

BIOTECHNOLOGY

2022-2023





VSB ENGINEERING COLLEGE (AN AUTONOMOUS INSTITUTION)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai An ISO 9001:2015 Certified Institution Accredited by NAAC, NBA Accredited Courses

> V.S.B. Educational Trust was founded in the year 2000 by Mr. V.S. Balsamy, the founder and correspondent of the V.S.B. Group of Institutions, with an interest in promoting, managing and administrating educational institutions with high academic standards, discipline and to take up and help other allied activities in the field of education. Under the Trust, V.S.B. Engineering College was established in the year 2002 and V.S.B College of Engineering Technical Campus in the year 2012.

SHRI.V. S. BALSAMY, B.SC., L.L.B., FOUNDER & CHAIRMAN, VSB GROUP OF INSTITUTIONS. FOUNDER AND

CHAIRMAN

Shri.V.S.Balsamy, B.Sc., L.L.B., a leading luminary, has 31 years of bright standing in the field of law. He is the recipient of "Indira Gandhi Sadhbavana Award" from Global Economic Council, New Delhi. He was also honoured with "The Best Humanitarian Award" in 2005.VSB Educational Trust was founded by him as the Founder-Trustee in the year 2000. He started V.S.B.
Engineering College in Karur in the year 2002 and V.S.B. College of Engineering-Technical Campus in Coimbatore in the year of 2012. He, the Correspondent of VSB Group of Institutions, lays emphasis on 'Hard Work'. As he strongly believes that "HARD WORK IS THE KEY TO SUCCESS", it is conceived as the motto of the Institutions.

About the Department:

Biotechnology is considered as one of the emerging field which act as the fuel for the industrial growth. **Biotechnology is the broad area of biology involving** living system & organism to develop or make product for specific use. The dignified department poses on its four pillars of potency – the Management, teachers, students, their values and discipline that pave the way for a strong foundation, inculcating visionary ideas with friendship and concord in hard work. The department has well equipped laboratories to fulfill the university requirements and constant upgrades are made to keep up with the present day advancements. Students with innovative ideas are constantly encouraged and the department helps them to conduct their research work within the college, allowing them to use the department resources. The department conducts various events monthly to enlighten the students regarding the various aspects of the field of biotech.

"Biotechnology is the poetry of the future, written in the language of molecules."

- Joshua Lederberg

VISION AND MACHINE

VISION:

To create a strong teaching base in the area of Biotechnology technical knowledge dissemination to the students, and to scale new height in research by combining the concepts of professionalism, social justice, environmental impacts and human ethics for the welfare of the general public.

MISSION:

1.Disseminate a blending of knowledge acquisition and its application in real-life situations to the students 2.Equip the students to adapt to changing global and local needs through well designed curriculum and syllabus 3.Groom students to uphold professional ethics and develop leadership qualities 4.Train students on issues related to social welfare.



Name:Double Beam UV Spectrophotometer Model:2203 Cost: Rs.2,87,409/- A Double beam UV spectrophotometer measures light absorption by substances in UV and visible spectra. Its dualbeam design ensures accuracy by simultaneously comparing the sample to a reference, enabling precise concentration and purity analyses in scientific research and industry.



Name:Cooling Centirfuge Model: C-24 Cost: Rs.2,076,80/-

A cooling centrifuge is a specialized laboratory device that combines high-speed spinning with temperature control capabilities. It rapidly separates substances of varying densities in samples while maintaining a cooled environment, crucial for preserving temperaturesensitive biological or chemical materials during centrifugation.



Name: UV Spectrophotometer Model:117/SYSTRONICS Cost: Rs.1,66,058/-

An ELISA (Enzyme-Linked

A UV spectrophotometer is a scientific instrument used to measure the absorption, transmission, or reflection of ultraviolet and visible light by a substance. It works by passing light through a sample and analyzing the amount of light absorbed at specific wavelengths, providing information about the sample's concentration, purity, or other properties in fields like chemistry, biology, pharmaceuticals, and environmental science.





