

"Dissemination of Education for Knowledge Science & Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)
Department of Zoology

ONE DAY WORKSHOP ON
'GEL ELECTROPHORESIS:
PRINCIPLE AND APPLICATIONS'
UNDER MOU ACTIVITY
(20th February, 2025)

Academic Year: 2024-2025

“Dissemination of Education for Knowledge Science & Culture”

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur

(An Empowered Autonomous Institute)

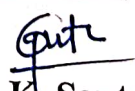
Department of Zoology

Academic Year: 2024-25

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One Day workshop on 'Gel Electrophoresis: Principle and Applications' - MoU Activity in Collaboration with The New College, Kolhapur

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Dr. G. K. Sontakke

HEAD

DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)



"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)
Internal Quality Assurance Cell

2024-25

Quality Initiatives/ Activities Report



1. **Name of Department:** ZOOLOGY

2. **Name of Organized Activity:** One Day workshop on 'Gel Electrophoresis: Principle and Applications' MoU activity in collaboration with The New College, Kolhapur

3. **Date/ Duration:** 20/02/2025, 11:00 am onwards

4. **Aims and Objectives:**

Aim: To provide hands on training on gel electrophoresis with it's principle and applications

Objectives:

- i. To understand the principle of gel electrophoresis
- ii. To acquire facts about the practical approaches of gel electrophoresis
- iii. To obtain information about applications of gel electrophoresis
- iv. To conduct activity under MoU in collaboration with The New College, Kolhapur

5. **No. of Beneficiaries:**

Sr. No.	Teachers (09)		Students (38)		Total
	Male	Female	Male	Female	
1	02	07	02	36	47

6. **Expenditure & Funding Agency:** NA

7. **Brief Description:**

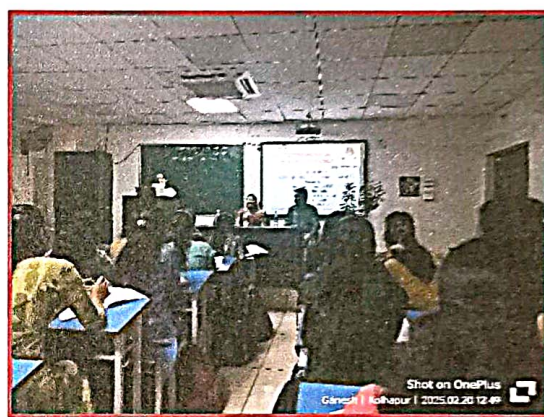
Department of Zoology, Vivekanand College, Kolhapur (An Empowered Autonomous Institute) and IQAC had organized one day workshop on 'Gel Electrophoresis: Principle and Application' Under the MoU in collaboration with New College, Kolhapur. This workshop was organized for the B. Sc. Students. Total 38 students and 09 faculties participated in this workshop. Dr. T. C. Gaupale, Assistant Professor, Department Zoology had given introduction of the workshop. The workshop was conducted in two sessions. The session- I 'Requirements and Chemical Preparation of Gel Electrophoresis' was conducted by Ms. N. A. Patel, Assistant Professor, Department of Zoology. In this session, she explained the discovery, principle, types and chemical preparations of Agarose and SDS-Polyacrylamide Gel Electrophoresis with it's

animated videos. The session II- 'Demonstration and Hands on training of Gel Electrophoresis' was given by Dr. S. S. Desai and Mr. G. H. Fadake where they explained the process and gave hands on training on gel electrophoresis for the students of both colleges. This was very interactive session. The workshop was started at 11:00 am and further proceeded with both sessions. This workshop was conducted with the permission of Principal Dr. R. R. Kumbhar and under the guidance of Dr. G. K. Sontakke, Head, Department of Zoology, Vivekanand College, Kolhapur (An Empowered Autonomous Institute).

8. Outcomes: (After completing the activity)


- i. Students acquired knowledge about principle of gel electrophoresis
- ii. Students acquired facts about the practical approaches of gel electrophoresis
- iii. Students gained information about applications of gel electrophoresis

9. Photos:



One Day Workshop on 'Gel Electrophoresis: Principle and Application'
MoU activity in collaboration with The New College Kolhapur

10. Signature of Coordinator/ Organizer:


Dr. G. K. Sontakke
HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

PERMISSION LETTER

Department of Zoology
Date: 13/02/2025

To,
The Principal
Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)

Subject: Request for Permission to Organize Workshop on Gel Electrophoresis: Principles and Applications

Respected Sir,

I, on behalf of the Department of Zoology, would like to seek your kind permission to organize a one-day workshop on "Gel Electrophoresis: Principles and Applications" under the existing MoU with The New College Kolhapur. The workshop is proposed to be conducted on Thursday; 20/02/2025, at Zoology department from 11.00 am onwards. The objective is to provide hands-on training and theoretical knowledge to students and faculty member in molecular biology techniques. We request your approval for the workshop & permission to use the necessary infrastructure, including the smart room no. 203 and sanction the expenditure of Rs. 500/- for the same. Kindly grant us permission to conduct this workshop.

