



## One Day Intensive Workshop on Liquid Chromatography-Mass Spectrometry

- Organized by CAMS at Venture Center-

<b>Gains</b>	<ul style="list-style-type: none"> <li>• Introduction to liquid chromatography and mass spectrometry technology</li> <li>• LCMS Instrumentation and Method development strategies</li> <li>• Workflow of different mass spectrometric applications</li> <li>• Quick update on latest techniques/developments</li> <li>• Lab Demonstration- LCMS method development, analysis of real samples and data interpretation</li> <li>• Workflow of different mass spectrometric applications</li> <li>• Mini workshop on data acquisition of real sample and data interpretation</li> <li>• Quick update on latest techniques/developments</li> <li>• Learn from faculty with extensive practical experience with industrial applications</li> </ul>								
<b>Organized by</b>	<ul style="list-style-type: none"> <li>• Venture Center – a Technology Business Incubator</li> </ul>								
<b>For whom</b>	<ul style="list-style-type: none"> <li>• Students, Academic researchers and Staff of organic chemistry, analytical chemistry, biochemistry, biotechnology, food technology, environmental science wishing to equip themselves for industry jobs</li> <li>• Industry professionals (Pharma, Biopharma, Chemical CROs, Environmental and Food industry etc.)</li> </ul>								
<b>When</b>	<b>(Thursday) 29<sup>th</sup> August 2024   Time: 9 am- 5.30 pm</b>								
<b>Where</b>	Lecture Theater & CAMS, Venture Center, 100 NCL Innovation Park, (Pashan) Road, Pune-411008								
<b>Contact</b>	Technical queries: Mr. Amit Wankhede   <a href="mailto:amit.wankhede@venturecenter.co.in">amit.wankhede@venturecenter.co.in</a>   +918956226088 Registration queries: Mr. Vineet Joshi   <a href="mailto:vineet.joshi@venturecenter.co.in">vineet.joshi@venturecenter.co.in</a>   +91-9156465141								
<b>Registration</b>	<p><b>Maximum 20 seats; First-come-first-serve.</b></p> <table border="1"> <thead> <tr> <th>Fee category</th><th>Fees</th></tr> </thead> <tbody> <tr> <td>Students with valid ID cards</td><td>Rs 1,000/-</td></tr> <tr> <td>Micro, small enterprises/ Individuals</td><td>Rs 2,000/-</td></tr> <tr> <td>Medium and large companies/ others</td><td>Rs 4,000/-</td></tr> </tbody> </table> <p><b>Steps for registration:</b></p> <ul style="list-style-type: none"> <li>• Step 1: Interested participants need to fill in registration form at the following link.</li> <li>• <b>Register Online at:</b> <a href="https://forms.gle/5T7vghWsSbguxJd59">https://forms.gle/5T7vghWsSbguxJd59</a></li> <li>• Step 2: Payment details will be shared via email to participants post screening of registration details and seat will be confirmed only after receipt of payment.</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• For more details, visit: <a href="https://www.venturecenter.co.in/events">https://www.venturecenter.co.in/events</a></li> <li>• <b>REGISTRATIONS AND FINAL PAYMENT DEADLINE Registration closes once 20 seats are full or on 26<sup>th</sup> August 2024 (whichever comes sooner)</b></li> <li>• <b>Fees paid is not refundable and non transferable under any circumstances</b></li> <li>• The organizers reserve the right to accept or refuse or delay registrations so as to optimize the composition of the group and hence maximize learning for all participants</li> </ul>	Fee category	Fees	Students with valid ID cards	Rs 1,000/-	Micro, small enterprises/ Individuals	Rs 2,000/-	Medium and large companies/ others	Rs 4,000/-
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## Introduction

Liquid chromatography-Mass Spectrometry (LC-MS) is a powerful analytical technique used for separation, identification and quantification of components in a mixture. It is analytical technique that involves physical separation of analytes followed by their mass-based detection. LC-MS technique is widely used in pharmaceutical analysis, environmental monitoring, food analysis, metabolomics and proteomics etc.

This workshop aims to introduce the participants to the basics of Liquid Chromatography - Mass Spectrometry. The goal is that the participants should be able to utilize their learning from this workshop for their respective workflows. The workshop will be conducted by faculty having vast experience working on high end mass spectrometers and related techniques. The workshop includes lab demonstrations and data interpretation exercises. Learn from faculty with extensive practical experience with industrial applications.