Name:ELISA Reader Model: Read well Touch Cost: Rs.1,60,000/-



Name: PCR Model: WEE-32 Cost: Rs.1,24,999/-

PCR (Polymerase Chain Reaction) is a powerful molecular biology technique used to amplify and create multiple copies of a specific segment of DNA. It involves a series of temperature-controlled cycles that denature, anneal, and extend DNA strands, allowing targeted amplification of DNA sequences. PCR is vital in various applications, including genetic research, medical diagnostics, forensics, and biotechnology.

An ELISA (Enzyme-Linked

Immunosorbent Assay) reader is a laboratory instrument used to measure the optical density of a microplate-based assay. It detects and quantifies specific proteins or other substances by analyzing the color change resulting from enzymatic reactions in the wells of the microplate. The reader measures the absorbance of light at specific wavelengths, providing quantitative data for various applications in medical diagnostics, research, and biotechnology



Name:ELISA Reader Model: Read well Touch Cost: Rs.1,60,000/-



Name: Shaking Incubator Model: LT-051-24 Cost: Rs.83,435/-

A shaking incubator is a specialized piece of laboratory equipment designed to provide controlled conditions for culturing microorganisms, cells, or other biological samples while agitating them gently. It combines a controlled temperature environment, typically ranging from ambient to above body temperature, with an orbital or reciprocal shaking mechanism. This shaking motion ensures uniform mixing and aeration of the samples, promoting cell growth, protein expression, or other biological processes. Shaking incubators are widely used in various scientific disciplines such as microbiology, cell biology, biochemistry, and molecular biology for research, experimentation, and growth of cultures under optimized conditions.

A sonicator, also known as an ultrasonic homogenizer or ultrasonic disruptor, is a device used in laboratories for the disruption, homogenization, or mixing of samples using ultrasonic waves. It employs high-frequency sound waves (typically above the range of human hearing) to create intense mechanical vibrations in a liquid medium. These vibrations cause cavitation, the formation and implosion of microscopic bubbles, which generates localized forces that disrupt cells, break apart molecules, or disperse particles in the sample. Sonicators are versatile tools used in various scientific fields like biology, chemistry, nanotechnology, and materials science for processes such as cell lysis, emulsification, dispersion, and sample preparation for analysis.



Name: Sonicator Model: 10A Cost: Rs.81,545/-



Name: Laminar Air Flow Chamber Model: TCR 100 Cost: Rs.62,495/-

A laminar airflow chamber is a controlled environment enclosure used in laboratories and cleanroom settings to maintain a sterile and particle-free workspace. It utilizes highefficiency particulate air (HEPA) or ultra-low penetration air (ULPA) filters to generate a unidirectional airflow that moves in a consistent, parallel stream. This airflow minimizes the presence of airborne contaminants by continuously pushing particles away from the work area, creating a clean zone for tasks like delicate experiments, tissue culture, or handling sensitive materials. Laminar airflow chambers are critical in industries such as microbiology, pharmaceuticals, electronics, and healthcare, where maintaining a sterile environment is essential to prevent contamination and ensure the quality of work or products.

An autoclave is a specialized device used in laboratories, medical facilities, and industrial settings to sterilize equipment, materials, and instruments by subjecting them to high-pressure steam at elevated temperatures. Operating much like a pressure cooker, the autoclave creates an environment that reaches temperatures typically between 121 to 134 degrees Celsius (250 to 273 degrees Fahrenheit) under high pressure, effectively killing bacteria, viruses, fungi, and spores. This process ensures the complete elimination of potentially harmful microorganisms, making the sterilized items safe for use in medical procedures, research, or other applications requiring aseptic conditions. Autoclaves are critical in maintaining hygiene and preventing the spread of infections in healthcare, laboratories, and various industries that require sanitized equipment and materials.