13/2/2025

Approved.
13.2.25

Yours Faithfully,



Dr. G. K. Sontakke

HEAD

DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic Year: 2024-25

Date: 18/02/2025

NOTICE

All the students of B.Sc. III and B.Sc. II (Major) are hereby informed that Department of Zoology, Vivekanand College, Kolhapur (An Empowered Autonomous Institute) has organized a **One-Day Workshop on 'Gel Electrophoresis : Principles and Applications'** under the MoU with The New College, Kolhapur on Thursday, 20th February, 2025 at the Department of Zoology from 11:00 am onwards. Attendance is compulsory to all the students.

Gita

Dr. G. K. Sontakke

HEAD

**DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)**

Jr. College Recog.No. H.S.C./ 1074/R-1/DT : 8-8-1976
Jr. College Code No. 23-09-002
Jr. College U.Dise No. 27341301006

"ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार"
-शिक्षणमहर्षी डॉ. बापूजी साळुंखे

Estd.: June 1964



Shri Swami Vivekanand Shikshan Sanstha's
VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

2130, 'E' Tarabai Park, Kolhapur, Tal. Karveer, Dist. Kolhapur -416003

Affiliated to Shivaji University, Kolhapur (M.S.)

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College with Potential for Excellence by U.G.C., New Delhi

"Star College" by D.B.T Govt. of India

ISO 9001 : 2015



(अधिकारप्रदत्त स्वायत्त)
कोल्हापूर

Ph. : 0231-2658612 | Fax : 0231-2658840 | Resl. : 0231-2653962 | Website : www.vivekanandcollege.ac.in | E-mail : info@vivekanandcollege.org

Founder Dr. Bapuji Salunkhe D.Lit.	President Hon. Chandrakant Dada Patil MLA	Chairman Prin. Abhaykumar Salunkhe M.A.	Secretary Prin. Mrs. Shubhangi Gawade M.Sc., B.Ed.	Principal Dr. R. R. Kumbhar M.Sc., M.Phil., Ph.D.
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Ref. No. VCK/ 2603/2024-25

Date : 15/2/2025

To,
Prof. (Dr.) Kavita Amrut Gajare
Head, Department of Zoology
The New College, Kolhapur

Subject: Invitation for Workshop on Gel Electrophoresis: Principle and Applications

Respected Madam,

The Department of Zoology, Vivekanand College, Kolhapur (An Empowered Autonomous Institute), is pleased to invite your esteemed institution to participate in a one-day workshop on "Gel Electrophoresis: Principles and Applications", organized under the Memorandum of Understanding (MoU) between our institutions.

The workshop is scheduled to be held on Thursday, 20/02/2025, at Zoology department from 11.00 am onwards. It aims to provide hands-on training and theoretical insights into gel electrophoresis techniques, which are essential for molecular biology studies. We would be honoured by the participation of one faculty member and B.Sc. III students from your institution. Looking forward to your positive response.

Yours Faithfully,

Per
Dr. R. R. Kumbhar
PRINCIPAL
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Received
Dr. Bapuji

6

"Dissemination of Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)

Department of Zoology & IQAC

Under MoU with The New College, Kolhapur

Organizes One Day Workshop on

'Gel Electrophoresis: Principle and Applications'

20th February, 2025

Time: 11:00 am onwards

Venue: Room No. 203

Programme Schedule

Introduction & Welcome: Dr. T. C. Gaupale

Assistant Professor, Department of Zoology,
Vivekanand College, Kolhapur (An Empowered Autonomous
Institute)

Session I- Requirements & Chemical Preparation for Gel Electrophoresis:

Ms. N.A. Patel

Assistant Professor, Department of Zoology,
Vivekanand College, Kolhapur (An Empowered Autonomous
Institute)

Session II- Demonstration & Hands-on Training of Gel Electrophoresis:

Dr. S. S. Desai

Assistant Professor, Department of Zoology,
Vivekanand College, Kolhapur (An Empowered Autonomous
Institute)

Mr. G. H. Fadake

Assistant Professor, Department of Zoology,
Vivekanand College, Kolhapur (An Empowered Autonomous
Institute)

Vote of Thanks

: Ms. N. A. Jadhav

Assistant Professor, Department of Zoology,
Vivekanand College, Kolhapur (An Empowered Autonomous
Institute)

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Organizes One Day Workshop on

'Gel Electrophoresis: Principal and Applications'

Under MoU Activity with The New College, Kolhapur

Academic Year: 2024-25

Date & Time : 20/02/2025, 11.00 am onwards

Venue: Room No.203

Attendance of Faculty

Sr. No	Name of Faculty	Name of College	Signature
1.	Ms. P. R. Goikwad	Vivekanand College, Kolhapur	Goikwad
2.	Ms. N. A. Tadhav	Vivekanand College, Kolhapur	Tadhav
3.	Ms. P. S. Ghetfalkar	Vivekanand college, kolhapur	Ghetfalkar
4.	Mr. G. H. Fadake	Vivekanand college, kolhapur	Fadake
5.	Dr. S. S. Desai	Vivekanand College, Kolhapur	Desai
6.	Ms. N. A. Patel	Vivekanand College, Kolhapur	Patel
7.	Ms. Y. S. Pujari	The New college kol	Pujari
8.	Dr. T. C. Gaupale	Vivekanand college	Gaupale
9.	Dr. T. C. Patil	Vivekanand college	Patil
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18.			

G.K. Sonata

Dr G. K. Sonata

HEAD

DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

"Dissemination of Education for Knowledge, Science and Culture"

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Organizes One Day Workshop on

'Gel Electrophoresis: Principal and Applications'

Under MoU Activity with The New College, Kolhapur

Academic Year: 2024-25


Date & Time: 20/02/2025, 11.00 am onwards

Venue: Room No.203

Attendance of Students

Sr. No	Name of Students	Name of College	Signature
1.	Dnyaneshwari P Kokate	The New College	<i>D.Kokate</i>
2.	Kimaya K. Patil	The New College	<i>K.K.Patil</i>
3.	Shirina V. Bariya	VCK	<i>Shirina</i>
4.	Rutuja Pradeep Navale	VCK	<i>Rutuja</i>
5.	Madhuri Sanjay Patil	VCK	<i>M.Patil</i>
6.	Vidit Sachin Khot	VCK	<i>V.Khot</i>
7.	Anushka R. Patil	VCK	<i>Anushka</i>
8.	Suryash K. Jadhav	VCK	<i>SJ</i>
9.	Mahamadkar Shabanul Mulka	VCK	<i>Shabanul</i>
10.	Sanika Sanjay More	VCK	<i>SS More</i>
11.	Shireen Sajid Momin	VCK	<i>Shireen</i>
12.	Priyanka Sandeep Kukade	VCK	<i>P.Kukade</i>
13.	Prabodhini R. Dindayal	VCK	<i>P.R.Dindayal</i>
14.	Vaishnavi Vinod Abkange	VCK	<i>V.V.Abkange</i>
15.	Rutuja Vishal Kamble	VCK	<i>R.Kamble</i>
16.	Sahida Allauddin Mansuri	VCK	<i>M.Sahida</i>
17.	Shambhavi Mukesh Kr. Mishra	VCK	<i>Shambhavi</i>
18.	Rifat Nasir Khan Ustad	VCK	<i>R.Ustad</i>
19.	Ayesha Aslam Shaikh	VCK	<i>Ashaikh</i>
20.	Priya Gopal Singh	VCK	<i>Priya</i>
21.	Afroz Aslam Sayyad	VCK	<i>Afroz</i>
22.	Ashiya Riyaj Nayakurdi	VCK	<i>Ashiya</i>
23.	Sonali Ramesh Rathod	VCK	<i>Rathod</i>

24.	Pradnya Rajendra Patil.	VCK.	Patil.
25.	Siddhi Sanjay Katkar.	VCK	Siddhi .
26.	Komal Anil Mitake	VCK	Komal
27.	Shruti Sudarshan Raje	VCK	Raje
28.	Asmita Krishnesh Lawhate	The new collage	Asmita
29.	Lata Dhondiram Bajari	The new collage	Bajari
30.	Kranti Sagar Chavan	NCK	Kranti Chavan.
31.	Madhura Tukaram Londhe.	The New college	Madhura .
32.	Patil Shruti Ramesh	NCK	Patil
33.	SAKSHI S. SUTAR	NCK	Sutar
34.	Pranali S. Jawade	NCK	Jawade
35.	Asmita Krishnesh Lawhate	—	Asmita
36.	Kranti Sagar Chavan	—	Kranti Chavan.
37.	Madhura Tukaram Londhe	—	Madhura .
38.	Lata Dhondiram Bajari	—	Lata Bajari.
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 Dr G. K. Sonata
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Estd : June 1964



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Founder
Dr. Bapuji Salunkhe
D.Lit.

