



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

Department of Biotechnology

BT1821 - Project Work

Project Titles (2020-24 batch students)

Title of the Project	Name of the Student	Register Number	Roll Number
DEVELOPMENT OF SUNSCREEN FORMULATION USING BUTTERFLY PEA FLOWER (<i>Clitoria ternatea</i>) EXTRACT INFUSED WITH BOILED RICE WATER	SRIDIVYA. R	920420UBT001	20UBT001
	ABINAYA. J	920420UBT024	20UBT024
NATURAL DYE INFUSED SEAWEED HYDROCOLLOID BEADS AS VISUAL SENSORS FOR MONITORING FOOD SAFETY IN PACKED TENDER COCONUT	SAIBHAVADHARANI. B	920420UBT025	20UBT025
	SUBHIKSHA. S	920420UBT027	20UBT027
	VINODHINI. R	920420UBT042	20UBT042
OPTIMIZING BIOPROCESS DEVELOPMENT FOR ENHANCED CHITINASE PRODUCTION FROM BACTERIAL SOURCE	CERLICLADIYA. P	920420UBT043	20UBT043
	NITHYASHREE. S. R	920420UBT049	20UBT049
DEVELOPMENT OF BIOPLASTIC FROM FRUIT SCRAP AND EVALUATION OF ITS MECHANICAL AND PHYSICAL PROPERTIES	GIRITHARAN. S	920420UBT004	20UBT004
	SANDOSHMANI. R	920420UBT009	20UBT009
	NARASINGAM. R	920420UBT030	20UBT030
DEGRADATION OF POLYETHYLENE USING BACTERIA	SINDHUJA. S	920420UBT021	20UBT021
INSILICO GENETIC ANALYSIS OF LEUKEMIA FOR EXPRESSIONAL PROFILES	MINUSHA. S	920420UBT041	20UBT041
EVALUATING THE EFFICACY OF BIOTRANSFORMED ORGANIC WASTE AS A BIOFERTILIZER ON THE GROWTH OF <i>Abelmoschus esculentus</i> (Okra)	SUDHARSAN. M	920420UBT002	20UBT002
	KEERTHI VASAN. V	920420UBT014	20UBT014
DEVELOPMENT OF EDIBLE JELLY BEANS WITH HERBAL INFUSION AS A SWEET RELIEF FOR ALLEVIATING	BOOJITHA. E	920420UBT036	20UBT036
	HARSINI. S	920420UBT045	20UBT045
EFFECT OF INTRINSIC PARAMETERS ON EXCITATION AND EMISSION MATRIX OF RESAZURIN FOR FOOD QUALITY ANALYSIS	DINESH. R	920420UBT015	20UBT015
	GOKULNATH. S	920420UBT026	20UBT026
	PRASANNA VENGATESH. V	920420UBT046	20UBT046
CONTINUOUS SORPTION OF MICROPLASTICS FROM DOMESTIC WASTEWATER BY USING METAL CATALYST	JASMINE KILDA. L	920420UBT017	20UBT017
	KAMALI. S	920420UBT020	20UBT020
	VAISHAALI. A. M	920420UBT034	20UBT034
DEVELOPMENT OF BIO-COMPOSITE FILM USING UNDER-	JEFFRY DANIEL. D	920420UBT003	20UBT003

UTILIZED AGRICULTURAL AND MARINE WASTE BIOMASS	AKASH DEV. M. S	920420UBT013	20UBT013
EXPLORING NATURAL COMPOUNDS AS STEROL CARRIER PROTEIN-2 INHIBITORS FOR MOSQUITO LARVICIDAL APPLICATION-INSILICO APPROACH	GOBIKA. G	920420UBT007	20UBT007
	VARSHA. G. V	920420UBT028	20UBT028
	SAKTHI SUREGA. P	920420UBT039	20UBT039
ANALYSIS AND SCREENING OF PHYTOCONSTITUENTS FROM Boswellia serrata AS A POTENTIAL INHIBITOR OF MMP-13 IN OSTEOARTHRITIS	ARAVIND. R	920420UBT012	20UBT012
	JOHN PAUL HUDSON. S	920420UBT031	20UBT031
	JEGADEESH. M	920420UBT032	20UBT032
EVALUATION OF VARIOUS CARBOHYDRATES AS EXOGENEOUS CARBON SOURCES IN THE CULTIVATION OF CYANOBACTERIA AND PRODUCTION OF POLYSACCHARIDES	THILSATH MEERAL. S	920420UBT006	20UBT006
	LAMIYA BANU. M	920420UBT037	20UBT037
A STUDY ON INFLUENCE OF STRESS COMPONENTS ON THE GROWTH AND POLYSACCHARIDE PRODUCTIVITY OF CYANOBACTERIA	RINISHA. R	920420UBT029	20UBT029
	VARSHA. E	920420UBT038	20UBT038
WHEY WONDERS: LEVERAGING WHEY FOR GOURMET AND HEALTHY DAIRY PRODUCT FORMULATIONS	FAHEEMA THAHASEEN. A	920420UBT008	20UBT008
ASTUDYONTHEIMPACTOFSTERILIZATION AND MICROBIAL QUALITY IN FLAVORED MILK TO IMPROVE ITS SHELF LIFE	RAVINA. R	920420UBT010	20UBT010
	MOULI MONISHA. V	920420UBT011	20UBT011
Lactobacillus FROM CHILLI STALKS (capsicum annum) CHARACTERIZATION AND ITS APLPLICATIONS	VAIRAMUTHU. P	920420UBT033	20UBT033
	SHANKAR GANESH. M. V	920420UBT044	20UBT044
CYANOBACTERIAL EXPLOITATION OF FIREWORK WASTEWATER FOR SUSTAINABLE PRODUCTION OF SECONDARY METABOLITES	SIVA SANKARI. K	920420UBT005	20UBT005
	MADHUMITHA. K	920420UBT018	20UBT018
	YOGASRI. M	920420UBT035	20UBT035
	GOWSALYA. K	920420UBT040	20UBT040
ANALYSIS OF CHITINASE-3 LIKE PROTEIN 1(CHI3L1) GENE EXPRESSION IN BUFFALO OOCYTES, IN VITRO GENERATED EMBRYOS AND CUMULUS CELLS	DEEJITH NAATIYAAL. M. S	920420UBT019	20UBT019
INVESTIGATION OF SCOPOLETIN FROM Solanum trilobatum FOR ITS EFFICACY AGAINST CHRONIC RHINOSINUSITIS WITH NASAL POLYPS (CRS _w NP)	BENITA MARGARET. L	920420UBT016	20UBT016
	NITHYASREE. A	920420UBT022	20UBT022
	VARSHINIRAJI. P	920420UBT023	20UBT023
SPAWN PRODUCTION	AASIF HUSSAIN	920420UBT047	20UBT047

**DEVELOPMENT OF SUNSCREEN FORMULATION
USING BUTTERFLY PEA FLOWER (*Clitoria ternatea*)
EXTRACT INFUSED WITH BOILED RICE WATER**

A PROJECT REPORT

Submitted by

SRIDIVYA R (920420UBT001)

ABINAYA J (920420UBT024)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR – 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
 (An Autonomous Institution - Affiliated to Anna University, Chennai)
 K. VELLAKULAM, VIRUDHUNAGAR – 625 701

BONAFIDE CERTIFICATE

Certified that the project report “**DEVELOPMENT OF SUNSCREEN FORMULATION USING BUTTERFLY PEA FLOWER (*Clitoria ternatea*) EXTRACT INFUSED WITH BOILED RICE WATER**” is the bonafide work of “**SRIDIVYA R (920420UBT001) & ABINAYA J (920420UBT024)**” who carried out the project work under my supervision.

P. Shyam Kumar

SIGNATURE

Dr. R. Shyam Kumar

DEPT. OF BIOTECHNOLOGY
Head of the Department,
 Kamaraj College of Engineering & Technology,
 Virudhunagar.

Department of Biotechnology,
 Kamaraj College of Engg. & Tech.
 Virudhunagar – 626 701.

P. Shyam Kumar

SIGNATURE

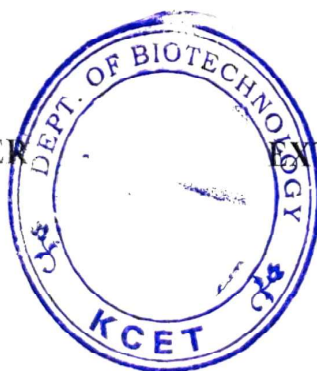
Dr. R. Shyam Kumar

Supervisor,

Professor,

Department of Biotechnology,
 Kamaraj College of Engg. & Tech.
 Virudhunagar – 626 701.

P. Shyam Kumar
INTERNAL EXAMINER



R. Shyam Kumar
EXTERNAL EXAMINER

NATURAL DYE INFUSED SEAWEED HYDROCOLLOID BEADS AS VISUAL SENSORS FOR MONITORING FOOD SAFETY IN PACKED TENER COCONUT

A PROJECT REPORT

Submitted by

SAIBHAVADHARANI B (920420UBT025)

SUBHIKSHA S (920420UBT027)

VINODHINI R (920420UBT042)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR – 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE


Certified that the project report "NATURAL DYE INFUSED SEAWEED HYDROCOLLOID BEADS AS VISUAL SENSORS FOR MONITORING FOOD SAFETY IN PACKED TENDER COCONUT" is the bonafide work of "SAIBHAVADHARANI B (920420UBT025), SUBHIKSHA S (920420UBT027) and VINODHINI R (920420UBT042)" who carried out the project work under my supervision.

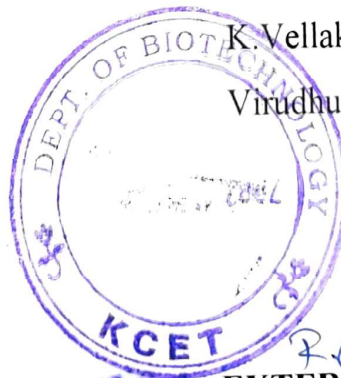

SIGNATURE

Dr.R. Shyam Kumar
HOD
Head of the Department,
Kamaraj College of Engineering & Technology
Professor,
VIRUDHUNAGAR.
Department of Biotechnology,
Kamaraj College of Engg. & Tech.
K.Vellakulam,
Virudhunagar - 625 701.


SIGNATURE

Dr.R. Shyam Kumar
SUPERVISOR,
Professor,
Department of Biotechnology,
Kamaraj College of Engg. & Tech.
K.Vellakulam,
Virudhunagar - 625 701.


INTERNAL EXAMINER




EXTERNAL EXAMINER

OPTIMIZING BIOPROCESS DEVELOPMENT FOR ENHANCED CHITINASE PRODUCTION FROM BACTERIAL SOURCE

A PROJECT REPORT

Submitted by

CERLICLADIYA P (920420UBT043)

NITHYASHREE S R (920420UBT049)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

**(An Autonomous Institution - Affiliated to Anna University,
Chennai)**

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report **"OPTIMIZING BIOPROCESS DEVELOPMENT FOR ENHANCED CHITINASE PRODUCTION FROM BACTERIAL SOURCE"** is the bonafide work of **"CERLICLADIYA P (920420UBT043) and NITHYASHREE S R (920420UBT049)"** who carried out the project work under my supervision.


SIGNATURE

Dr.R Shyam Kumar

Head of the Department,

DEPT. OF BIOTECHNOLOGY

Professor,
Kamaraj College of Engineering & Technology
Dept. of Biotechnology,
Virudhunagar.

Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701.


SIGNATURE

Dr.R Shyam Kumar

SUPERVISOR,

Professor,

Dept. of Biotechnology,

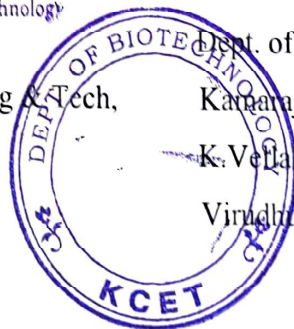
Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625701.


INTERNAL EXAMINER


EXTERNAL EXAMINER



**DEVELOPMENT OF BIOPLASTIC FROM FRUIT
SCRAP AND EVALUATION OF ITS MECHANICAL
AND PHYSICAL PROPERTIES**

A PROJECT REPORT

Submitted by

GIRITHARAN S (920420UBT004)

SANTHOSH MANI R (920420UBT009)

NARASINGAM R (920420UBT031)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, NEAR VIRUDHUNAGAR – 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
 (An Autonomous Institution - Affiliated to Anna University, Chennai)
K. VELLAKULAM, NEAR VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "DEVELOPMENT OF BIOPLASTIC FROM FRUIT SCRAP AND EVALUATION OF ITS MECHANICAL AND PHYSICAL PROPERTIES" is the bonafide work of "GIRITHARAN S (920420UBT004), SANTHOSH MANI R (920420UBT009) and NARASINGAM R (920420UBT030)" who carried out the project work under my supervision.

[Signature]
SIGNATURE

Dr. R. Shyam Kumar
DEPT. OF BIOTECHNOLOGY
Professor
 Kamaraj College of Engineering & Technology
VIRUDHUNAGAR.
Head of the Department,

Department of Biotechnology,
 Kamaraj College of Engg.
 & Tech.
 Virudhunagar - 625 701.

[Signature]
SIGNATURE

Dr. R. Baskaran
SUPERVISOR,

Associate professor,
 Department of Biotechnology,
 Kamaraj College of Engg. &
 Tech.
 Virudhunagar - 625 701.

[Signature]
INTERNAL EXAMINER



[Signature] 30/11/24
EXTERNAL EXAMINER

DEGRADATION OF POLYETHYLENE USING BACTERIA

A PROJECT REPORT

Submitted by

SINDHUJA S (920420UBT021)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

**KAMARAJ COLLEGE OF ENGINEERING AND
TECHNOLOGY**

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "DEGRADATION OF POLYETHYLENE USING BACTERIA" is the bonafide work of "SINDHUJA S (920420UBT021)" who carried out the project work under my supervision.



SIGNATURE

Dr. R. Shyam Kumar

Head of the Department,

Professor,

Department of Biotechnology,

Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701.



SIGNATURE

Dr. R. Baskaran

SUPERVISOR,


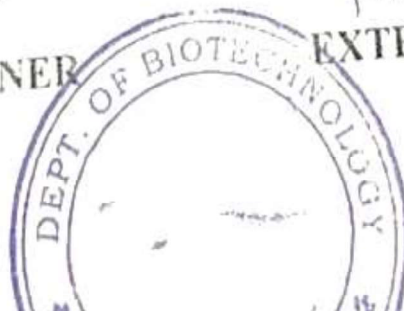
Associate Professor,

Department of Biotechnology

Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701.


INTERNAL EXAMINER

R. S. 30/4/24
EXTERNAL EXAMINER

INSILICO GENETIC ANALYSIS OF LEUKEMIA FOR EXPRESSIONAL PROFILES.

A PROJECT REPORT

sSubmitted by

MINUSHA S (920420UBT041)

in partial fulfilment for the award of the degree of

**BACHELOR OF TECHNOLOGY
IN
BIOTECHNOLOGY**



**DEPARTMENT OF BIOTECHNOLOGY
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR –625 701**

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
 (An Autonomous Institution - Affiliated to Anna University, Chennai)
 K. VELLAKULAM, VIRUDHUNAGAR – 625 701

BONAFIDE CERTIFICATE

Certified that the project report “INSILICO GENETIC ANALYSIS OF LEUKEMIA FOR EXPRESSIONAL PROFILES.” is the bonafide work of “Minusha S (920420UBT041)” who carried out the project work under my supervision.

P. Shyam Kumar

SIGNATURE

Dr. R. Shyam Kumar
Head of the Department,
 Professor,
 Department of Biotechnology,
 Kamaraj College of Engg. & Tech.
 Virudhunagar – 625701.

Dr. R. Baskaran

SIGNATURE

Dr. R. Baskaran
SUPERVISOR,
 Associate professor,
 Department of Biotechnology,
 Kamaraj College of Engg. & Tech.
 Virudhunagar – 625 701.

Internal Examiner

INTERNAL EXAMINER

R. Anil Kumar

EXTERNAL EXAMINER



**EVALUATING THE EFFICACY OF
BIOTRANSFORMED ORGANIC WASTE AS A
BIOFERTILIZER ON THE GROWTH OF
*Abelmoschus esculentus (Okra)***

A PROJECT REPORT

Submitted by

SUDHARSAN M (920420UBT002)

KEERTHI VASAN V (920420UBT014)

in partial fulfilment for the award of the degree of

**BACHELOR OF TECHNOLOGY
IN
BIOTECHNOLOGY**



**DEPARTMENT OF BIOTECHNOLOGY
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625 701**

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "EVALUATING THE EFFICACY OF BIOTRANSFORMED ORGANIC WASTE AS A BIOFERTILIZER ON THE GROWTH OF *Abelmoschus esculentus* (Okra) " is the bonafide work of "M.SUDHARSAN (920420UBT002) and V. KEERTHI VASAN (920420UBT014)" who carried out the project work under my supervision.


SIGNATURE

HOD

DEPT. OF BIOTECHNOLOGY
Dr. R. Sriyani Kumar
Kamaraj College of Engineering & Technology
VIRUDHUNAGAR.

HEAD OF THE DEPARTMENT.

Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Virudhunagar - 625 701


SIGNATURE

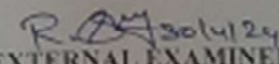
Dr.K.Geetha

SUPERVISOR,

Associate Professor,

Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Near Virudhunagar - 625 701.


INTERNAL EXAMINER


EXTERNAL EXAMINER



**DEVELOPMENT OF EDIBLE JELLY BEANS
WITH HERBAL INFUSION AS A SWEET RELIEF
FOR ALLEVIATING DYSMENORRHEA
DISCOMFORT**

A PROJECT REPORT

Submitted by

BOOJITHA E (920420UBT036)

HARSINI S (920420UBT045)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

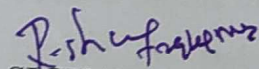
K.VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "DEVELOPMENT OF EDIBLE JELLY BEANS WITH HERBAL INFUSION AS A SWEET RELIEF FOR ALLEVIATING DYSMENORRHEA DISCOMFORT" is the bonafide work of "BOOJITHA E (920420UBT036) & HARSINI S (920420UBT045)" who carried out the project work under my supervision.

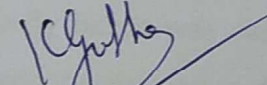

SIGNATURE

Dr. R. Shyam Kumar

HOD
DEPT. OF BIOTECHNOLOGY
Department
Kamaraj College of Engineering & Technology
Associate Professor,

Dept. of
Biotechnology
Kamaraj College of
Engg & Tech,
K. Vellakulam

Virudhunagar- 625701


SIGNATURE

Dr. K. Geetha

SUPERVISOR

Associate Professor,

Dept. of
Biotechnology
Kamaraj College of
Engg & Tech,
K. Vellakulam

Virudhunagar- 625701


SIGNATURE

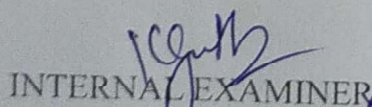
Er. K. Chitra Devi

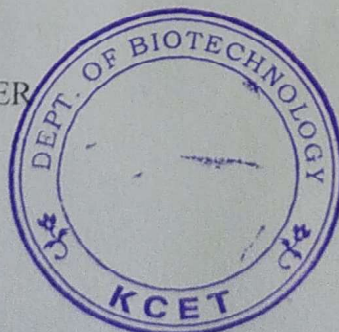
CO-SUPERVISOR

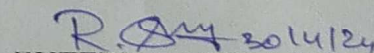
Assistant Professor,

Dept. of
Biotechnology
Kamaraj College of
Engg & Tech
K. Vellakulam

Virudhunagar-625701


INTERNAL EXAMINER




EXTERNAL EXAMINER

EFFECT OF INTRINSIC PARAMETERS ON EXCITATION AND EMISSION MATRIX OF RESAZURIN FOR FOOD QUALITY ANALYSIS

A PROJECT REPORT

Submitted by

DINESH R (920420UBT015)

GOKULNATH S (920420UBT026)

PRASANNA VENGATESH V (920420UBT046)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

**KAMARAJ COLLEGE OF ENGINEERING AND
TECHNOLOGY**

**(An Autonomous Institution - Affiliated to Anna University,
Chennai)**

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
 (An Autonomous Institution- Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "EFFECT OF INTRINSIC PARAMETERS ON EXCITATION AND EMISSION MATRIX OF RESAZURIN FOR FOOD QUALITY ANALYSIS" is the bonafide work of " DINESH R (920420UBT015), GOKULNATH S (920420UBT026) and PRASANNA VENGATESH V (920420UBT046)" who carried out the project work under my supervision.

R. Shyam Kumar
SIGNATURE

Dr. R. Shyam Kumar, Ph.D.

**HOD -
 Head of the Department**

DEPT. OF BIOTECHNOLOGY

Professor,

Kamaraj College of Engg & Tech

K. Vellakulam,

Virudhunagar - 625 701

S. Karthikumar
SIGNATURE

Dr. S. Karthikumar, Ph.D.

SUPERVISOR,

Associate Professor,

Dept. of Biotechnology,

Kamaraj College of Engg & Tech,

K. Vellakulam,

Virudhunagar - 625701.

IC
INTERNAL EXAMINER

R. Aravind
EXTERNAL EXAMINER



CONTINUOUS SORPTION OF MICROPLASTICS FROM DOMESTIC WASTEWATER BY USING METAL CATALYST

A PROJECT REPORT

Submitted by

JASMINE KILDA L (920420UBT017)

KAMALI S (920420UBT020)

VAISHAALI A M (920420UBT034)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "CONTINUOUS SORPTION OF MICROPLASTICS FROM DOMESTIC WASTEWATER BY USING METAL CATALYST" is the bonafide work of "L. JASMINE KILDA (920420UBT017), S. KAMALI (920420UBT020) & A. M. VAISHAALI (920420UBT034)" who carried out the project work under my supervision.


SIGNATURE

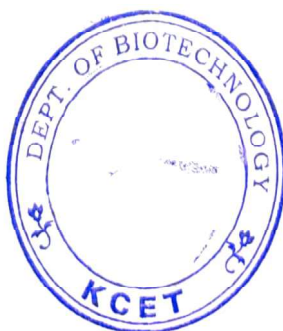
Dr. R. Shyam Kumar
HOD
Head of the Department,
Kamaraj College of Engineering & Technology
Professor,
VIRUDHUNAGAR.
Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Virudhunagar – 625 701.


SIGNATURE

Dr. S. Karthikumar
SUPERVISOR,
Associate Professor,
Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Virudhunagar – 625 701.


INTERNAL EXAMINER


EXTERNAL EXAMINER



DEVELOPMENT OF BIO-COMPOSITE FILM USING UNDER-UTILIZED AGRICULTURAL AND MARINE WASTE BIOMASS

A PROJECT REPORT

Submitted by

JEFFRY DANIEL D (920420UBT003)

AKASH DEV M S (920420UBT013)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report **"DEVELOPMENT OF BIO-COMPOSITE FILM USING UNDER-UTILIZED AGRICULTURAL AND MARINE WASTE BIOMASS"** is the bonafide work of **"JEFFRY DANIEL D (920420UBT003) and AKASH DEV M S (920420UBT013)"** who carried out the project work under my supervision.



SIGNATURE

Dr. R. Shyam Kumar

Head of the Department,

Professor,
DEPT. OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology
Department of Biotechnology,

Kamaraj College of Engg. & Tech.

Virudhunagar – 625 701.



SIGNATURE

Dr. A. Ronaldo Anuf

Supervisor,

Assistant Professor,
Department of Biotechnology,

Kamaraj College of Engg. & Tech.

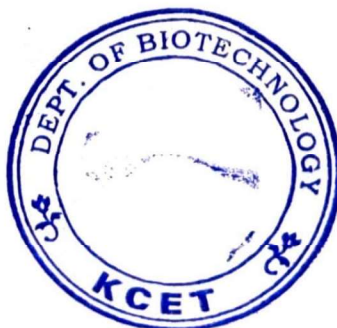
Virudhunagar – 625 701.



INTERNAL EXAMINER



EXTERNAL EXAMINER



**EXPLORING NATURAL COMPOUNDS AS
STEROL CARRIER PROTEIN-2 INHIBITORS FOR
MOSQUITO LARVICIDAL APPLICATION-
INSILICO APPROACH**

A PROJECT REPORT

Submitted by

GOBIKA G (920420UBT007)

VARSHA G V (920420UBT028)

SAKTHI SUREGA P (920420UBT039)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

**KAMARAJ COLLEGE OF ENGINEERING AND
TECHNOLOGY**

(An Autonomous Institution- Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution- Affiliated to Anna University,
Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "EXPLORING NATURAL COMPOUNDS AS STEROL CARRIER PROTEIN-2 INHIBITORS FOR MOSQUITO LARVICIDAL APPLICATION-*INSILICO* APPROACH" is the bonafide work of "GOBIKA G (920420UBT007), VARSHA G V (920420UBT028) and SAKTHI SUREGA P (920420UBT039)" who carried out the project work under my supervision.

SIGNATURE

Dr. R. Shyam Kumar,

HEAD OF THE DEPARTMENT,

DEPT. OF BIOTECHNOLOGY

Kamaraj College of Engineering & Technology
Virudhunagar.

Kamaraj College of Engg & Tech,

K. Vellakulam,

Virudhunagar - 625 701

SIGNATURE

Dr. D. Pradiba,

SUPERVISOR,

Assistant Professor,

Dept. of Biotechnology,

Kamaraj College of Engg & Tech,

K. Vellakulam,

Virudhunagar - 625 701.

INTERNAL EXAMINER

EXTERNAL EXAMINER



**ANALYSIS AND SCREENING OF
PHYTOCONSTITUENTS FROM *Boswellia serrata* AS
A POTENTIAL INHIBITOR OF MMP-13 IN
OSTEOARTHRITIS**

A PROJECT REPORT

Submitted by

ARAVIND R (920420UBT012)

JOHN PAUL HUDSON S (920420UBT031)

JEGADEESH M (920420UBT032)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

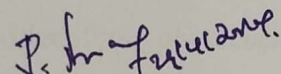
K. VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

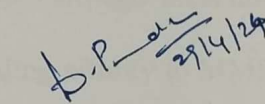
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

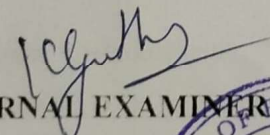
Certified that the project report "ANALYSIS AND SCREENING OF PHYTOCONSTITUENTS FROM *Boswellia serrata* AS A POTENTIAL INHIBITOR OF MMP-13 IN OSTEOARTHRITIS" is the bonafide work of "ARAVIND R (920420UBT012), JOHN PAUL HUDSON (920420UBT031) & JEGADEESH M (920420UBT032)" who carried out the project work under my supervision.

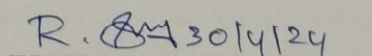

SIGNATURE

Dr. R. Shyam Kumar
Head of the Department,
HOD
Professor
DEPT. OF BIOTECHNOLOGY
Department of Engineering & Technology,
Kamaraj College of Engg. & Tech.,
VIRUDHUNAGAR.
Virudhunagar – 625 701.


SIGNATURE

Dr. D. Pradiba
SUPERVISOR,
Assistant Professor,
Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Virudhunagar – 625 701.


INTERNAL EXAMINER


EXTERNAL EXAMINER



**EVALUATION OF VARIOUS CARBOHYDRATES
AS EXOGENEOUS CARBON SOURCES IN THE
CULTIVATION OF CYANOBACTERIA AND
PRODUCTION OF POLYSACCHARIDES**

A PROJECT REPORT

Submitted by

THILSATH MEERAL S (920420UBT006)

LAMIYA BANU M (920420UBT037)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

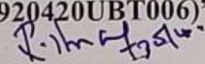
**KAMARAJ COLLEGE OF ENGINEERING AND
TECHNOLOGY**

(An Autonomous Institution- Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "EVALUATION OF VARIOUS CARBOHYDRATES AS EXOGENEOUS CARBON SOURCES IN THE CULTIVATION OF CYANOBACTERIA AND PRODUCTION OF POLYSACCHARIDES" is the bonafide work of "THILSATH MEERAL S (920420UBT006) and LAMIYA BANU M (920420UBT006)" who carried out the project work under my supervision.


SIGNATURE

HOD

DEPT. OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology
VIRUDHUNAGAR
Dr. R. Shyam Kumar
Head of the Department,


Professor,

Dept. of Biotechnology,

Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701.


SIGNATURE

Er. R. Amuthalakshmi,

SUPERVISOR,

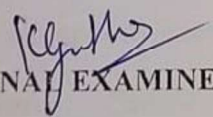
Assistant Professor,

Dept. of Biotechnology,

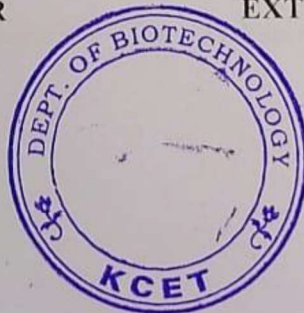
Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701


INTERNAL EXAMINER


EXTERNAL EXAMINER



**A STUDY ON INFLUENCE OF STRESS
COMPONENTS ON THE GROWTH AND
POLYSACCHARIDE PRODUCTIVITY OF
CYANOBACTERIA**

A PROJECT REPORT

Submitted by

RINISHA R (920420UBT029)

VARSHA E (920420UBT038)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

**(An Autonomous Institution - Affiliated to Anna University,
Chennai)**

K. VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University,
Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "A STUDY ON INFLUENCE OF
STRESS COMPONENTS ON THE GROWTH AND
POLYSACCHARIDE PRODUCTIVITY OF CYANOBACTERIA" is
the bonafide work of "RINISHA R (920420UBT029) and VARSHA E
(920420UBT038)" who carried out the project work under my supervision.


SIGNATURE

Dr. R. Shyam Kumar
Head of the Department,
HOD
PROFESSOR OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology
Dept. of Biotechnology,
VIRUDHUNAGAR.

Kamaraj College of Engg & Tech,
K.Vellakulam,
Virudhunagar - 625 701.


INTERNAL EXAMINER


SIGNATURE

Er. R. Amuthalakshmi
SUPERVISOR,

Assistant Professor,
Dept. of Biotechnology,

Kamaraj College of Engg & Tech,
K.Vellakulam,
Virudhunagar - 625 701.


EXTERNAL EXAMINER



WHEY WONDERS: LEVERAGING WHEY FOR GOURMET AND HEALTHY DAIRY PRODUCT FORMULATIONS

A PROJECT REPORT

Submitted by

FAHEEMA THAHASEEN A (920420UBT008)

in partial fulfilment for the award of the degree of

**BACHELOR OF TECHNOLOGY
IN
BIOTECHNOLOGY**



**DEPARTMENT OF BIOTECHNOLOGY
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701**

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "WHEY WONDERS: LEVERAGING WHEY FOR GOURMET AND HEALTHY DAIRY PRODUCT FORMULATIONS" is the bonafide work of "FAHEEMA THAHASEEN A (920420UBT008)" who carried out the project work under my supervision.

[Signature]

SIGNATURE

Dr.R. Shyam Kumar

HOD
Head of the Department
DEPT. OF BIOTECHNOLOGY
Professor, Department of Engineering & Technology
VIRUDHUNAGAR.
Department of Biotechnology,

Kamaraj College of Engg. & Tech.
Virudhunagar - 625701.

[Signature]

SIGNATURE

Er. K. Chitradevi

SUPERVISOR,

Assistant Professor,

Department of Biotechnology,

Kamaraj College of Engg. & Tech.
Virudhunagar - 625701.



[Signature]

INTERNAL EXAMINER

[Signature] 14/12/24

EXTERNAL EXAMINER

A STUDY ON THE IMPACT OF STERILIZATION AND MICROBIAL QUALITY IN FLAVORED MILK TO IMPROVE ITS SHELF LIFE

A PROJECT REPORT

Submitted by

RAVINA R (920420UBT010)

MOULIMONISHAV (920420UBT011)

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution- Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "A STUDY ON THE IMPACT OF STERILIZATION AND MICROBIAL QUALITY OF FLAVOURED MILK TO IMPROVE ITS SHELF LIFE" is the bonafide work of "RAVINA R (920420UBT010) and MOULI MONISHA V (920420UBT011)" who carried out the project work under my supervision.


SIGNATURE

Dr.R.Shyam Kumar

Head of the Department,
HOD

DEPT. OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology
Dept. of Biotechnology
VIRUDHUNAGAR.

Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701.


SIGNATURE

Er.K.Chitradevi

SUPERVISOR,

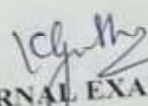
Assistant Professor,

Dept. of Biotechnology,

Kamaraj College of Engg & Tech,

K.Vellakulam,

Virudhunagar - 625 701.


INTERNAL EXAMINER


EXTERNAL EXAMINER



***Lactobacillus* FROM CHILLI STALKS (*capsicum
annuum*) CHARACTERIZATION AND ITS
APPLICATIONS**

A PROJECT REPORT

Submitted by

VAIRAMUTHU P (920420UBT033)

SHANKAR GANESH M V (920420UBT044)

in partial fulfilment for the award of the degree of

**BACHELOR OF TECHNOLOGY
IN
BIOTECHNOLOGY**

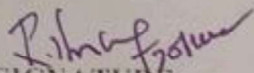


**DEPARTMENT OF BIOTECHNOLOGY
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701
APRIL 2024**

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625701

BONAFIDE CERTIFICATE

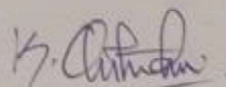
Certified that the project report "*Lactobacillus* FROM CHILLI STALKS (*Capsicum annuum*) CHARACTERIZATION AND ITS APPLICATIONS" is the bonafide work of "P.VAIRAMUTHU (920420UBT033) and M.V. SHANKAR GANESH (920420UBT044)" who carried out the project work under my supervision.


SIGNATURE

Dr.R. Shyam Kumar

Head of the Department,
DEPT. OF BIOTECHNOLOGY
Professor,
Kamaraj College of Engineering & Technology,
Virudhunagar.

Kamaraj College of Engg. & Tech.
Virudhunagar - 625701.


SIGNATURE

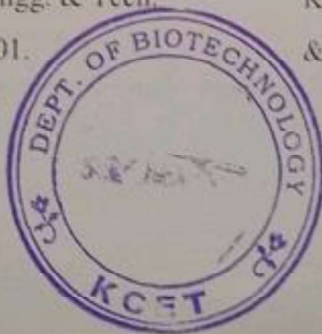
Er.K.Chitra Devi,

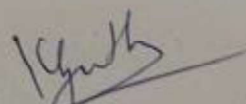
Supervisor,

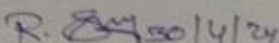
Assistant Professor,

Department of Biotechnology,

Kamaraj College of Engg.
&Tech.Virudhunagar - 625701.




INTERNAL EXAMINER


EXTERNAL EXAMINER

CYANOBACTERIAL EXPLOITATION OF FIREWORK WASTEWATER FOR SUSTAINABLE PRODUCTION OF SECONDARY METABOLITES

A PROJECT REPORT

Submitted by

SIVA SANKARI K (920420UBT005)

MADHUMITHA K (920420UBT018)

YOGASRI M (920420UBT035)

GOWSALYA K (920420UBT040)

in partial fulfillment for the award of the degree of



**BACHELOR OF TECHNOLOGY
IN
BIOTECHNOLOGY**

DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

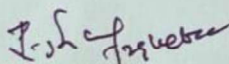
K. VELLAKULAM, VIRUDHUNAGAR - 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution- Affiliated to Anna University, Chennai)
K.VELLAKULAM, VIRUDHUNAGAR - 625 701

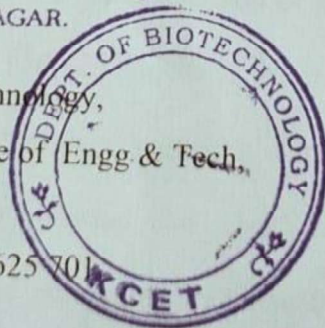
BONAFIDE CERTIFICATE

Certified that the project report "CYANOBACTERIAL EXPLOITATION OF FIREWORK WASTEWATER FOR SUSTAINABLE PRODUCTION OF SECONDARY METABOLITES" is the bonafide work of "SIVA SANKARI K (920420UBT005), MADHUMITHA K (920420UBT018), YOGASRI M (920420UBT035) and GOWSALYA K (920420UBT040)" who carried out the project work under my supervision.

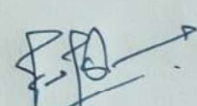

SIGNATURE

Dr. R. Shyam Kumar
DEPT. OF BIOTECHNOLOGY
Head of the Department
Kamaraj College of Engineering & Technology
VIRUDHUNAGAR.
Professor,

Dept. of Biotechnology,
Kamaraj College of Engg & Tech.,
K.Vellakulam,
Virudhunagar - 625 701

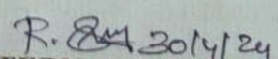



INTERNAL EXAMINER


SIGNATURE

Er. Karl Joseph Samuel
SUPERVISOR,

Assistant Professor,
Dept. of Biotechnology,
Kamaraj College of Engg & Tech,
K.Vellakulam,
Virudhunagar - 625 701.


EXTERNAL EXAMINER

**ANALYSIS OF CHITINASE-3 LIKE PROTEIN 1(CHI3L1) GENE
EXPRESSION IN BUFFALO OOCYTES, IN VITRO GENERATED
EMBRYOS AND CUMULUS CELLS**

A PROJECT REPORT

Submitted by

M.S.DEEJITH NAATIYAAL(920420UBT019)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR – 625 701

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR – 625 701

BONAFIDE CERTIFICATE

Certified that the project report “ANALYSIS OF CHITINASE-3 LIKE PROTEIN 1(CHI3L1) GENE EXPRESSION IN BUFFALO OOCYTES, IN VITRO GENERATED EMBRYOS AND CUMULUS CELLS” is the bonafide work of M.S.DEEJITH NAATIYAAL(920420UBT019) who carried out the project work under my supervision.

R. Shyam Kumar
SIGNATURE

Dr. R. Shyam Kumar

Head of the Department,

HOD
DEPT. OF BIOTECHNOLOGY

Professor,
Department of Biotechnology

Kamaraj College of Engg. & Tech.

Virudhunagar – 625 701.

Er. A. Ganga
SIGNATURE

Er. A. Ganga

SUPERVISOR,

Assistant Professor,

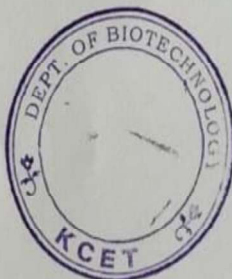
Department of Biotechnology,

Kamaraj College of Engg. & Tech.

Virudhunagar – 625 701.

K. S. Deejith
INTERNAL EXAMINER

R. S. Deejith
EXTERNAL EXAMINER



INVESTIGATION OF SCOPOLETIN FROM *Solanum trilobatum* FOR ITS EFFICACY AGAINST CHRONIC RHINOSINUSITIS WITH NASAL POLYPS (CRS_wNP)

A PROJECT REPORT

Submitted by

BENITA MARGARET L (920420UBT016)

NITHYASREE A (920420UBT022)

VARSHINIRAJI P (920420UBT023)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR – 625 701

APRIL 2024

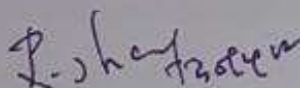
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, VIRUDHUNAGAR – 625 701


BONAFIDE CERTIFICATE

Certified that the project report “**INVESTIGATION OF SCOPOLETIN FROM *Solanum trilobatum* FOR ITS EFFICACY AGAINST CHRONIC RHINOSINUSITIS WITH NASAL POLYPS (CRSwNP)**” is the bonafide work of “**BENITA MARGARET L (920420UBT016), NITHYASREE A (920420UBT022)** and **VARSHINIRAJI P (920420UBT023)**” who carried out the project work under my supervision.


SIGNATURE

Dr. R. Shyam Kumar
HOD
Head of the Department,
Kamaraj College of Engineering & Technology
Virudhunagar

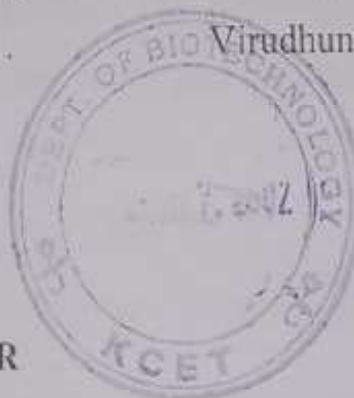
Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Virudhunagar – 625 701.

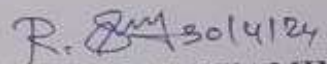

SIGNATURE

Er. A. Ganga
SUPERVISOR,
Assistant Professor,

Department of Biotechnology,
Kamaraj College of Engg. & Tech.
Virudhunagar – 625 701.


INTERNAL EXAMINER




EXTERNAL EXAMINER

SPAWN PRODUCTION

A PROJECT REPORT

Submitted by

AASIF HUSSAIN (920420UBT047)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY

DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, NEAR VIRUDHUNAGAR – 625 701

APRIL 2024



KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

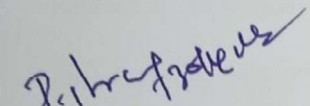
(An Autonomous Institution - Affiliated to Anna University, Chennai)

K. VELLAKULAM, NEAR VIRUDHUNAGAR – 625 701

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K. VELLAKULAM, NEAR VIRUDHUNAGAR – 625 701

BONAFIDE CERTIFICATE

Certified that the project report “**SPAWN PRODUCTION**” is the bonafide work of “**AASIF HUSSAIN (920420UBT047)**” who carried out the project work under my supervision.


SIGNATURE

Dr. R. Shyam Kumar

Professor

Head of the Department,

Department of Biotechnology,

Kamaraj College of Engg. & Tech.

Virudhunagar – 625 701.


SIGNATURE

Er. K. Chitradevi

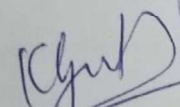
SUPERVISOR,

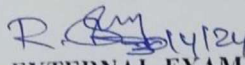
Associate professor,

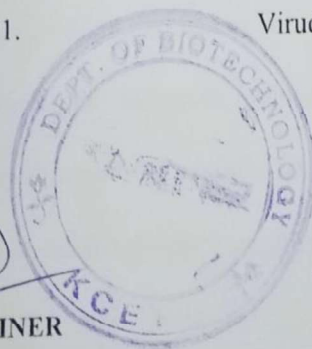
Department of Biotechnology,

Kamaraj College of Engg. & Tech.

Virudhunagar – 625 701.


INTERNAL EXAMINER


EXTERNAL EXAMINER



Subject Code & Name

: MB1321 Project Phase - I

Class & Year

: II Year M. Tech. Biotechnology

Semester : III

S.No	Name	Reg.No	Title	
1	ANNALAKSHMI.N	920422509001	ISOLATION OF CELLS FROM NON-FILTERING REGION OF HUMAN TRABECULAR MESHWORK AND CONFIRMATION OF THE PRESENCE OF STEM CELLS BY IMMUNOSTAINING	Dr. D. Pradiba
2	AREEF SULAIMAN.M	920422509002	DOWNSTREAM PROCESSING OF THERAPEUTIC PROTEINS - PURIFICATION OF MONOCLONAL ANTIBODIES	Dr.R.Shyam Kumar
3	MONIKA.A	920422509003	PRELIMINARY QUALITATIVE ANALYSIS ON DETECTION OF ANOMALY IN AGRICULTURAL DOMAIN WITH REFERENCE TO META COMPETENCY FACTORS	Dr.S.Karthikumar

P.j.harf
Project co-ordinator

P.j.harf
1400/13T



**ISOLATION OF CELLS FROM NON-FILTERING
REGION OF HUMAN TRABECULAR MESHWORK AND
CONFIRMATION OF THE PRESENCE OF STEM
CELLS BY IMMUNOSTAINING**

PHASE I REPORT

Submitted by

N.ANNALAKSHMI (920422509001)

in partial fulfillment for the award of the degree of

MASTER OF TECHNOLOGY

IN

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY



DEPARTMENT OF BIOTECHNOLOGY

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 626 001

NOVEMBER 2023

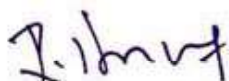
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution- Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 626 001

BONAFIDE CERTIFICATE

Certified that the project report "ISOLATION OF CELLS FROM NON-FILTERING REGION OF HUMAN TRABECULAR MESHWORK AND CONFIRMATION OF THE PRESENCE OF STEM CELL BY IMMUNOSTAINING" is the bonafide work of N.ANNALAKSHMI (920422509001) who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Dr.R.Shyam Kumar

Head of the Department,

Dept. of Biotechnology,

DEPT. OF BIOTECHNOLOGY

Kamaraj College of Engg&Tech,

K.Vellakulam,

Virudhunagar - 626 001.



Dr.D.Pradiba

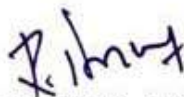
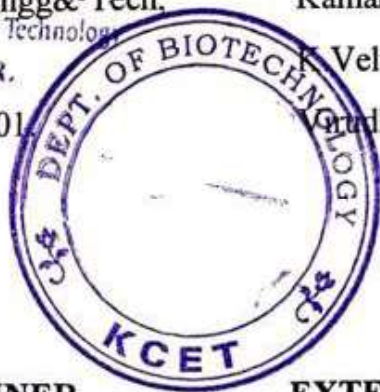
Internal Supervisor,

Dept of Biotechnology

Kamaraj College of Engg&Tech,

K.Vellakulam,

Virudhunagar - 626 001.



INTERNAL EXAMINER



EXTERNAL EXAMINER

PERFORMANCE COMPARISON OF PROTEIN A AFFINITY RESINS FOR THE PURIFICATION OF MONOCLONAL ANTIBODIES

A THESIS

Submitted by

AREEF SULAIMAN M (920422509002)

in partial fulfilment for the award of the degree of

**MASTER OF TECHNOLOGY
IN
BIOTECHNOLOGY**



**DEPARTMENT OF BIOTECHNOLOGY
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)
K. VELLAKULAM, VIRUDHUNAGAR - 625 701**

APRIL 2024

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution- Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 625 701

BONAFIDE CERTIFICATE

Certified that the project report "PERFORMANCE COMPARISON OF PROTEIN A RESINS FOR THE PURIFICATION OF MONOCLONAL ANTIBODIES" is the bonafide work of M. AREEF SULAIMAN (920422509002) who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

P. Shyam

SIGNATURE

Dr. R. Shyam Kumar

DEPT. OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology
Professor,
VIRUDHUNAGAR.

Dept. of Biotechnology,
Kamaraj College of Engg & Tech,
K.Vellakulam,
Virudhunagar - 625 701.

P. Shyam

SIGNATURE

Dr. R. Shyam Kumar

INTERNAL SUPERVISOR,

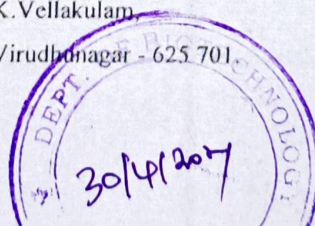
Professor,

Dept. of Biotechnology,

Kamaraj College of Engg & Tech,

K.Vellakulam

Virudhunagar - 625 701



Deepak
25/04/2024

SIGNATURE

Kanjwani Deepak

EXTERNAL

SUPERVISOR,

Lead Investigator,

Biopharmaceutical

Development,

Syngene International Ltd.

Bangalore - 560 099.

P. Suganya

INTERNAL EXAMINER

P. Suganya
30/4/24

EXTERNAL EXAMINER

R. SUGANYA, API/BI

PSREC, SVLC.

**PRELIMINARY QUALITATIVE ANALYSIS ON
DETECTION OF ANOMALY IN AGRICULTURE
DOMAIN WITH REFERENCE TO META
COMPETENCY FACTORS**

PHASE I REPORT

Submitted by

MONIKA A(920422509003)

in partial fulfillment for the award of the degree of

MASTER OF TECHNOLOGY

IN

KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BIOTECHNOLOGY



**KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution - Affiliated to Anna University, Chennai)**

K.VELLAKULAM, VIRUDHUNAGAR - 626 001

NOVEMBER 2023

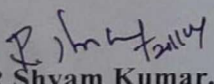
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution- Affiliated to Anna University, Chennai)

K.VELLAKULAM, VIRUDHUNAGAR - 626 001

BONAFIDE CERTIFICATE

Certified that the project report "PRELIMINARY QUALITATIVE ANALYSIS ON DETECTION OF ANOMALY IN AGRICULTURE DOMAIN WITH REFERENCE TO META COMPETENCY FACTORS" is the bonafide work of A. MONIKA (920422509003) who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


Dr. R. Shyam Kumar,

Head of the Department,

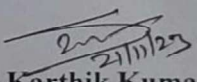
Professor

Dept. of Biotechnology,

Kamaraj College of Engg & Tech,

K. Vellakulam,

Virudhunagar - 626 001.


Dr. S. Karthik Kumar,

Supervisor,

Associate Professor

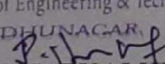
Dept of Biotechnology

Kamaraj College of Engg & Tech,

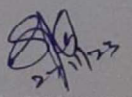
K. Vellakulam,

Virudhunagar - 626 001.

HOD
DEPT. OF BIOTECHNOLOGY
Kamaraj College of Engineering & Technology
VIRUDHUNAGAR


INTERNAL EXAMINER

F.16.2


EXTERNAL EXAMINER

Department of Biotechnology

Consolidated Mark Statement – Internship

Class: III B.Tech Biotechnology

Regulation: R2021

2023-2024: ODD Semester

S.No.	Roll Number	Register Number	Name of Student	Total (100)*
1	21UBT001	920421214035	SANTHOSH KAVERI.S.R	93
2	21UBT002	920421214005	ARUN PRASANTH.D	87
3	21UBT003	920421214015	HARINI.M	88
4	21UBT004	920421214011	DIVYA JOTHI.K	97
5	21UBT005	920421214003	ANANTHAKANNAN.V	88
6	21UBT006	920421214025	GAJALAKSHMI.K	89
7	21UBT007	920421214033	SABARI RAJ.B	89
8	21UBT008	920421214038	SHAMYUKTHA.T	97
9	21UBT009	920421214007	BAVADHARSHINI.K	95
10	21UBT010	920421214039	SIVA GANESH.S	88
11	21UBT011	920421214016	HARINI.T	91
12	21UBT012	920421214022	MADHUMITHA.S	91
13	21UBT013	920421214009	DHARSHAN.K	93
14	21UBT014	920421214020	JAYA SUBHASH	89
15	21UBT015	920421214008	DEEPIKA.S	88
16	21UBT016	920421214001	ABINAYA.M	89
				88
17	21UBT017	920421214026	NITHYA SHREE.J	94

18	21UBT018	920421214045	SWETHA.V	93
19	21UBT019	920421214012	FEMINA FATHIMA.A	88
20	21UBT021	920421214027	POOJA.C	90
21	21UBT022	920421214040	SORNAMALA RAMYA.K	89
22	21UBT023	920421214028	PRAVEEN.J	89
23	21UBT024	920421214049	YOGADHARSHAN.S	88
24	21UBT025	920421214048	YAKGNADEVI.M	95
25	21UBT026	920421214006	BALA PRIYA.V	93
26	21UBT027	920421214037	SHALINI.S	91
27	21UBT029	920421214047	VIJAYASHREE.V	92
28	21UBT030	920421214002	ADARSIYA.J	96
29	21UBT031	920421214034	SANMITAA.S	92
30	21UBT032	920421214044	SUJITHA.R	95
31	21UBT033	920421214036	SASI BALAN.M	88
32	21UBT034	920421214043	SUJA ULAGASHREE.K	93
33	21UBT035	920421214029	PRIYADHARSHINI.S	93
34	21UBT036	920421214014	HARI KRISHNAN.A.M	92
35	21UBT037	920421214017	HARSHITHA.S	89
36	21UBT038	920421214024	MITHUGANESH.S	91
37	21UBT039	920421214004	ANIS FATHIMA.S	89
38	21UBT040	920421214043	JAYASREE.A	93
39	21UBT042	920421214023	MOHANA KANNA.N	91
40	21UBT043	920421214018	JANA SRITHAN.S	89
41	21UBT044	920421214021	KRISHA.K.S	92
42	21UBT045	920421214046	UDITH SARAN.N	88
43	21UBT046	920421214032	RINITA JONELLIA.A	95
44	21UBT047	920421214031	RIDHU VARSHINI.T.S	86

45	21UBT048	920421214030	PRIYANGKA.S	91
46	21UBT049	920421214025	NANDHINI.G	94

K. Chithra
Signature of Internship Incharge

J. Ince
Signature of HoD

N. S. - Sar
16/10/23
Signature of Dean (Academic Courses)

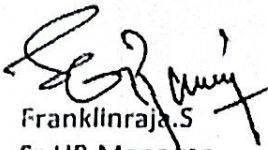
28th June 2023

To whom so ever it may concern

This is to certify that Mr. Santhosh Kaveri.S.R. B.Tech student of Kamaraj College of Engineering and Technology has undergone an internship in Pharmaceutical department of our organization during 14th June 2023 to 28th June 2023.

We wish him all success in his future endeavors.

For Aurolab,



Franklinraja.S
Sr.HR Manager



National Award
for Excellence

JEYPEE BIOTECHS Farm to Fork System

Regd. Office : 2/527, East Street, Kulloorchandai, Virudhunagar - 626 053.
www.jeypeefarm.com jeypeebio@gmail.com Ph : 94431 42328



Sows Sustainability

Certificate Of Internship

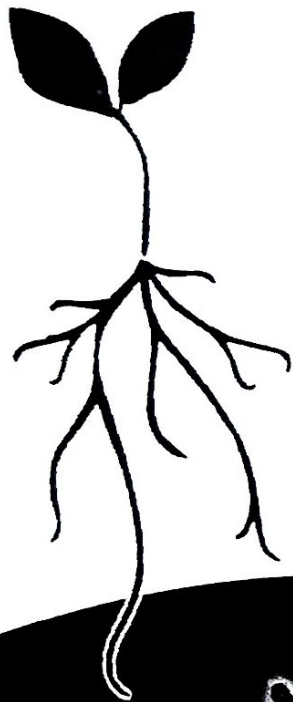
This is to certify that

D. ARUN PRASANTH 21UBT002

III year B.Tech Biotechnology Student


of Kamaraj College of Engineering & Technology, Virudhunagar
has undergone Internship on Designing a Cottage Fermentor
in our facility at Jeyppee Farm, Kullursanthai

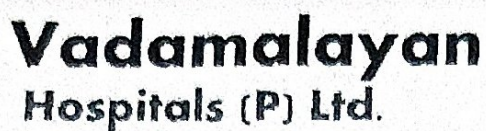
from June 15, 2023 to June 30, 2023



Virudhunagar
01.07.2023




R. Palaneeswar
CEO - Jeyppee BiotechS



2129010104
 July 27, 2022 - July 27, 2022
 From July 27, 2022

10/07/2023

Training Certificate

This is to certify that Ms. HARINI M, Reg No:920421214015, III Year, B.Tech (Bio Technology), Kamaraj College of Engineering and Technology, Virudhunagar, has undergone observation training at Laboratory & Blood Bank Department our Vadamalayan MultiSpeciality Tertiary Care Hospitals, Madurai from 26/06/2023 to 10/07/2023. During the aforementioned period her attendance and conduct was found good.

We wish her all the best in her future endeavors.

Dr.V.Pugalagiri

(Chairman & Managing Director)



15 / 1, Jawahar Road, Chokkikulam, Madurai - 625 002. Ph : 0452 3545400, 2545400 (100 Lines) 4361022, 4361033
9A, Vallabhai Road, Chokkikulam, Madurai - 625 002. Fax: +91 452 2522225
enquiries@vadamalayan.org, www.vadamalayan.org
For Emergency: 0452 250 1033

25809



AGRO FOOD TRADE CENTRE

(formerly TAMILNADU FOODGRAINS MARKETING YARD)

[Special Purpose Vehicles of Cereals, Pulses & Staples (CPS) Cluster]

Industrial Infrastructure Upgradation Scheme

Ministry of Commerce and Industry, Govt. of India.

Sikkandar Chavadi, MADURAI- 625 018.

TRAINING CERTIFICATE

This is to certify that Ms.K.DIVYA JOTHI a student of B.Tech- Bio Technology Department, Kamaraj College of Engineering & Technology, Virudhunagar has completed the Hands-on Training of "Nutritional Analysis of Food Products, Grain Processing Technology (Laboratory level), Quality Analysis Of Edible Oil, Spices, Jaggery & Sugar Product" organized by Agro Food Trade Centre from 12.06.2023 to 12.07.2023 at Food Products Analytical Laboratory and Research Centre (NABL accredited), Agro Food Trade Centre, Sikkandar Chavadi, Madurai-625 018.

DR.K.SINGARAVADIVEL

Independent Director & Former Director of NIFTEM-T
(Ministry of Food Processing Industries-GOI.)

K.SURESHKUMAR

Executive Director

S.RETHINAVELU

Founder and CMD



National Award
for Excellence

JEYPEE BIOTECHS Farm to Fork System

Regd. Office : 2/527, East Street, Kulloorchandal, Virudhunagar - 626 053.
www.jeypeefarm.com jeypeeblo@gmail.com Ph : 94431 42328



Sows Sustainability

Certificate Of Internship

This is to certify that

V. ANANTHAKANNAN 21UBT005

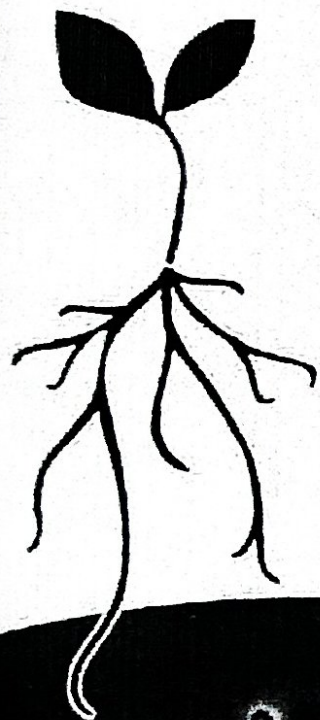
III year B.Tech Biotechnology Student

of Kamaraj College of Engineering & Technology, Virudhunagar

has undergone Internship on Designing a Cottage Fermentor

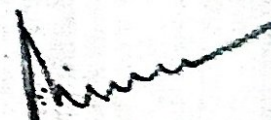
in our facility at Jeyppee Farm, Kullursanthai

from June 15, 2023 to June 30, 2023



Virudhunagar
01.07.2023




R. Palaneaswar
CEO - Jaypee BiotechS

Scanned by TapScanner

Date: 23.12.2022

CERTIFICATE

This is to certify that **Ms. K. Gajalakshmi** Second Year B.Tech. (Bio- Technology) student of **Kamaraj College of Engineering and Technology, Madurai** has undergone **Internship Program** for the period from 19.12.2022 to 23.12.2022. She has been regular in her attendance during this period.

She has gained Good Knowledge in all aspects of the Company during her Internship Program.

WE WISH HER ALL SUCCESS.

For BG Crop Science & Technologies (P) Ltd.,



Winny Irwin Jose
(Chief Executive Officer)

E mail : patwaribakersmdu@gmail.com



Patwari Bakers Pvt. Ltd.

FACTORY Plot No. B-2 SIDCO Industrial Estate Kappur Mathura, 025 008 Ph. (0562) 2482148, 0452148, 0452149 Tel Fax 2488010
REGD OFFICE B-3 SBI2 Narveshima Hyderabad 500 001 Ph. (040) 24616384

DATE:18.07.2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.B.SABARI RAJ**
(Roll No 21UBT007) 3rd year B.Tech Bio Technology,Kamaraj College
Of Engineering and Technology,K.Vellakulam,Virudhunagar has
successfully completed 15 days of an Internship training at Patwari
Bakers Pvt. Ltd. Madurai during the period from 04.07.23 to 18.07.23

During the above, we found that he was
consistent,honest,and diligent in his assigned duties and responsibilities.

We wish him great success in his future endeavours.

With regards,

For Patwari Bakers Pvt Ltd

Authorized Signatory





FLEMING LABORATORIES LIMITED

Plot No. 131, Ground Floor, Green Park Avenue,
Behind Hotel Surabhi Pride, (Near Suchitra Junction),
Jeedimetla, Hyderabad - 500 067: Telangana
Land Line No. : 040-27235851/2/3
Phone No. : 9666858013 / 9666857664
CIN : U24230TG1992PLC014560
GSTIN : 36AAACF3245M1ZK

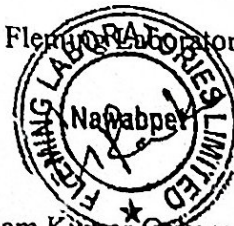
Date:08/07/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Miss.T.Samyuktha (Roll No. 21UBT008 of B.Tech. Biotechnology in Kamaraj College of Engineering and Technology-Tamilnadu) successfully completed her Internship in Quality Control department (trained on HPLC, Wet Lab, Micro biology, Stability & GC) as part of her internship with our organization from 9th June, 2023 to 8th July, 2023-and was provided a Stipend.

During this period she has shown a very good attitude towards learning and exhibited good behavior.

For Fleming Laboratories Ltd.



Ram Kumar Gokarnesan,
Chief Operation's Officer.



Vadamalayan
Hospitals (P) Ltd.



VMH/HR/Training/2023/247

10/07/2023

Training Certificate

This is to certify that Ms. BAVADHARSHINI K, Reg No:920421214007, III Year, B.Tech (Bio Technology), Kamaraj College of Engineering and Technology, Virudhunagar, has undergone observation training at Laboratory & Blood Bank Department our Vadamalayan MultiSpeciality Tertiary Care Hospitals, Madurai from 26/06/2023 to 10/07/2023. During the aforementioned period her attendance and conduct was found good.

We wish her all the best in her future endeavors.


Dr.V.Pugalagiri

(Chairman & Managing Director)



National Award
for Excellence

JEYPEE BIOTECHS **Farm to Fork System**

Regd. Office : 2/527, East Street, Kulloorchandai, Virudhunagar - 626 053.
www.jeypeeefarm.com jeypeebio@gmail.com Ph : 94431 42328



Sows Sustainability

Certificate Of Internship

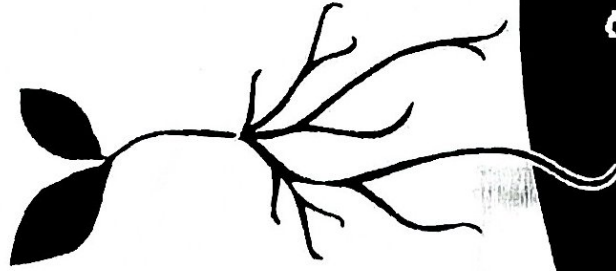
This is to certify that

S. SIVA GANESH 21UBT010

III year B.Tech Biotechnology Student

of Kamaraj College of Engineering & Technology, Virudhunagar
has undergone Internship on Designing a Cottage Fermentor
in our facility at Jeyppee Farm, Kullursanthai

from June 15, 2023 to June 30, 2023



Virudhunagar
01.07.2023



R. Palaneeswar
CEO - Jeyppee Biotechs

Date:08/07/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Miss.T.Harini (Roll No.21UBT011 of B.Tech. Biotechnology in Kamaraj College of Engineering and Technology-Tamilnadu) successfully completed her Internship in Quality Control department (trained on HPLC, Wet Lab, Micro biology, Stability & GC) as part of her internship with our organization from 9th June, 2023 to 8th July, 2023 and was provided a Stipend.

During this period she has shown a very good attitude towards learning and exhibited good behavior.

For Fleming Laboratories Ltd.



Ram Kuntla Chokarnesan,

Chief Operation's Officer.



FLEMING LABORATORIES LIMITED

Plot No. 131, Ground Floor, Green Park Avenue,
Behind Hotel Surabhi Pride, (Near Suchitra Junction),
Jeelimeeta, Hyderabad - 500 067, Telangana
Land Line No. : 040-27235851/2/3
Phone No. : 9666858013 / 9666857664
CIN : U24230TG1992PLC014560
GSTIN : 36AAACF3245M1ZK

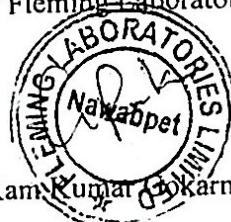
Date:08/07/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Miss.S.Madhumitha (Roll No. 21UBT012 of B.Tech. Biotechnology in Kamaraj College of Engineering and Technology-Tamilnadu) successfully completed her Internship in Quality Control department (trained on HPLC, Wet Lab, Micro biology, Stability & GC) as part of her internship with our organization from 9th June, 2023 to 8th July, 2023 and was provided a Stipend.

During this period she has shown a very good attitude towards learning and exhibited good behavior.

For Fleming Laboratories Ltd.



Ram Kumar Gokarnesan,
Chief Operation's Officer.

Certificate of Training

Name: K. DHARSAN, B.Tech (Biotechnology) (21UBT013)

Has Completed the **AGRO INDUSTRIAL** Tie-up Training Programme

From: 26th June 2023 To 12th July 2023

And is Awarded This Certificate By

AGRIYA-AGRO TECH
MADURAI

Date: 12/07/2023

M. Shanmuga Sundaram
M. Shanmuga Sundaram (General Manager)



Patwari Bakers Pvt. Ltd.

FACTORY : Plot No. B 2, SIDCO Industrial Estate, Koppalur, Madurai - 625 008. Ph : (0452) 2482148, 8452148, 8452149 Tel. Fax : 2488010

REGD. OFFICE : 5-5-56/2, Darussalam, Hyderabad - 500 001. Ph : (040) 24016384

DATE:18.07.2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.S.JAYASUBASH**
(Roll No 21UBT014) 3rd year B.Tech Bio Technology, Kamaraj College
Of Engineering and Technology, K. Vellakulam, Virudhunagar has
successfully completed 15 days of an Internship training at **Patwari
Bakers Pvt. Ltd. Madurai** during the period from 04.07.23 to 18.07.23

During the above, we found that he was
consistent, honest, and diligent in his assigned duties and responsibilities.

We wish him great success in his future endeavours.

With regards,

For Patwari Bakers Pvt Ltd

Authorized Signatory





medopharm

medopharm pvt ltd

www.medopharm.com

email: info@medopharm.com

Date: 18th July, 2023.

To whomsoever it may concern

We are glad to inform you that **Ms. Deepika.S** - B.Tech(Biotechnology) studying in **Kamaraj College of Engineering and Technology** has successfully completed her internship from 03.07.2023 to 17.07.2023.

During her internship, she was trained on various activities. Her core area of training was on Regulatory Affairs Department.

We found her extremely inquisitive and hardworking. She was very much interested to learn the functions and core divisions, her best efforts were get into the depth of the subject to understand it better.

Her association with us was very fruitful and we wish her all the best in her future endeavors.

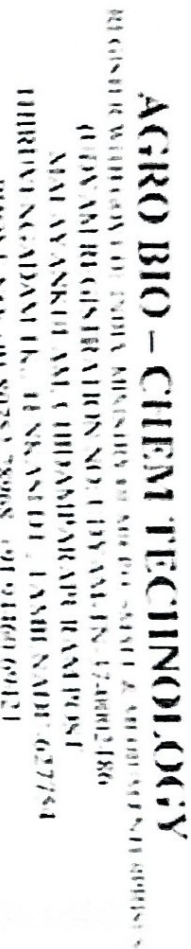
N. Mahesh

18/07/2023



REGISTERED OFFICE : "MEDO HOUSE", # 25, Pullyur, IInd Main Road, Trusipuram,
Chennai - 600 024, Tamilnadu, India.
Unit 1 : # 50, Kayarambedu Village, Guduvanchery - 603 202, Tamilnadu, India.
Unit 2 : # 34-B, Industrial Area, Malur - 563160, Karnataka, India.
CIN : U15100TN1980PTC008206

Ph. : +91-44-4014 9999
Ph. : +91-44-27438449/50/60/70
Ph. : +91-8151-232307



Internship-03-3/2023

Date: 05.07.2023

TO WHOM IT MAY CONCERN

This is to certify that **Miss Abinaya. M (Roll No: 21UBT016)** second year student of **B.Tech Biotechnology** in **Kamaraj College Of Engineering & Technology** (An Autonomous institution affiliated to Anna University, Chennai) has successfully completed fourteen days (From 9th June 2023 to 23rd June 2023) in plant training at **M/s. Agro Bio-Chem Technology, Malayankulam**. During the period of her internship programme with us she was found to be punctual and inquisitive.

**Chief Executive Officer
For Agro Bio - Chem Technology**



icmr | **NIRT**
INDIAN COUNCIL OF
MEDICAL RESEARCH | NATIONAL INSTITUTE FOR
RESEARCH IN TUBERCULOSIS

CERTIFICATE OF ATTENDANCE

This is to certify that Ms. Nithya shree, J., B. Tech., Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar, Tamil Nadu has successfully completed the internship from 18/07/2023 to 01/08/2023 in the Department of Bacteriology, ICMR-National Institute for Research in Tuberculosis, Chennai – 600031.

Dr. S. Sivakumar
Scientist D and Head
Department of Bacteriology

Dr. C. Padmapriyadarisini
Director

Fourrts

(India) Laboratories Pvt. Limited

Plant 1 : Vandalur - Kelambakkam Road, Kelambakkam - 603 103, Chengalpattu District, Tamil Nadu, India.

Phone : 91-44-4740 4310 E-mail : fourrts@plant fourrts.com website : www.fourrts.com

Ref.: FIN/HR/2023

Date: 22/06/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms.V.SWETHA, studying Biotechnology from Kamaraj College of Engineering and Technology, Virudhunagar, pincode -626001, has completed his/her Intern ship training in our Organization from 07/06/2023 to 22/06/2023 (104 hrs).

During the Course of his/her training period with us he/she was found to be sincere and regular.

We wish him/her all success in his/her future endeavours.

for FOURRTS (INDIA) LABORATORIES PVT LTD.,

(J SRINIVASSAN)

Sr.VICE PRESIDENT -HR&GA



Corporate Office : No. 1, Fourrts Avenue, Annai Indra Nagar, Okkiyam Thoraipakkam, Chennai-600097, India.
Phone : 91-44-4344 1880 E-mail : admin@fourrts.com



Date: 21.07.2023

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN

This is to certify that A. FEMINA FATHIMA (Reg. No. 21UBT019) doing B.Tech (Bio Technology) of The Kamaraj collage of Engineering has undergone Internship Training for the period from 21.06.2023 to 05.07.2023 in our organization. We found her conduct is good during the tenure.

For ENZYMCO PRIVATE LIMITED

(MANAGER - QUALITY ASSURANCE)



ENZYMCO PRIVATE LIMITED

Registered Office: # 3, VP Sannathi Street, Srivilliputhur - 626 125, India
Factory 1 & Admin Office : SF No. : 6/170-A, Naltarmangalam, Amathur (PO), Virudhunagar - 626 005, India
Factory 2: # 395, Lakshmi Nagar, SIDCO Industrial Estate, Coimbatore - 641 050, India

GSTIN: 33AAJCP9296P1ZE

IE Code: AAJCP9296P

CIN Number: U15140TN2018PTC123207

www.enzymco.in | Email: vk@enzymco.in | Ph: +91 9487603999



BOOMA NURSING HOME

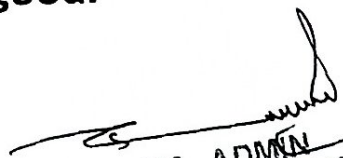
MULTI SPECIALITY CENTRE

Reg. No. J.M.2487

Date: 03.07.2023

Certificate

This is to certify that Miss.C.Pooja Roll No. 21UBT021 a II year Student of B.Tech.,Biotechnology, Kamaraj College of Engineering & Technology, Madurai has taken practical training in the department of Booma laboratory for two weeks from 16-06-2023 to 30-06-2023. She is regular in her training and her concept and interest was good.


GM - ADMIN
BOOMA NURSING HOME
22, Gokhale Road,
Madurai - 625 002



AGRO BIO - CHEM TECHNOLOGY

REGISTER WITH GOVT OF INDIA, MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES

(UDYAM REGISTRATION NO: UDYAM-TN-37-0002486)

MALAYANKULAM, CHIDAMPARAPURAM POST

THIRUVENGADAM TK., TENKASI DT., TAMILNADU-627754

PHONE NO: +91 80752 28968, +91 94460 69421

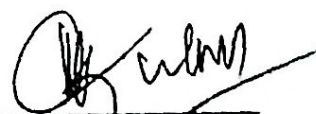
E. MAIL: abetorganic@gmail.com, cmkpfact@gmail.com

Internship-03-2/2023

Date:05.07.2023

TO WHOM IT MAY CONCERN

This is to certify that **Miss Sornamala Ramya. k (Roll No:21UBT022)** second year student of B.Tech Biotechnology in Kamaraj College Of Engineering & Technology (An Autonomous institution affiliated to Anna University, Chennai) has successfully completed fourteen days (From 9th June 2023 to 23rd June 2023) in plant training at **M/s. Agro Bio-Chem Technology, Malayankulam**. During the period of her internship programme with us she was found to be punctual and hardworking.



Chief Executive Officer
For Agro Bio - Chem Technology



Meenakshi Mission Hospital
& Research Centre
Madurai



03.07.2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. J. Praveen**, pursuing **2nd Year B.Tech.(Biotechnology)** at **Kamaraj College of Engineering and Technology, Virudhunagar** has undergone training in the Department of **Biomedical** in our institution from **19.06.2023 to 03.07.2023**.

During the above period, his involvement in the above subject was **good**.


K. Vivek Chandran
Senior Manager - HR



Annakkili Amma Research Institute (AARI)

"Educate, Encourage and Promote Algal Science"

936, Mridula Nivas, Sivaram Avenue, Sivagami Nagar, Medavakkam, Chennai- 600 100, Tamil Nadu.
Phone: 044 4551 4364 :: E-mail: aari.tamilnadu@gmail.com Website: www.aaribioscience.com

CERTIFICATE



This is to certify that
Mr. YOGA DHARSHAN S.,

Department of Biotechnology,

Kamaraj College of Engineering and Technology,

has undergone a hands on training program on

"Microbial Techniques for a period of

Fifteen Days from 15/06/2023 to 02/07/2023.

During this period, He/ She has acquired much theoretical
& practical knowledge regarding Microbial Techniques.

His/Her performance during the training was Good.

"I wish all success in his/her future endeavor".



Perumal
Dr. U. Elaya Perumal
Chief Scientist

Registration No: AARI-081/2023

Date:08/07/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Miss. M.Yakgna Devi (Roll No. 21UBT025 of B.Tech Bio-technology in Kamaraj College of Engineering and Technology, Tamil Nadu) successfully completed her Internship in Quality Control department. She was trained on basics of HPLC, Wet Lab, Microbiology lab, Stability & GC Lab as part of her internship with our organization from 09/06/2023 to 08/07/2023 and was provided a Stipend.

During this period she has shown a very good attitude towards learning and exhibited good behavior.

For Fleming Laboratories Ltd.



Ram Kumar Gokarnesan,

Chief Operation's Officer.

Date:08/07/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Miss. V. Bala Priya (Roll No. 21UBT026 of B.Tech. Biotechnology in Kamaraj College of Engineering and Technology-Tamilnadu) successfully completed her Internship in Quality Control department (trained on HPLC, Wet Lab, Micro biology, Stability & GC) as part of her internship with our organization from 9th June, 2023 to 8th July, 2023 and was provided a Stipend.

During this period she has shown a very good attitude towards learning and exhibited good behavior.

For Fleming Laboratories Ltd.



Ram Kumar Gokarnesan,
Chief Operation's Officer.

MADURAI DISTRICT COOPERATIVE MILK PRODUCERS' UNION LTD:
MADURAI-20.

Ref.No.5442/Pers.2/2021

Date: 04.07.2023

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN.

This is to certify that S.Shalini (Reg.No. 21UBT027) doing B.Tech(Bio technology) of The kamaraj collage of Engineering has undergone Internship Training for the period from 12.06.2023 to 27.06.2023 in our organization. We found her conduct is good during the tenure.

Asst.General Manager (Admin)

04/7/23



Ref: VMCH/HR/1176/2023

Date: 12/07/2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms.V.Vijayashree (21UBT029), B.Tech (Biotechnology), Kamaraj College of Engineering & Technology, Virudhunagar, has completed her Internship from 07.06.2023 to 06.07.2023 at Velammal Medical College Hospital & Research Institute, Madurai - 625009.

We wish all the best for her better future.



Dean

Prof. T. THIRUNAVUKKARASU, M.D.,
Dean
Velammal Medical College Hospital
and Research Institute
"Velammal Village"
Madurai-Tuticorin Ring Road
Anuppanadi, Madurai-625 009, T.N.

"Velammal Village", Madurai - Tuticorin Ring Road, Anuppanadi, Madurai - 625 009,
Tamil Nadu, India. Tel : +91 452 2510000. Fax : +91 452 2510010. Toll Free No. 1800 425 00108
E-mail : info@velammalmedicalcollege.edu.in Web : www.velammalmedicalcollege.edu.in

An Initiative of Velammal Educational Trust



*Summer Research Fellowship Programme
Certificate*

*This is to certify that Ms J Adarsiya worked on a project entitled
"Studies on valorization of Date Palm waste" during June - July
2023 as a Summer Research Fellow under the supervision of
Prof. Shahid A. Abbasi, Pondicherry University, Puducherry. The
Summer Research Fellowship Program is jointly sponsored by IASc
(Bengaluru), INSA (New Delhi) and NASI (Prayagraj).*



Place: Bengaluru

Date: 12-09-2023

P. K. Das

Chairman, Science Education Panel

INDIAN ACADEMY OF SCIENCES, C. V. RAMAN AVENUE, POST BOX No. 8005,
RAMAN RESEARCH INSTITUTE CAMPUS, SADASHIVANAGAR P.O.,
BENGALURU 560 080, INDIA

MADURAI DISTRICT COOPERATIVE MILK PRODUCERS' UNION LTD:
MADURAI-20.


Ref.No.5442/Pers.2/2021


Date:04.07.2023

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN.

This is to certify that S.Sanmitaa (Reg.No. 21UBT037) doing B.Tech(Bio technology) of The kamaraj collage of Engineering has undergone Internship Training for the period from 12.06.2023 to 27.06.2023 in our organization. We found her conduct is good during the tenure.


Asst.General Manager (Admin)


04/7/23


04/7/23





Date:17.07.2023

Sub: Students attendance and Internship training certificate

Respected Sir/Mam,

This is to certify that Ms. SUJITHA R (21UBT032) pursuing 2nd year B. TECH. (Bio Technology) at Kamaraj College of Engineering & Technology, she has successfully completed her internship in our concern for the period from 09.06.2023 to 11.07.2023.

It is also hereby certified that the above student is regular in attendance. The certificate is issued for training undergone in our concern and submitted their internship report with their respective topics.

We wish her successful future ahead.

Thanking You,

Authorized Signature

The Peninsular Export Company

Regd. Office :
1, Patel Road
Virudhunagar 626 001
Tamilnadu, India
04562 245024

Branch Office :
Shop No. B41 Koyambedu Whole Sale
Food Grain Market Complex
Koyambedu Chennai 600 092
044 2479 0633





National Award
for Excellence

JEYPEE BIOTECHS

Farm to Fork System

Regd. Office : 2/527, East Street, Kulloorchandai, Virudhunagar - 626 053.
www.jeypeeefarm.com jeypeebio@gmail.com Ph : 94431 42328



Sows Sustainability

Certificate Of Internship

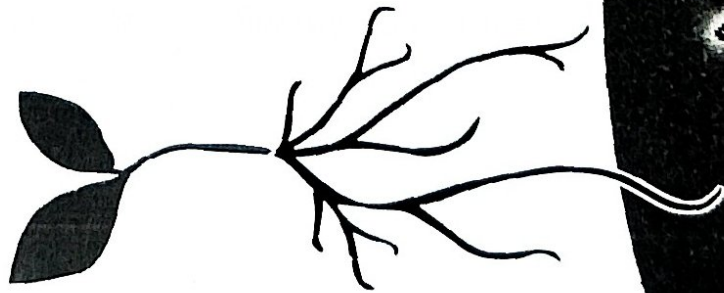
This is to certify that

M. SASI BALAN 21UBT033

III year B.Tech Biotechnology Student

of Kamaraj College of Engineering & Technology, Virudhunagar
has undergone Internship on Designing a Cottage Fermentor
in our facility at Jeypee Farm, Kullursanthai

from June 15, 2023 to June 30, 2023



Virudhunagar
01.07.2023


R. Palaneeswar
CEO - Jeypee Biotech



AGRO BIO – CHEM TECHNOLOGY

REGISTER WITH GOVT OF INDIA, MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES

(UDYAM REGISTRATION NO: UDYAM-TN-37-0002486

MALAYANKULAM, CHIDAMPARAPURAM POST

THIRUVENGADAM TK., TENKASI DL., TAMILNADU-627754

PHONE NO: +91 80752 28968, +91 94460 69421

E. MAIL: abetorganic@gmail.com, cmkpfact@gmail.com

Internship-03-1/2023

Date:05.07.2023

TO WHOM IT MAY CONCERN

This is to certify that **Miss Suja Ulagashree. k (Roll No:21UBT034)** second year student of B.Tech Biotechnology in Kamaraj College Of Engineering & Technology (An Autonomous institution affiliated to Anna University, Chennai) has successfully completed fourteen days (From 9th June 2023 to 23rd June 2023) in plant training at **M/s.Agro Bio-Chem Technology, Malayankulam**. During the period of her internship programme with us she was found to be punctual and diligent.

Chief Executive Officer
For Agro Bio - Chem Technology



CERTIFICATE OF ATTENDANCE

This is to certify that Ms. Priyadharshini, S., B. Tech., Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar, Tamil Nadu has successfully completed the internship from 18/07/2023 to 01/08/2023 in the Department of Bacteriology, ICMR-National Institute for Research in Tuberculosis, Chennai – 600031.


Dr. S. Sivasubramanian
Scientist D and Head
Department of Bacteriology


Dr. C. Padmanabhan
Director

Certificate of Training

Name: A.M HARIKRISHNAN, B.Tech (Biotechnology) (21UBT036)

Has Completed the AGRO-INDUSTRIAL Tie-up Training Programme

From: 26th June 2023 To 12th July 2023

And is Awarded this Certificate By

AGRIYA AGRO TECH
MADURAI

Date: 12/07/2023

M. Shanmuga Sundaram

M. Shanmuga Sundaram (General Manager)

MADURAI DISTRICT COOPERATIVE MILK PRODUCERS' UNION LTD:
MADURAI-20.

Ref.No.5442/Pers.2/2021


Date:04.07.2023

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN.

This is to certify that S.Harshitha (Reg.No.21UBT039) doing B.Tech(Bio technology) of The kamaraj collage of Engineering has undergone Internship Training for the period from 12.06.2023 to 27.06.2023 in our organization. We found her conduct is good during the tenure.


Asst.General Manager (Admin)


04/07/23



Certificate of Training

Name: S. MUTHUGANESH, B.Tech (Biotechnology) (21UBT038)

Has Completed the AGRO INDUSTRIAL Tie-up Training Programme

From: 26th June 2023 To 12th July 2023

And is Awarded This Certificate By

AGRIYA AGRO TECH
MADURAI

Date: 12/07/2023

M. Shanmuga Sundaram

M. Shanmuga Sundaram (General Manager)

MADURAI DISTRICT COOPERATIVE MILK PRODUCERS' UNION LTD:
MADURAI-20.

Ref.No.5442/Pers.2/2021

Date: 04.07.2023

CERTIFICATE

TO WHOM SO EVER IT MAY CONCERN.

This is to certify that S.Anis Fatima(Reg.No. 21UBT034) doing B.Tech(Bio technology) of The kamaraj collage of Engineering has undergone Internship Training for the period from 12.06.2023 to 27.06.2023 in our organization. We found her conduct is good during the tenure.

Asst.General Manager (Admin)

04/07/23



DEPARTMENT OF BIOTECHNOLOGY
(UGC-SAP and DST-FIST & PURSE Sponsored Department)

Science Campus

ALAGAPPA UNIVERSITY

(A State University Accredited with "A+" Grade by NAAC (CGPA: 3.64) in the Third Cycle and Graded as Category-I by MHRD-UGC, 2020; QS India Rank: 24; QS ASIA Rank: 251-260;

THE WUR - 401-500; NIRF Rank: 28)

Karaikudi - 630 003, Tamil Nadu, India

Dr. S. Gowrishankar
Assistant Professor



Tel : +91 4565 225215

Mobile : +91 99949 33559

Fax : +91 4565 225202

gowrishankar.alu@gmail.com

gowrishankar@alagappauniversity.ac.in

URL: <http://www.alagappabiotech.org>

Bonafide Certificate

This is to certify that the Internship project work entitled "Cloning of KP-1 Phage-derived holin" is a Bonafide work carried out by Ms. A. Jayasree (Reg. No. 21UBTD40) IIIrd year B.Tech., Biotechnology, Kamaraj College of Engineering and Technology under my guidance during the period of June 22 to July 07, 2023 at the Department of Biotechnology, Alagappa University, Karaikudi.

(S GOWRISHANKAR)

Dr. S. GOWRISHANKAR
Assistant Professor
Department of Biotechnology
Science Campus
Alagappa University
Karaikudi - 630 003.



6 937199 328100

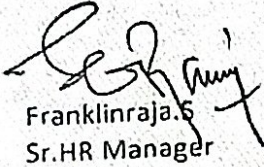
28th June 2023

To whom so ever it may concern

This is to certify that Mr. Mohana Kannan.N. B.Tech student of Kamaraj College of Engineering and Technology has undergone an internship in Pharmaceutical department of our organization during 14th June 2023 to 28th June 2023.

We wish him all success in his future endeavors.

For Aurolab,



Franklinraja.S
Sr.HR Manager



Patwari Bakers Pvt. Ltd.

FACTORY : Plot No. B 2, SIDCO Industrial Estate, Koppalur, Madurai - 625 008. Ph : (0452) 2482148, 6452148, 6452149 Tel. Fax : 2488010

REGD. OFFICE : 5-5-56/2, Darussalam, Hyderabad - 500 001. Ph : (040) 24616384

DATE:18.07.2023

TO WHOMSOEVER IT MAY CONCERN

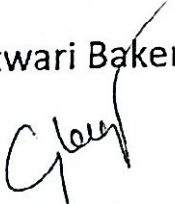
This is to certify that **Mr.S.JANA SRITHAN**
(Roll No 21UBT043) 3rd year B.Tech Bio Technology, Kamaraj College
Of Engineering and Technology, K. Vellakulam, Virudhunagar has
successfully completed 15 days of an Internship training at **Patwari
Bakers Pvt. Ltd. Madurai** during the period from 04.07.23 to 18.07.23

During the above, we found that he was
consistent, honest, and diligent in his assigned duties and responsibilities.

We wish him great success in his future endeavours.

With regards,

For Patwari Bakers Pvt Ltd


Authorized Signatory

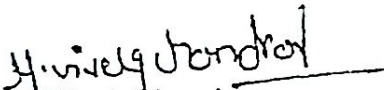


15.07.2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. K.S. Krisha, pursuing 2nd Year B.Tech.(Biotechnology)., at Kamaraj College of Engineering & Technology, Virudhunagar District has undergone training in the Department of Microbiology in our institution from 01.07.2023 to 15.07.2023.

During the above period, her involvement in the above subject was good.


K. Vivek Chandran
Senior Manager - HR





Patwari Bakers Pvt. Ltd.

FACTORY : Plot No. B 2, SIDCO Industrial Estate, Koppalur, Madurai - 625 008. Ph : (0452) 2482148, 6452148, 6452149 Tel. Fax : 2488010

REGD. OFFICE : 5-5-56/2, Darussalam, Hyderabad - 500 001. Ph : (040) 24616384

DATE:18.07.2023

TO WHOMSOEVER IT MAY CONCERN


This is to certify that **Mr.N.UDITH SARAN**
(Roll No 21UBT045) 3rd year B.Tech Bio Technology, Kamaraj College
Of Engineering and Technology, K.Vellakulam, Virudhunagar has
successfully completed 15 days of an Internship training at **Patwari
Bakers Pvt. Ltd. Madurai** during the period from 04.07.23 to 18.07.23

During the above, we found that he was
consistent, honest, and diligent in his assigned duties and responsibilities.

We wish him great success in his future endeavours.

With regards,

For Patwari Bakers Pvt Ltd


Authorized Signatory





Vadamalayan
Hospitals (P) Ltd.



VMH/HR/Training/2023/246

10/07/2023

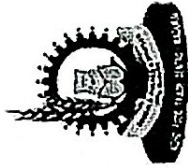
Training Certificate

This is to certify that Ms. RINITA JONELLIA A, Reg No:920421214032, III Year, B.Tech (Bio Technology), Kamaraj College of Engineering and Technology, Virudhunagar, has undergone observation training at Laboratory & Blood Bank Department our Vadamalayan MultiSpeciality Tertiary Care Hospitals, Madurai from 26/06/2023 to 10/07/2023. During the aforementioned period her attendance and conduct was found good.

We wish her all the best in her future endeavors

Dr.V.Pugalagiri

(Chairman & Managing Director)



AGRO FOOD TRADE CENTRE

(formerly TAMILNADU FOODGRAINS MARKETING YARD)

[Special Purpose Vehicles of Cereals, Pulses & Staples (CPS) Cluster]

Industrial Infrastructure Upgradation Scheme

Ministry of Commerce and Industry, Govt. of India.

Sikkandar Chavadi, MADURAI- 625 018.

TRAINING CERTIFICATE

This is to certify that **Ms.T.S.RIDHU VARSHINI** a student of B.Tech- Bio Technology Department, Kamaraj College of Engineering & Technology, Virudhunagar has completed the Hands-on Training of "Nutritional Analysis of Food Products, Quality Analysis of Edible Oil" organized by Agro Food Trade Centre from 12.06.2023 to 22.06.2023 at Food Products Analytical Laboratory and Research Centre (NABL accredited), Agro Food Trade Centre, Sikkandar Chavadi, Madurai-625 018.

DR.K.SINGARAVADIVEL

Independent Director & Former Director of NIFTEM-T
(Ministry of Food Processing Industries-GOI.)

K.SURESHKUMAR

Executive Director

S.RETHINAVELU

Founder and CMD



Vadamalayan
Hospitals (P) Ltd.



H-2013-0194
July 27, 2022 - July 27, 2026
Since July 27, 2013

VMH/HR/Training/2023/248

10/07/2023

Training Certificate

This is to certify that Ms. PRIYANGKA S, Reg No:920421214030, III Year, B.Tech (Bio Technology), Kamaraj College of Engineering and Technology, Virudhunagar, has undergone observation training at Laboratory & Blood Bank Department our Vadamalayan MultiSpeciality Tertiary Care Hospitals, Madurai from 26/06/2023 to 10/07/2023. During the aforementioned period her attendance and conduct was found good.

We wish her all the best in her future endeavors.

Dr.V.Pugalagiri

(Chairman & Managing Director)



Date:17.07.2023

Sub: Students attendance and Internship training certificate

Respected Sir/Mam,

This is to certify that **Ms. NANDHINI G (21UBT049)** pursuing 2nd year **B. TECH. (Bio Technology)** at **Kamaraj College of Engineering & Technology**, she has successfully completed her internship in our concern for the period from **09.06.2023 to 11.07.2023**.

It is also hereby certified that the above student is regular in attendance. The certificate is issued for training undergone in our concern and submitted their internship report with their respective topics.

We wish her successful future ahead.

Thanking You,

Authorized Signature

The Peninsular Export Company

Regd. Office :
1, Patel Road
Virudhunagar 626 001
Tamilnadu, India
04562 245024

Branch Office :
Shop No. B41 Koyambedu Whole Sale
Food Grain Market Complex
Koyambedu Chennai 600 092
044 2479 0633