Name: Autodave Model: LT-AV-104 Cost: Rs.62,492/-

Jaboratory Highlights



Name: Incubator Model: LT-INS-3 Cost: Rs.44,227/-

An incubator is a controlled environment chamber designed to provide optimal conditions for the growth, cultivation, or maintenance of biological samples, cells, or microorganisms. It regulates temperature, humidity, and often other variables like CO2 levels to mimic the ideal environment for the specific organisms or processes being studied. Incubators are crucial tools in scientific research, healthcare, and various industries, supporting cell culture, microbiology experiments, and the development of biological materials like vaccines, pharmaceuticals, and agricultural products. They come in various types, including those for bacterial cultures, mammalian cell cultures, or specialized incubators for specific applications such as microbiological incubators, shaking incubators, or CO2 incubators.

A compound microscope is an essential tool in laboratories and educational settings, featuring multiple lenses that work together to magnify tiny objects or specimens. Its system of lenses, including objective and eyepiece lenses, enables detailed observation by creating enlarged virtual images of specimens that are otherwise invisible to the naked eye. This versatile instrument allows for precise magnification adjustments and is widely used across scientific fields, aiding in the study of cells, tissues, microorganisms, and various microscopic structures crucial for research, education, and medical diagnostics.



Name: Compound Microscope Model: AI MICRO Cost: Rs.14,998/-



Cell-Biology Laboratory

Microbiology Laboratory



Genetics Laboratory





Bioprocess Laboratory





BC/IMA Laboratory



Immunology Laboratory

Dounstream Process Laboratory

FACULTY ACHIEVEMENTS

Mrs. Keerthiga K M.Tech. Biotechnology,

Kar No. 114/2017	NATURE SCIENCE FOUNDATION A Unique Research and Development Centre for Society Improvement (150 9001:2015, 45001:2015 & 50001:2015 Centified and Mainry of MSME Registered Organization) Coimbatore - 641 004, Tamil Nadu, India. Multipul Science Foundation Return Science Foundation
	NSF/BWFA/2023/06
	BEST WOMEN FACULTY AWARD
	This is to certify that
	Mrs. K.Keerthiga
	Assistant Professor, Department of Biotechnology,
V.S.	B Engineering College (Autonomous), Karur – 639 111,
	Tamil Nadu has been honoured with
	"Best Women Faculty Award"
In	Recognition of her academic excellence and extraordinary
	contribution in enhancing the field of Biotechnology
	having adjudged during Academic year 2022-2023 by
Nati	ure Science Foundation, Coimbatore, Tamil Nadu, India.





Best Women Faculty Award

Leads Auditor Certificate



DEPARTMENT OF CHEMICAL ENGINEERING (Accredited by NBA, New Delhi)

One Week Online Faculty Development Programme SUSTAINABLE DEVELOPMENT IN CHEMICAL, ENVIRONMENTAL AND LIFE SCIENCE APPLICATIONS

CERTIFICATE OF PARTICIPATION

This is to certify that Ms. KEERTHIGA K, VSB ENGINEERING COLLEGE has attended One Week Online Faculty Development Programme on SUSTAINABLE DEVELOPMENT IN CHEMICAL, ENVIRONMENTAL AND LIFE SCIENCE APPLICATIONS organized by Department of Chemical Engineering, Coimbatore Institute of Technology, Coimbatore during 30TH Oct - 03RD Nov, 2023.

Dr. V.M.SIVAKUMAR

Dr. M.THIRUMARIMURUGAN

FDP Co-ordinator Professor & Head - Chemical Engineering

Dr. A. RAJESWARI Principal

Faculty Development Program **Conducted by**



Principles

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Biochemistry and

Molecular Biology



Dr. M. Anis kumar working as an Professor in the Department of Biotechnology, VSB Engineering College-Karur, 639111, Tamil Nadu, has about 18 years of teaching experience. He received his MTech in Industrial Biotechnology from SASTRA University and PhD Degree in Technology (Biotechnology) from Anna University, Chennal. He has published 4 patents with 2 grants received, 4 book chapters, 15 research papers in refereed international and national journals. His areas of research include optimizations and scale up of Bioprocess engineering and separations based on downstream processing with Molecular and genetics engineering identifications.