President
Hon. Chandrakant Dada Patil
MLA

Chairman
Prin. Abhaykumar Salunkhe
M.A.

Secretary
Prin. Mrs. Shubhangi Gawade
M.Sc., B.Ed.

Principal
Dr. R. R. Kumbhar
M.Sc., M.Phil., Ph.D.

Ref. No. VCK/2643/2024-25

Date : 26/2/2025

To,
Prof. (Dr.) Kavita Amrut Gajare
Head,
Department of Zoology
The New College, Kolhapur

Subject: Letter of Appreciation

Respected Madam,

On behalf of the Department of Zoology, Vivekanand College, Kolhapur (An Empowered Autonomous Institute), we wish to express our gratitude for participating in the One-Day Workshop on 'Gel Electrophoresis: Principles and Applications', organized under the Memorandum of Understanding (MoU) between our institutions, held on Thursday, 20/02/2025, at the Department of Zoology from 11.00 am onwards.

We deeply appreciate your time and efforts in participating in this workshop. Your contribution, both in the hands-on training and in sharing theoretical insights into gel electrophoresis techniques, has been invaluable. We trust that the workshop will be highly beneficial to the students in enhancing their practical and theoretical understanding of the subject.

Received
by
Dr. R. R. Kumbhar

Yours faithfully,

Per
Dr. R. R. Kumbhar
PRINCIPAL

VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

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Department of Zoology

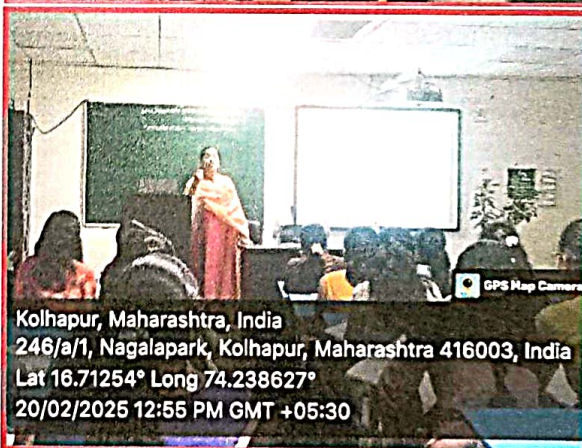
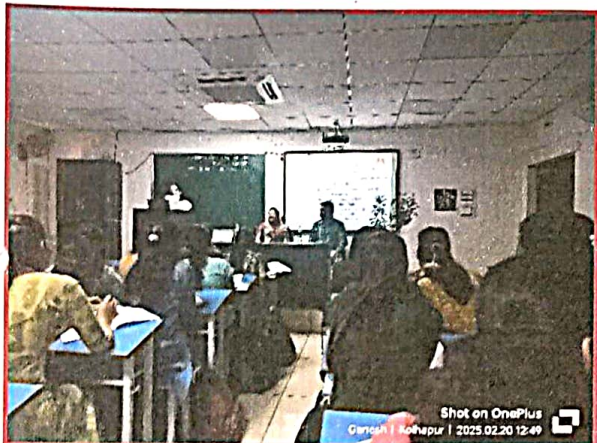
Academic Year 2024-25

PHOTOPLATE

One Day workshop on "Gel Electrophoresis: Principle and Application"

MoU activity in collaboration with New College Kolhapur.

(20/02/2025)



Pute

Dr. G. K. Sontakke

HEAD

**DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)**

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Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic Year: 2024-2025

Report of One Day Workshop on 'Gel Electrophoresis: Principle and Applications'

Department of Zoology, Vivekanand College, Kolhapur (An Empowered Autonomous Institute) and IQAC had organized a one day workshop on 'Gel Electrophoresis: Principle and Applications' under MoU with The New College, Kolhapur for B. Sc. students on Thursday, 20th February, 2025 at Zoology Department from 11:00 am onwards. The aim of this workshop was to give theoretical insights and provide hands on training on Gel Electrophoresis with it's principle and applications which would be useful in the field of biotechnology and molecular biology. Total 38 students and 09 faculties participated in this workshop.

Dr. T. C. Gaupale, Assistant Professor, Department Zoology had given introduction of the workshop. The workshop was conducted in two sessions. The session-I 'Requirements and chemical preparation for Gel Electrophoresis' was conducted by Ms. N. A. Patel, Assistant Professor, Department of Zoology, Vivekanand College, Kolhapur. In this session, she explained the discovery, principle, types and chemical preparations of Agarose and SDS-Polyacrylamide Gel Electrophoresis with it's animated videos. The session- II was engaged by Dr. S. S. Desai and Mr. G. H. Fadake in which they demonstrated and gave hands on training of sample preparation, gel preparation, sample loading, band visualization of agarose gel electrophoresis to the students of both colleges. Both the sessions were very interactive and informative.

Vote of thanks was proposed by Ms. N. A. Jadhav. This workshop was conducted with the permission of Principal- Dr. R. R. Kumbhar, IQAC Coordinator - Dr. Shruti Joshi and under the guidance of Dr. G. K. Sontakke, Head, Department of Zoology Vivekanand College, Kolhapur (An Empowered Autonomous Institute).



Dr. G. K. Sontakke

HEAD

**DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)**

बातमी
प्राणिशास्त्र विभाग
जेल इलेक्ट्रोफोरेसिस कार्यशाळेचे यशस्वी आयोजन

कोल्हापुर – दि. 20/02/2025


कार्यक्रमाचे स्थळ – विवेकानंद कॉलेज, कोल्हापुर (अधिकार प्रदत्त स्वायत्त संस्था)

कार्यक्रमाचे आयोजन करणाऱ्या विभागाचे नाव – प्राणीशास्त्र विभाग.

स्वामी विवेकानंद शिक्षण संस्थेच्या विवेकानंद महाविद्यालयामध्ये प्राणिशास्त्र विभाग आणि IQAC यांच्या संयुक्त विद्यमाने न्यु कॉलेज, कोल्हापुर बरोबर सामंजस्य करार अंतर्गत बी.एस्सी. द्वितीय व तृतीय वर्षाच्या विद्यार्थ्यांसाठी जेल इलेक्ट्रोफोरेसिस, तत्व व उपयोग या विषयावर एक दिवसीय कार्यशाळेचे आयोजन करण्यात आले.

कार्यशाळे दरम्यान विद्यार्थ्यांचे जेल इलेक्ट्रोफोरेसिस मुलभुत संकल्पना तांत्रिक प्रक्रिया आणि त्यांचे जैवशास्त्रीय संशोधन क्षेत्रातील उपयोग याबद्दल सखोल मार्गदर्शन करण्यात आले. कु. एन. ए. पटेल यांनी सैध्दांतीक भाग स्पष्ट करुण अगॅरोज जेल, आणि पॉलीअॅक्रिलामाईड जेल इलेक्ट्रोफोरेसिस साठी जेल तयार करणे, सॅम्पल लोडिंग-रनिंग आणि बॅंड विज्वलायझेशन याचे प्रशिक्षण श्री. जी. एच. फडके आणि डॉ. एस. एस. देसाई यांनी दिले.

या कार्यशाळेचा उपयोग विद्यार्थ्यांना जैव तंत्रज्ञान व संशोधन क्षेत्रात उपयोगी ठरेल अशा आधुनिक तंत्रज्ञानाची ओळख करुन देणे हा होता. कार्यक्रमाचे नियोजन प्राणिशास्त्र विभागप्रमुख डॉ. जी. के. सोनटक्के यांनी केले. या कार्यशाळेसाठी महाविद्यालयाचे प्राचार्य डॉ. आर. आर. कुंभार सर आणि IQAC च्या समन्वयक डॉ. जोशी मॅडम यांचे अमूल्य योगदान लाभले. कार्यक्रमाचे प्रास्ताविक डॉ. टी. सी. गौपाले यांनी केले, तसेच सुत्रसंचालन डॉ. एस. एस. देसाई यांनी केले. कु. एन. ए. जाधव यांनी कार्यक्रमाचे आभार प्रदर्शन केले. यामध्ये विभागातील सर्व सहाय्यक प्राध्यापक व शिक्षकेतर कर्मचारी यांचे सहकार्य लाभलेया कार्यक्रमासाठी न्यु कॉलेज कोल्हापुर मधून बी. एस्सी. भाग 2 व 3 चे एकुण 10 व विवेकानंद कॉलेज मधून बी. एस्सी. भाग 2 व 3 चे 21 विद्यार्थी उपस्थित होते.


विभाग प्रमुख
प्राणीशास्त्र विभाग,
विवेकानंद कॉलेज कोल्हापुर,
(अधिकारप्रदत्त स्वायत्त)

GEL ELECTROPHORESIS- PRINCIPLE AND APPLICATIONS

DATE : 20/02/2025

One day workshop on

"Gel Electrophoresis - Principle and applications"

Organized by

Department of Zoology & IQAC

Vivekanand College, Kolhapur

(An Empowered Autonomous Institute)

Under MoU activity with

The New College Kolhapur

Academic Year 2024-25



CONTENT

- ❖ Introduction
- ❖ Principle and theory of electrophoresis
- ❖ Different types of electrophoresis techniques
- ❖ Moving Boundary Electrophoresis
- ❖ Zone electrophoresis
- ❖ Applications of electrophoresis

INTRODUCTION

- ❑ The term electrophoresis describes the migration of a charged particle under the influence of electric field.
- ❑ Electrophoresis is similar to chromatography.
- ❑ Electric field is used as a dragging force.
- ❑ Technique is simple and very effective.
- ❑ Many important biological molecules such as amino acids, peptides, proteins, nucleotides, nucleic acids possess ionisable groups and, therefore, at any given pH, exists in solution as electrically charged species either as cations or anions.
- ❑ Most of the polymers (containing macromolecules) are electrically charged and will therefore move in an electric field.

- ❑ Under the charge of an electric field these charged particles will migrate either to cathode or to anode, depending on the nature of their net charge.
- ❑ This is one of the most fundamental processes used in all types of molecular biology and RDT experiments.
- ❑ It is Simple, rapid and highly sensitive. It is used for separation of-
 - ✓ Proteins in body fluids: serum, urine, CSF
 - ✓ Proteins in erythrocytes: hemoglobin
 - ✓ Nucleic acids: DNA, RNA



Father of Electrophoresis

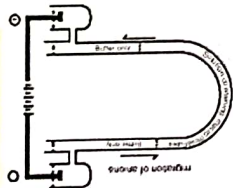
Arne Tiselius
(Sweden, 1902-1971)

The Nobel Prize in Chemistry 1948

"for his research on electrophoresis and adsorption analysis, especially for his discoveries concerning the complex nature of the serum proteins"

This type of cell is essentially a bent glass tube with electrolyte reservoirs containing the cathode and anode, and a buffer containing the macromolecules that need electrophoresed.

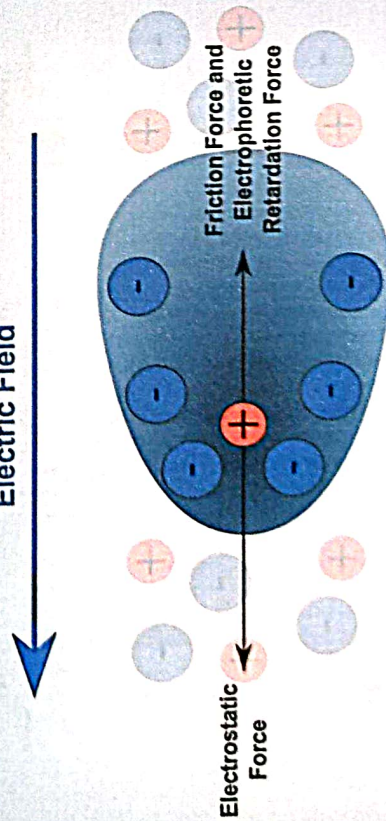
He tested horse serum in the apparatus and found 4 distinct bands consisting of albumin and 3 globulin components, which he named " α ," " β ," and " γ ."



DEFINITION

- *Electro* means *Electricity* & *Phoresis* means *Separation*
 - Separation of biomolecules by the effect of an electric current.
 - Electrophoresis is the migration of charged particles or molecules in a medium under the influence of an applied electric field.
- OR
- Electrophoresis may be defined as the migration of the charged particle through a solution under the influence of an external electrical field.

Electric Field



Factors affecting electrophoresis

Strength of electric field

Charge of the sample used

Size of the biomolecule

Binding strength of biomolecule

Hydrophobicity of the sample taken

Shape of the biomolecule

Ionic strength of buffer