



R. J. COLLEGE of Arts, Science & Commerce (AUTONOMOUS)

(Hindi Vidya Prachar Samiti's RAMNIRANJAN JHUNJHUNWALA COLLEGE of Arts, Science & Commerce)

Opposite Ghatkopar Railway Station, Ghatkopar (West), Mumbai 400086, Maharashtra, INDIA.

Website: www.rjcollege.edu.in

Email: rjcollege@rjcollege.edu.in

Tel No: +91 22 25151763

Fax No: +91 22 25150957

College is recognized under Section 2(f) & 12(B) of the UGC Act, 1956

Affiliated to UNIVERSITY OF MUMBAI || NAAC Re-Accredited 'A' Grade (CGPA: 3.50)



HINDI VIDYA PRACHAR SAMITI'S
RAMNIRANJAN JHUNJHUNWALA COLLEGE

Department of Biotechnology

Presents

DBT Star College Activity

'Gyan-Vigyan'

Online Popular Lecture Series
(2020-21)



MASS SPECTROMETRY

Mr. Subodh Chawan

Saturday, 5th December, 2020



8.30 am



On



zoom

Notice for Online lecture series-Gyan Vigyan, Lecture V- "Mass spectrometry"
organised By Biotechnology Department on 5th December 2020.



Principal

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Capability Development and Skill Enhancement (Awareness of Trends in Technology)

DBT STAR COLLEGE ACTIVITY: Online lecture series-Gyan Vigyan

Lecture V- "Mass spectrometry"

Date: SATURDAY, DECEMBER 5th 2020, Time: 8:30 AM- 10:00 AM

Resource Person: Mr. Subodh Chawan Director, Scientia Life Technologies LLP

Students Benefited: Students of Biotechnology, Zoology, Botany and Chemistry.

Number of students Benefited: 50

Number of Teachers Involved: 08 - Dr. Sucheta Golwalkar, Dr. Smruti Thombare, Dr. Rachana Acharya, Dr. Tania Karipel, Saleha Khan, Dr. Namrata Parab, Smita Jadhav, Jasvinder Kaur

REPORT:

The Department of Biotechnology organized a webinar on "Mass Spectrometry" for the students of Biotechnology, Zoology, Botany and Chemistry on 5th Dec 2020. The speaker was Mr. Subodh Chawan, Director, Scientia Life Technologies LLP.

He discussed important aspects of mass spectrometry like Key components of mass spectrometer, ionization techniques (MALDI, ESI), type of analyzers, applications of MS as analytical technique in various fields like proteomics, forensics, therapeutics, food industry and environmental studies etc.

During the Q /A session of the webinar, students enthusiastically interacted with the speaker.



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List of students attended the session on Awareness of Trends in Technology

Roll No.	TYBT	Roll No.	Msc-BT
9	Dongre Shrutika Nitin	1	Rushikesh Ambikar
10	Dubey Nidhi Balmukund	3	Pooja Bait
11	Dubey Shreya Sunilkumar	6	Pranali Dhas
14	Gawand Shubham Anil	7	Archana Jaiswar
24	Khan Shahin Fasiullah	9	Suraksha Kamble
28	Menon Vaishnavi Vikram	11	Rituja Mahanty
35	Oza Preeti Kaushal	13	Aniket Mourya
36	Pampottithara Merin Antony	14	Kasturi Nag
38	Parab Siddhi Narendra	15	Ketaki Rane
39	Pathak Priya Ravindra	17	Saloni Thakore
40	Pingale Divya Vijay	18	Jidnyasa Ture
41	Randive Abhishek Rajaram	20	Ishita Vast
42	Rane Sakshi Satish	21	Lalit Wagh
43	Sahani Jyoti Narad	22	Pratiksha Yadav
44	Shukla Ekta Pravin	24	Sneha Yadav
45	Singh Aakanksha Shivshankar		
47	Singh Namita Dhirajkumar		




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48	Tiwari Rahul Ashok Poonam		
49	Tiwari Satyam Premchand Surindra		
50	Tripathi Priya Chandrashekhar		
51	Vishwakarma Riddhi Bharat		
53	Waghmare Pallavi Maruti		
54	Yadav Ankitkumar Mahendraprasad		
55	Yadav Sejal Lallan		
56	Yadav Shriya Surendra		
57	Koyande Aditi Rajendra Prerana		
58	Nishad Anisha Shyamsunder		
59	Panigrahy Pragati Jayram		

Students from other Departments Awareness of Trends in Technology:

Zoology/Chemistry/Botany
Akanksha Ghogale
Ansari Ruksar Zakir
Chempakamangalam Shreya Sanal
Hindavi Desai
Vaishnavi Rai
Krishnamoni Kalita
Anmol Mishra




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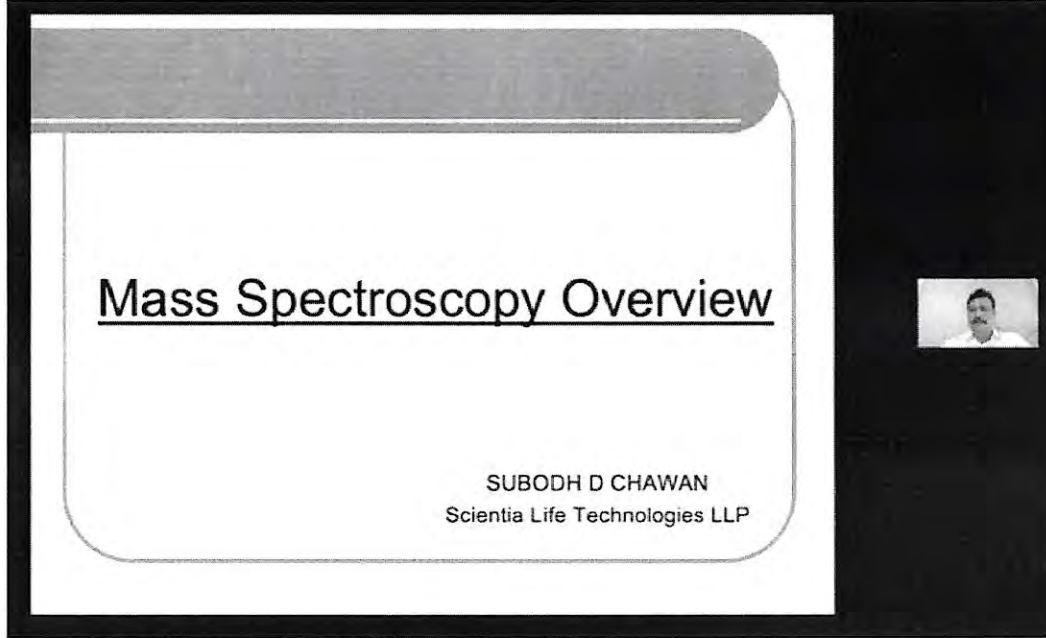
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Screenshot of Online lecture series-Gyan Vigyan, Lecture V- "Mass spectrometry" organised By Biotechnology Department on 5th December 2020.



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Key Components of Mass Spectrometer

Source: Ionization is the fundamental requirement for mass spectrometry. Gas phase ions are created in the source. Common types of ionization include electron impact (EI), chemical (CI), electrospray, matrix assisted laser desorption/ionization (MALDI).

High Vacuum: A high vacuum is required to ensure a large mean free path for the distance an ion can travel without colliding with another molecule. Frequent collisions reduce the number of ions passing through the mass spectrometer.

Mass Analyzer: The mass analyzer selectively filters the ions based on the mass-to-charge ratio (m/z) by electric and/or magnetic fields. Common types of mass analyzers include quadrupoles, traps, time of flight, Fourier transform ion cyclotron resonance and others.

Detector: Every ion that makes it from the source through the mass analyzer and collides with the detector creates a signal (a small current) that is relayed to the data system. The sum of multiple ion detector collisions generates the signal intensity.




```

graph LR
    Source[Source] --> MA[Mass Analyzer]
    MA --> Detector[Detector]
    subgraph HV [High Vacuum]
        MA
        Detector
    end
  
```

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DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE

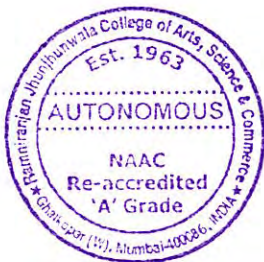
This is to certify that Ms. PAMPOTTITHARA MERIN ANTONY of TYBT has attended a webinar on "Mass spectrometry" delivered by Mr. Subodh Chawan, Director, Scientia Life Technologies LLP; organised by the Department of Biotechnology as part of Online lecture series-Gyan Vigyan under DBT Star College Activity on 05/12/2020.


Dr. Sucheta Golwalkar
Head, Department of Biotechnology




Dr. Himanshu Dawda
Principal

Copy of the Certificate of Participation Online Lecture Series – Gyan Vigyan, Lecture V – “Mass Spectrometry” organised by Biotechnology Department on 5th December 2020.




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