Ms. K. Keerthiga working as an Assistant professor in the Department of Biotechnology in VSB Engineering College, has 2 years experience in QC pharmaceutical industry and 2 years of teaching experience. She received MTech degree in Biotechnology with first class distinction from Bharathidasan University, Tiruchirappalli. She has published 7 research papers in various international journals. She has received the Best Woman faculty award from Nature Science Foundation. Her areas of interest include Biochemistry, Biological Enzyme kinetics and Downstream processing.



Ms. G. Jeyashree working as an Assistant professor in the Department of Biotechnology, VSB Engineering College, VSB Engineering College-Karur, 639111, Tamil Nadu, has about 2 years of teaching experience. She received her BTech in Kalasalingam Academy of Research and Education and MTech in Kumaraguru College of Engineering. She has published 2 research papers in international journals. Her area of research included Biochemistry and Molecular Genetics.

PRINCIPLES OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

DR. M. ANIS KUMAR MS. K. KEERTHIGA MS. G. JEYASHREE

Our Faculties Dr. M. Anis Kumar Mrs. K. Keerthiga Ms. G. Jeyashree

Biochemistry & Molecular Biology Book **Student Achievements** University rank holder (43rd Convocation)

Ms.Sumaya Fathima

mid, Ga

(2019-2022)





Chennai 600 025 Tamil Nadu, India Date : 05-09-2023

CONTROLLER OF EXAMINATIONS

P. Salphin

PLACED STUDENTS

FirstName	Salary	Company
YOGESHKUMAR S	7	DXC, ZIFO, TCS
HELENA FLORA M	4	Cognizant, Faceprep, capgemini
VARSHINEE K R	4.1	DXC, TCS, Episource
KARTHIKA DEVI S	4.76	DXC, ZIFO, TCS
INDHUJA G	3	Faceprep, Episource
RAKSHANA R	3.36	TCS, Episource
SIVASANGARIM	3.36	TCS, Episource
POORNASAREENAT	4.1	DXC,, Mindtree
SATHYA M	4.1	DXC, TCS
SRINIVAS D	4.1	DXC, TCS



PLACED STUDENTS

FirstName	Salary	Company
SANGEETHA K	4.25	TCS, capgemini
PRIYA DHARSHINI	4.25	capgemini, Episource
HARINIT	4.76	DXC, ZIFO
THARUNKUMAR A S	4.76	ZIFO, Accenture
ΜΟΗΑΝ Κ	4.76	ZIFO, TCS
AAISHA BANU M	3	Just Dail
INDHIRA S	3	Just Dail, SiliconHouse
AAFIYA TAKSHEEN S	3	Faceprep
SUNIL KISHORE M	3	Episource
MATHUMITHA N	3	Episource

PLACED STUDENTS

FirstName	Salary	Company
SUBASHINI M	3.36	TCS
PRIYA D	3.36	TCS
SANGEETHA J	3.36	TCS
PRIYADHARSHINI J	3.36	TCS
BOOBALAN P	4	Mindtree
CHITHRA	4	Mindtree
PRABU G	4.1	DXC
METHA J	4.25	capgemini
KARTHIKA S	4.76	ZIFO
VAISHNAVI R	3	SiliconHouse

Success is not just about reaching the peak; it's about leaving a trail for others to follow.