### Course outline:

- Theory of operational principles and essential concepts
- Introduction to different mass spectrometric workflows
- Demonstration on MS system; Running a sample- Create method, Create sequence, Acquire data, Data analysis
- Mini-workshop on data interpretation with real data; few special applications illustrated with real case studies
- Quick update on latest techniques/developments

## Participants to note the following

- Course includes tea and lunch at Venture Center
- Course will include: Lab demo; Access to restricted website with online compilation of resources for LC-MS; Course notes including slides, case studies and application notes and one-on-one feedback on data interpretation exercise
- **Please note, the participants will have to arrange for their own travel/local transport and accommodation and dinners**
- No sessions will be repeated if a participant is unable to attend due to any reasons.
- Free membership in mailing list to follow-up on workshop and intimation of relevant events/ funding/ opportunities



### Workshop Schedule

Thursday, 29<sup>th</sup> August 2024

Time	Session title	Lead
09.00 – 09.30	Registration	Vineet
09.30 – 09.45	Introduction to the course and faculty	Sneha
09.45 – 10.30	<ul style="list-style-type: none"> <li>General concepts, essential terms and basics of LC-MS</li> </ul>	Shakuntala
10.30 – 11.00	Tea; Group Photograph	
11.00 – 11.45	<ul style="list-style-type: none"> <li>Instrumentation                             <ul style="list-style-type: none"> <li>Types of Sources</li> <li>Types of Analyzers</li> <li>Types of Detectors</li> </ul> </li> <li>Method Development Strategies</li> </ul>	Arvind
11.45-12.30	<ul style="list-style-type: none"> <li>Basic Maintenance of LC-MS</li> <li>Applications of Mass Spectrometry</li> <li>Qualitative</li> <li>Quantitative</li> <li>Biopharma (1-2 slides)</li> </ul>	Heramb
12.30 – 13.30	Lunch	
13.30 – 16.00	<ul style="list-style-type: none"> <li>Introduction to practical session-sample prep (CAMS 500 NIP, Lab block 400 NIP)</li> <li>Demonstration on LC-MS system (CAMS 500 NIP)</li> <li>Running a sample, Create method, Create sequence, Data acquisition</li> <li>Data analysis</li> <li>VC Tour</li> </ul>	Sayali, Amit, Heramb,
16.00 – 16.30	Tea	
16.30 – 17.15	<ul style="list-style-type: none"> <li>Data interpretation exercise</li> <li>Calculations</li> </ul>	Sayali/Amit Heramb
17.15 – 17.15	<ul style="list-style-type: none"> <li>Closure – Feedback</li> </ul>	Sneha

### Speaker (in alphabetical order of last name)



**Sneha Asai**  
**Assistant Manager- Analytical Services**

Sneha is working as Assistant Manager at Center for BioPharma Analysis (CBA), Venture Center. She has completed her PhD degree in Life and Biomolecular Science from Stazione Zoologica Anton Dohrn, Italy. She has 8+ years of industrial experience in molecular genetics and clinical R&D. She was earlier associated with Linq Therapeutics Pvt. Ltd. and ATS Genetech Pvt Ltd. She manages the Analytical and Cell Culture Lab at CBA.



**Shakuntala Bai**  
**Assistant Scientist-Analytical Services**

Shakuntala is currently Assistant Scientist at Center for BioPharma Analysis (CBA), Venture Center. She holds a Ph.D. in Biological Sciences from CSIR- National Chemical Laboratory, Pune. She had worked as Project Scientist-II at Regional Centre for Biotechnology, Faridabad. Her doctoral and post doctoral work was based on biomarker discovery and mass spectrometry method development for clinical plasma studies in diabetes and preterm birth. She has professional experience in Mass spectrometry based proteomics, Cell culture techniques and animal experiments.



**Arvindkumar Chaurasiya**  
**Assistant Scientist-Analytical Services**

Arvindkumar is Assistant Scientist at Center for BioPharma Analysis (CBA), Venture Center. He holds a PhD degree in Biological Sciences from CSIR-National Chemical Laboratory, Pune. He has eight years of research and academic experience in working with liquid chromatography-mass spectrometry. During his PhD research work he worked on the identification and quantification of proteins, peptides and post-translational modifications of proteins using mass spectrometry. His responsibilities at Venture Center include method development, sample preparation, chromatography, data acquisition, data analysis and data interpretation using mass spectrometry.



**Heramb Kulkarni**  
**Principle Scientist-Analytical Services**

Heramb is working as Principle Scientist at Center for Biopharma Analysis (CBA), Venture Center. He holds a PhD degree in Life Science from Centre for Cellular and Molecular Biology, Hyderabad. He has 8+ years of industrial experience with pharma and biopharma R&D. He was earlier associated with Accutest Biologics Pvt. Ltd. and Biocon Limited. He leads mass spectrometry based studies at CBA.



**Sayali Kulkarni**  
**Specialist-Analytical Services**





Sayali is Specialist in Analytical Services, Venture Center. She has a Masters in Analytical Chemistry (Shivaji University) and 3 years experience as a quality control analyst in natural products. She was a project assistant in the Central NMR Facility at the National Chemical Laboratory, Pune. