. P

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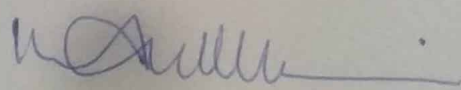
Tiruchirappalli-620 002

CERTIFICATE

This is to certify that the project work entitled "Adsorption capacity of coir pith in the textile effluents" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411359	FATHIMA NIDHA. VR
CB20S411360	KARKUZHALLI.K
CB20S411361	LAKSHMI PRIYA.S
CB20S411362	NITHYA. R
CB20S411363	NITHYA. S

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CERTIFICATE

This is to certify that the project work entitled "Isolation of microbes from the seawater" has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB20S411364	PRIYANKA.K
CB20S411365	SNEGA.S
CB20S411366	DHIVYA SHREE.M
CB20S411367	EDWIN NELSI.M

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Signature of the Head of the Department

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Dr.K. Anandhi, M.Sc., M.Phil., SET., Ph.D

Assistant professor & Head

Department of Microbiology

Shrimati Indira Gandhi College

Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “*Corynebacterium genitalium* sp. nov., nom. rev. and *Corynebacterium pseudogenitalium* sp. nov., nom. rev., two old species of the genus *Corynebacterium* described from clinical and environmental samples.” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412660	BHARGAVI K
CB21S412661	DHANALAKSHMI A
CB21S412662	DHARSHINI M
CB21S412663	HARISAKTHI. S
CB21S412664	JEEVARANJANI N



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**The Head
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Dr.K. Anandhi, M.Sc., M.Phil., SET., Ph.D

Assistant professor & Head

Department of Microbiology

Shrimati Indira Gandhi College

Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Biochemical and Molecular Mechanisms of Antibiotic Resistance in *Salmonella spp.*” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412655	ABARNA R
CB21S412656	ABINAYA
CB21S412657	ANUSIYA. S
CB21S412658	APARNA.R
CB21S412659	BADMAROSHINI H



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The Head
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Ms.G. Subashini, M.Sc., M.Phil., SET., NET

Assistant professor

Department of Microbiology

Shrimati Indira Gandhi College


Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Assessment of the Antimicrobial Susceptibility Pattern of microorganisms present in Yoghurt” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412671	KOHILA .E
CB21S412672	LAVANYA.N
CB21S412674	MONISHA.S
CB21S412675	MUTHULAKSHMI . K
CB21S412676	MUTHUPRIYADHARSHINI S


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The Head
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Ms.K. Chitra devi, M.Sc., M.Phil.,

Assistant professor

Department of Microbiology

Shrimati Indira Gandhi College

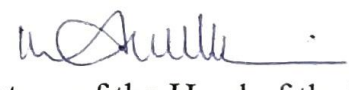
Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Biochemical and Molecular Mechanisms of Antibiotic Resistance in *Salmonella spp.*” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412677	NALINI R
CB21S412678	PAVITHRA. R
CB21S412679	RASIKAPRIYA. J
CB21S412680	RATHIDEVI . P
CB21S412681	RENUGA R


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Tiruchirappalli - 620 002.

Dr. A. Winny Fred Crossia, M.Sc., M.Phil., Ph.D., DMLT., NET

Assistant professor

Department of Microbiology

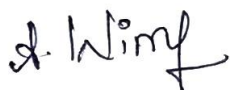
Shrimati Indira Gandhi College


Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Comparative study of disinfectant efficiency of Ethanol, Bleach and Phenolics against *Pseudomonas aeruginosa* and *Staphylococcus aureus*” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412682	RETHIKA. U
CB21S412683	SANDHIYA K
CB21S412684	SANDHIYA.S
CB21S412685	SANGEETHA .P
CB21S412686	SHALINI. G


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**The Head
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Ms. A. Padmavathi, M.Sc., M.Phil., SET

Assistant professor

Department of Microbiology


Shrimati Indira Gandhi College


Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Determining the culture condition for maximum lipase production by isolated *Micrococcus* from ugba” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412687	SHARMILA G
CB21S412688	SOUNDARYA.K
CB21S412689	SRI KEERTHANA.M
CB21S412690	SUBASHINI G
CB21S412692	SUBHA.B


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Dr. N. Shanmugapriya, M.Sc., M.Phil., Ph.D

Assistant professor

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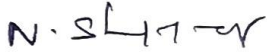
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Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Determining the major etiologic agent of urethritis” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412694	SUSHA.A
CB21S412695	SUSHMITHA.K
CB21S412696	THASBIKA.S
CB21S412697	VAISHNAVI R


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Dr. P. Priyadharsini, M.Sc., M.Phil., Ph.D., PDF., NET

Assistant professor

Department of Microbiology

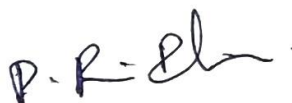
Shrimati Indira Gandhi College

Tiruchirappalli – 620002

CERTIFICATE

This is to certify that the project work entitled “Investigating the level of microbial contamination of yoghurts sold” has been carried out by the following students under my supervision and guidance during the Academic Year 2021-2022.

Register No.	Name of the Student
CB21S412698	VICTORIA JASMINE.P
CB21S412699	VIMALASRI.A
CB21S412700	VINOLIA CHRISTY A
CB21S412701	VIVETHA.R



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