Period	Name of the Course	Name of the Student
SEP-NOV 2020	Plant cell bioprocessing	Jeyashree
SEP-NOV 2020	Plant cell bioprocessing	Arunadevi.S

SEP-NOV 2020	Plant cell bioprocessing	Saranya M
SEP-NOV 2020	Plant cell bioprocessing	Varshini
SEP-NOV 2020	Plant cell bioprocessing	Boojasti

SEP-NOV 2020	<section-header></section-header>	shannugapriya. K
SEP-NOV 2020	Plant cell bioprocessing	Nivetha.M
SEP-NOV 2020	Plant cell bioprocessing	Muthu gayathri.D

SEP-NOV 2020	Plant cell bioprocessing	Haripriya.S
SEP-NOV 2020	Plant cell bioprocessing	Atchaya.V
SEP-NOV 2020	Plant cell bioprocessing	Gangasri.R

AUG-0CT 2021

Plant cell Bioprocessing

CHITHRA S

AUG-0CT 2021

Plant cell Bioprocessing

Metha.J

AUG-0CT 2021

Plant cell Bioprocessing Karthika devi.S

AUG-OCT 2021	Introduction to proteomics	Karthika
AUG-SEP 2021	Biomedical nanotechnology	Priyadharshini
<i>JUL-OCT 2021</i>	Immunology	Sumaya fathima .S

JAN-FEB 2022	Human molecular genetics	Jeno deva kiruba.A
JAN-FEB 2022	Human molecular genetics	P A Arunbalaji
JAN-FEB 2022	Human molecular genetics	Santhosh.S
JAN-APR 2022	Bioinformatics	Karthika
JAN-APR 2022	Bioinformatics	Priya dharshini.J
JAN-APR 2022	Bioinformatics	Rakshana

<i>JAN-APR 2022</i>	Bioinformatics	vignesh.N
JAN-FEB 2022	Human molecular genetics	Jeno deva kiruba.A
JAN-FEB 2022	Human molecular genetics	Jeevankumar DM

JAN-FEB 2022	Human molecular genetics	PA Arunbalaji
JAN-FEB 2022	Human molecular genetics	Santhosh S
JAN-FEB 2022	Human molecular genetics	<i>Thineshraj T V</i> G

JAN-FEB 2022

Human molecular genetics

Vishnuraj M S

JAN-FEB 2022

Human molecular genetics

Indhuja

JAN-FEB 2022

Human molecular genetics

Nithya N

JAN-FEB 2022	Human molecular genetics	Poornasareena T
JAN-MAR 2022	Bioreactor design and analysis	Boobalan P
JAN-MAR 2022	Bioreactor design and analysis	Boopalan.P

JAN-MAR 2022

Programming,data structures and algorithms using python

Srinivas Duraisamy

JUL-0CT 2022

Dairy and food process and product technology

Santhosh.S

Defense and feed

JUL-OCT 2022	process and product technology	Pooja.N
<i>JUL-OCT 2022</i>	Dairy and food process and product technology	Neelasurya behera.B
<i>JUL-OCT 2022</i>	Dairy and food process and product technology	Gurudeep.G

JUL-SEP 2022

Organic farming for sustainable agricultural production

Swetha. KS

AUG-0CT 2022

Introduction to cell biology

Elagnsuriyan .N

<i>AUG-OCT 2022</i>	biology	Arikrishna . S
AUG-OCT 2022	Introduction to cell biology	Mafaz
AUG-OCT 2022	Introduction to cell biology	Vasanth .S

AUG-OCT 2022	Introduction to cell biology	Sugunesh . S
AUG-OCT 2022	Introduction to cell biology	Rajkumar
JUL-AUG2022	Bioreactors	Boobalan .P

<i>JUL-OCT 2022</i>	Industrial biotechnology	Lakshana .P
<i>JUL-OCT 2022</i>	Industrial biotechnology	Harshaya. S
<i>AUG-SEP</i> 2022	Functional genomics	Manisha.MS

AUG-SEP 2022

Functional genomics

Yuvasri.R

AUG-OCT 2022 Cell biology

Sugunesh S

AUG-0CT 2022

Cell biology

Mafaz

AUG-OCT 2022	Cell biology	Rajkumar
AUG-OCT 2022	Cell biology	Elagnsuriyan
AUG-OCT 2022	Cell biology	Vasanth S

