Shiv Chhatrapati Shikshan Sanstha's

Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)

Department of Biotechnology

A) Summary

1) Title of Programme:		Workshop on Advanced Bioinstrumentation Techniques		
2) Name of Organizing Department/Unit:		Department of Biotechnology		
3) Name of the Coordinator(s)/ Convener(s)/ Organizer(s) of the Programme:		Chief Organizer: Dr. M. H. Gavhane Joint Chief Organizer: Prof. S. N. Shinde Convener: Dr. S. S. Kulkarni		
4) Date(s) of the Programme:		16th October 2025		
5) Venue/ Mode:		Dept. of Biotechnology, R. S. M. LATUR		
6) Target Group:		B.Sc. & M.Sc. Students		
7) Number of Participants:		Male	Female	Total
A separate list with signatures be maintained in the department/Unit)	Teaching	03	00	03
	Non-Teaching	00	00	00
	Students	05	08	13
8) Name(s) and details of Resource Person(s), if any:		Mr. Maroti Sudewad, Asst. Professor, Department of Chemistry, Rajarshi Shahu Mahavidyalaya, Latur (Autonomous) Mr. U. P. Sirdeshmukh Asst. Professor, Department of Chemistry, Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)		
9) Total Expenditure for the Programme:		Nil		
10) Source of Funding:		Not Applicable		

B) Report

i. Title

Workshop on Advanced Bioinstrumentation Techniques

ii. Introduction

Understanding the principles and applications of these advanced instruments is essential for students pursuing higher education and research in biotechnology. To provide practical exposure and hands-on understanding of such modern analytical tools, a Workshop on "Advanced Bioinstrumentation Techniques" was organized by the Department of Biotechnology, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur on 16.10.2025 The program commenced with an introductory address by Dr Sanghapal Kshirasagar, Assistant Professor in the Department of Biotechnology at Rajarshi Shahu Mahavidyalaya, Latur (Autonomous). The workshop aimed to train students in operating and understanding the working principles of key bioinstrumentation techniques used in biochemical and molecular analyses.

iii. Objectives of the Programme/ issues addressed

- To provide hands-on training and conceptual understanding of advanced bioinstrumentation techniques.
- To familiarize students with the principles and applications of Fluorimetry, Fluorescence Microscopy, and High-Performance Liquid Chromatography (HPLC).
- To enhance the practical skills of postgraduate students in using analytical instruments commonly used in biotechnology laboratories.
- To bridge the gap between theoretical knowledge and practical implementation of modern bioanalytical tools.

iv. Details of Participants

Total 13 student participants (Male 05 and Female 08) have attended this program.

v. Brief Summary of Events/ Sessions

The workshop comprised two technical sessions conducted by expert resource persons from the college: Mr. U. P. Sirdeshmukh, Assistant Professor, Department of Biotechnology, Rajarshi Shahu Mahavidyalaya, Latur (Autonomous), conducted a session on Fluorimetry and Fluorescence Microscopy. He elaborated on the principles, instrumentation, and working mechanisms of fluorescence-based detection systems.

Demonstrations included sample preparation, excitation and emission spectra, and visualization under a fluorescence microscope. Mr. Maroti Sudewad, Assistant Professor, Department of Chemistry, Rajarshi Shahu Mahavidyalaya, Latur (Autonomous), conducted a session on High-Performance Liquid Chromatography (HPLC). He explained the theoretical background, instrumentation, and applications of HPLC in biochemical compound separation, purification, and analysis. Students were given demonstrations on column handling, solvent preparation, and data interpretation. The sessions were highly interactive, with students actively engaging in discussions and demonstrations.

vi. Conclusion, with Feedback on the Programme

The Workshop on Advanced Bioinstrumentation Techniques provided valuable hands-on exposure to modern analytical tools used in biotechnology research and industry. The resource persons effectively demonstrated the working principles and applications of key instruments like HPLC, Fluorimetry, and Fluorescence Microscopy. Students expressed that the workshop enhanced their understanding of analytical techniques and strengthened their laboratory skills. The event was highly beneficial for M.Sc. Biotechnology students, helping them connect theoretical knowledge with real-world applications and motivating them towards advanced research and instrumentation-based careers.

vii. Appendix: List of Participants

Date: 17.10.2025

HOD
Head
Department of Biotechnology
Rajarshi Shahu Mahavidyalaya
(Autonomous) Latur-413 531

Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)

Principal
PRINCIPAL
Rajarshi Shahu Mahavidyalaya,Latur
(Autonomous)

C) Geotagged Photographs/ Screenshots

Mr. U. P. Sirdeshmukh, Assistant Professor, Department of Biotechnology, Rajarshi Shahu Mahavidyalaya, Latur (Autonomous), conducted a session on Fluorimetry and Fluorescence Microscopy.

Mr. Maroti Sudewad, Assistant Professor, Department of Chemistry, Rajarshi Shahu Mahavidyalaya, Latur (Autonomous), conducted a session on High-Performance Liquid Chromatography (HPLC).

D) Brochure Prepared for the Program

Shiv Chhatrapati Shikshan Sanstha's

Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)

Department of Biotechnology

Workshop on Advanced Bioinstrumentation Techniques

Sr.No	Name of the Student	Gender	Signature
1	Dadge Mayuri Manik	Female	Mayuri
2	Bonte Pooja Balaji	Female	[illegible]
3	Bhalerao Pranita Kamalcar	-"-	[illegible]
4	Shukla Abha Fatehbahadur	-"-	[illegible]
5	Daswante Tejashree Deepak	-"-	Tejashree
6	Rathod Dnyaneshwari Harising	-"-	Dnyaneshwari
7	Patil Vaishnavi Dilip	-"-	[illegible]
8	Kasle Rutuja Dilip	"	[illegible]
9	Mohite Shubham Anil	Male	[illegible]
10	Mane Vaibhav Prabhakar	Male	[illegible]
11	Omkar Shyamrao Reddy	Male	Omkar
12	Abhishek Sudhakar Survase	Male	BSS
13	Shreedatt Abhimanyu Bhakare	Male	SAB
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Head
Department of Biotechnology
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Rajarshi Shahu Mahavidyalaya, Latur (Autonomous)

PRINCIPAL
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