Shiv Chhatrapati Shikshan Sanstha's

Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous)

Department of Microbiology

A) A Summary Report of the Activity

1) Title of Programme:		"Hands-on Training Program on UV Spectroscopy" under DST-FIST		
2) Name of Organizing Department:		Department of Microbiology		
3) Name of the Coordinator(s)/ Convener(s)/ Organizer(s) of the Programme:		Chief Organizer: Dr. Mahadev Gavhane, Principal Convener: Dr. D. V. Vedpathak, HoD Organizing Secretary: Ms. S. S. Patil & Ms. R. S. Gudda		
4) Date(s) of the Programme:		16th December 2025		
5) Venue:		CIC Laboratory		
6) Target Group:		Teachers and Students		
7) Number of Participants:		Male	Female	Total
A separate list with signatures be maintained in the department/Unit)	Teaching	01	05	06
	Non-Teaching	01	-	01
	Students	12	18	30
8) Name(s) and details of Resource Person(s), if any:		Dr. Kundan Tayade Department of Microbiology, RSML		
9) Total Expenditure for the Programme:		Nil		
10) Source of Funding:		N/A		

B) Report

i. Title: "Hands-on Training Program on UV Spectroscopy" under DST-FIST.

ii. Introduction

UV Spectroscopy, also known as Ultraviolet–Visible Spectroscopy, is one of the most widely used analytical techniques in chemistry, biochemistry, pharmaceutical sciences, and environmental analysis. It is based on the absorption of ultraviolet (200–400 nm) and visible (400–800 nm) light by molecules, resulting in electronic transitions between molecular orbitals. The amount of light absorbed is directly proportional to the concentration of the absorbing species, as described by the Beer–Lambert Law.

This hands-on training program is designed to provide participants with both theoretical knowledge and practical experience in operating a UV-Visible spectrophotometer. The program focuses on understanding the basic principles of UV spectroscopy, instrumentation components (light source, monochromator, sample holder, detector), preparation of standard solutions, calibration techniques, and quantitative analysis of unknown samples.

iii. Objectives of the Program

a. To understand the basic principles of Ultraviolet–Visible Spectroscopy, including electronic transitions and the Beer–Lambert Law.
b. To gain practical experience in operating a UV-Visible spectrophotometer, including wavelength selection, calibration, and absorbance measurement.
c. To develop skills in quantitative analysis by preparing standard solutions, constructing calibration curves, and determining the concentration of unknown samples.
d. To interpret UV spectra and apply the technique in pharmaceutical, biochemical, and environmental analysis.

iv. Details of Participants

30 Student participants (Male 12 and 18 Female) attended the programme

v.Brief Summary of Events/ Sessions

The Department of Microbiology, organized DST-FIST Sponsored "Hands-on Training Program on UV Spectroscopy" on 16th December 2025 at 10:00 AM. The DST-FIST Sponsored "Hands-on Training Program on UV Spectroscopy" was successfully conducted with the objective of enhancing students' theoretical understanding and practical skills in Ultraviolet–Visible Spectroscopy. The programme provided comprehensive exposure to the fundamental principles of UV spectroscopy, including electronic transitions and the Beer–Lambert Law.

During the training, participants gained hands-on experience in operating a UV-Visible spectrophotometer, performing wavelength selection, calibration, and absorbance measurements. They were trained in preparing standard solutions, constructing calibration curves, and determining the concentration of unknown samples through quantitative analysis. The session also emphasized interpretation of UV spectra and highlighted applications of the technique in pharmaceutical, biochemical, and environmental fields.

A total of 30 students (12 male and 18 female) actively participated in the programme. The event was highly interactive and beneficial, significantly improving the analytical

skills and laboratory competence of the participants.

vi. Conclusion, with Feedback on the Programme:

In conclusion, the DST-FIST Sponsored "Hands-on Training Program on UV Spectroscopy" proved to be a highly informative and skill-oriented initiative that successfully strengthened students' conceptual understanding and practical expertise in Ultraviolet–Visible Spectroscopy. The programme effectively combined theoretical knowledge with hands-on laboratory training, enabling participants to confidently operate the UV-Visible spectrophotometer and perform quantitative analysis. The enthusiastic participation of all 30 students reflects the relevance and impact of the training, which significantly contributed to enhancing their analytical competence and preparedness for future academic and research endeavors.

vii. Any Appendix, If Necessary: Nil

viii. List of participants attached Date: 19th December 2025

Head
Department of Microbiology

HEAD
Dept. of Microbiology
Rajarshi Shahu Mahavidyalaya
LATUR - 413 512

Principal

PRINCIPAL
Rajarshi Shahu Mahavidyalaya, Latur
(Autonomous)

C) Geotagged Photographs/ Screenshots

Dr. D. V. Vedpathak delivering Welcome address

Resource person Dr. Kundan Tayade guiding students

Dr. Kundan Tayade explaining the computing system of UV Spectrophotometer

Students analyzing the Results

D) Brochure of the programme:

Shiv Chhatrapati Shikshan Sanstha's

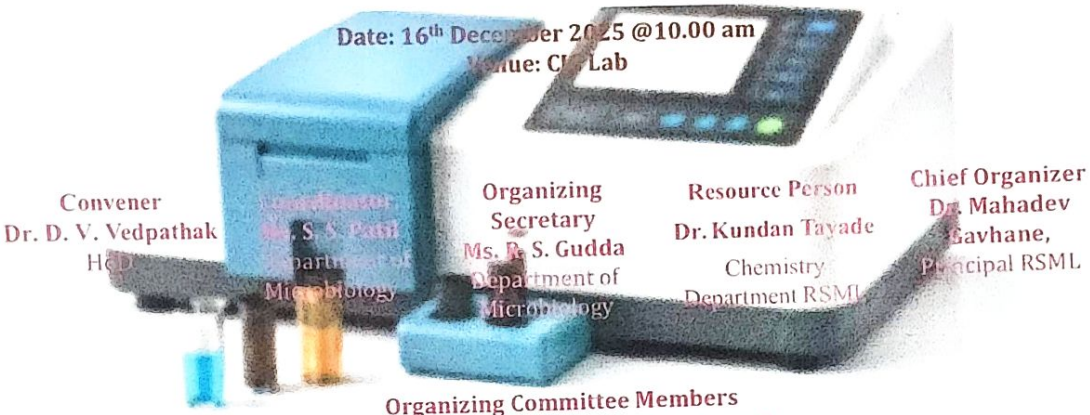
Rajarshi Shahu Mahavidyalaya Latur

Empowered Autonomous Institution

Department of Microbiology

Organizes

DST-FIST Sponsored "Hands-on Training Program on UV Spectroscopy"



Date: 16th December 2025 @10.00 am

Venue: CIF Lab

Convener
Dr. D. V. Vedpathak
HOD

Coordinator
Ms. S. S. Patil
Department of Microbiology

Organizing Secretary
Ms. R. S. Gudda
Department of Microbiology

Resource Person
Dr. Kundan Tayade
Chemistry Department RSML

Chief Organizer
Dr. Mahadev Gavhane,
Principal RSML

Organizing Committee Members
Ms. R. S. Shinde, Ms. P. V.Kandepatil

Shiv Chhatrapati Shikshan Sanstha's

Rajarshi Shahu Mahavidyalaya Latur (Autonomous),

Department of Microbiology

Organizes

Hands-on Training program on "UV-Vis Spectroscopy"

Under DST-FIST

Attendance List

Date: 16.12.2025

Sr. No.	Name of the Student	Class	Gender	Sign
1.	Samudre kanchan kalyan	M.Sc. II	Female	
2.	Chebale Anuja Laxman	M.Sc. I	Female	
3.	Bhosale Vishnu Suresh	B.Sc. III	Male	
4.	Dhakne Roshni Ramesh	M.Sc. I	Female	
5.	Shailja Shinde	M.Sc. II	Female	
6.	Swami Aishwarya Sidheshwar	M.Sc. II	Female	
7.	Bagwan Gulafshan Ahmed	B.Sc. III	Female	
8.	Sitape Rajratan Ashok	B.Sc. III	Male	
9.	Chate Omkesh Madhav	B.Sc. III	Male	
10.	Salunke Vaishnavi Dattatraya	M.Sc. I	Female	
11.	Gutte Jaywant Vaijanath	B.Sc. III	Male	
12.	Pranav vitthal Sarole	M.Sc. II	Male	
13.	Kavathe Shubham Anant	M.Sc. II	Male	
14.	Shaikh Javeriya Begum Lateef	M.Sc. II	Female	
15.	Anuja Ram kulkarni	B.Sc. II	Female	
16.	Shaikh Arzoo Fazal	M.Sc. I	Female	
17.	Kore vaishnavi gopinath	M.Sc. I	Female	
18.	Amrata Ghalappa Mathpati	B.Sc. III	Female	
19.	Shrikrishna Dnyanoba Chavan	B.Sc. III	Male	
20.	Pratiksha Dattatrya Haidrabade	M.Sc. I	Female	

21.	Pinjari Nawaj Shadul	B.Sc. III	Male	
22.	Sanchit Rajendra Patil	M.Sc. II	Male	
23.	More shamsundar Madhukar	M.Sc. II	Male	
24.	Birajdar Priyanka Devendra	M.Sc. I	Female	
25.	Kote Shrutika Somnath	B.Sc. III	Female	
26.	Mahalankar madhura balasaheb	B.Sc. II	Female	
27.	Samruddhi Jeetendra Joshi	B.Sc. III	Female	
28.	Sadaf Rabbani Bagwan	B.Sc. III	Female	
29.	Krushnakumar Lalasaheb Deshmukh	M.Sc. I	Male	
30.	Bhuvan sunil sude	B.Sc. III	Male	

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