JAN-APR 2023

Enzyme science and technology

Bavanandhini. S

JAN-APR 2023

Enzyme science and technology

Yuvasri.R

JAN-APR 2023

Enzyme science and technology

Cibinaya G

JAN-APR 2023	Enzyme science and technology	Kaviya
JAN-MAR 2023	Data analysis for biologists	Lakshmanan
JAN-MAR 2023	Cell biology	Gowtham.S

JAN-MAR 2023	Cell biology	Aran pandian . B
JAN-MAR 2023	Cell biology	Nagendran.M
<i>JAN-MAR 2023</i>	Cell biology	Elagnsuriyan

FEB-APR 2023	Biointerface engineering	Aravind sai bharathy K
JAN-APR 2023	Enzyme science and technology	Janani P
JAN-APR 2023	Enzyme science and technology	Renuga P

JAN-APR 2023	Enzyme science and technology	Santhosh kumar
<i>JAN-APR 2023</i>	Enzyme science and technology	Vasanth S
JAN-APR 2023	Enzyme science and technology	Sugunesh S
JUL-OCT 2023	Fundamentals of food process engineering	Snega.T
<i>JUL-OCT 2023</i>	.Fundamentals of food process engineering	Lakshmi.S
<i>JUL-OCT 2023</i>	Dairy and food process and product technology	Shruthi.R

JUL-0CT 2023

Industrial biotechnology

Vigneshwaran

JUL-0CT 2023

Industrial biotechnology

Mathavan.T

JUL-0CT 2023

Wild life ecology Keerthana

.*R*

<i>JUL-OCT 2023</i>	Genetic engineering	Renuga.P
<i>JUL-OCT 2023</i>	Progamming in java	Vasanth S
AUG-OCT 2023	Introduction to cell biology	Deepasri.G

AUG-0CT 2023

Introduction to cell biology

Kanimozhi.R.S

AUG-0CT 2023

Introduction to cell biology Kiruthika devi.M

AUG-0CT 2023

Introduction to cell biology Divya dharshini.R

AUG-OCT 2023	Introduction to cell biology	Swetha.p
AUG-OCT 2023	Introduction to cell biology	Keerthiga.G
AUG-OCT 2023	Introduction to cell biology	Periyasamy.D

मारत सरकार GOVERNMENT OF INDIA ORIGINAL

मूल/No : 127917

पेटेंट कार्यालय THE PATENT OFFICE डिजाइन के पंजीकरण का प्रमाणपत्र CERTIFICATE OF REGISTRATION OF DESIGN

डिजाइन सं. / Design No. : 373883-001 तारीख / Date : 10/11/2022 पारस्परिकता तारीख / Reciprocity Date* : देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो ROUND SWEET MAKER MACHINE WITH MANUAL OPERATION AND PORTABILITY से संबंधित है, का पंजीकरण, श्रेणी 31-00 में 1.Dr R Arun Kumar 2. Dr M Anis Kumar, Ph.D 3.Dr G Venkat Kumar, Ph.D 4.Dr Sumathy Rengarajan, Ph.D 5.Dr T Naveen Kumar Reddy 6.Dr S Azhagu Madhavan, Ph.D 7.Dr K Ashokkumar, Ph.D 8.Dr P Arjun, Ph.D 9.Dr A Bakrudeen Ali Ahmed, Ph.D, Pdf के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class **31-00** in respect of the application of such design to **ROUND SWEET MAKER MACHINE WITH MANUAL OPERATION AND PORTABILITY** in the name of 1.Dr R Arun Kumar 2. Dr M Anis Kumar, Ph.D 3.Dr G Venkat Kumar, Ph.D 4.Dr Sumathy Rengarajan, Ph.D 5.Dr T Naveen Kumar Reddy 6.Dr S Azhagu Madhavan, Ph.D 7.Dr K Ashokkumar, Ph.D 8.Dr P Arjun, Ph.D 9.Dr A Bakrudeen Ali Ahmed, Ph.D, Pdf.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में। In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

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निर्ममन की तारीख/Date of Issue : 27/01/2023

है।

महानियेक घेट डिलाइन और आधरे पित्र Controller General of Patents, Designs and Trade Marks

peration & Stor

Round Sweet Maker Aachine with Manual

परस्परिकता तारीख (यदि कोई से) जिसकी अनुमति देज के नाम पर की गई है। डिजाइन का सत्त्याधिकार पंजीकरण की तारीख से दस वर्षों के लिए लेगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, चाँव वर्षों की अतिरिक्त अवधि के लिए किया जा सकेंगा। इस प्रमाण पत्र का उपयोग विधिक कार्यचाहियों अवधा विदेश में पंजीकरण प्राप्त करने के लिए नहीं हो सकता है।

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Passed Gate Exam

MS.KARTHIGA DEVI

TNSCST Project Completion

Chennai-600 025 27.10.2023 MS-0868/2023 DR. R. SRINIVASAN Member Secretary

Ms. Priyadharshini S

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY GOVERNMENT OF TAMILNADU

CERTIFICATE

This is to certify that Mr./Ms. Rakshana.R, VSB Engineering College, Karur-639 11: has successfully completed the project titled "Development and formations of the skin ointment by using the extract of the Oenothera biennis with silver nanoparticles to treat the ichthyosis vulgaris" in the Sector MEDICAL SCIENCES under STUDEN PROJECT SCHEME sponsored by the Council during the academic year 2022-2023.

Chennai-600 025 27.10.2023 ^{MS-0868/2023} DR. R. SRINIVASAN Member Secretary

Ms. Rakshana R

successfully completed the project titled "Isolations of microbes for production of naringinase and its optimization for food industry" in the Sector BIOLOGICAL SCIENCES under STUDENT PROJECT SCHEME sponsored by the Council during the academic year 2022-2023.

Chennai-600 025 27.10.2023 ^{B5-1050/2023} DR. R. SRINIVASAN Member Secretary

Ms Chitra S

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY GOVERNMENT OF TAMILNADU

This is to certify that Mr./Ms. Sangeetha.J, VSB Engineering College, Karur-639 111 has successfully completed the project titled "Development and formations of the skin ointment by using the extract of the Oenothera biennis with silver nanoparticles to treat the ichthyosis vulgaris" in the Sector MEDICAL SCIENCES under STUDENT PROJECT SCHEME sponsored by the Council during the academic year 2022-2023.

Chennai-600 025 27.10.2023 ^{MS-0868/2023} DR. R. SRINIVASAN Member Secretary

Ms. Sangeetha J

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY GOVERNMENT OF TAMILNADU

CERTIFICATE

This is to certify that Mr./Ms. S. Pradeepa, VSB Engineering College, Karur-639 11 has successfully completed the project titled "Isolations of microbes for production or naringinase and its optimization for food industry" in the Sector BIOLOGICAL SCIENCES under STUDENT PROJECT SCHEME sponsored by the Council during the academic year 2022-2023.

Chennai-600 025 27.10.2023 ^{BS-1050/2023} DR. R. SRINIVASAN Member Secretary

Ms Pradeepa S

LAKSHMI S	IV/VII
SRIMATHI S	IV/VII
Soundharya s	III/V
MANISHA M.S	III/V
BAVANANDHINI S	III/V

Presented & Got Won 2nd Position

Mational level Technical

-BisaEMEins 23

Conducted by Kamaraj Engineering College

Chitra S

Pradeepa S	IV/VIII
Harini S	IV/VIII
Helena Flora M	IV/VIII
Karthika S	IV/VIII

Presented & Got 1St Mace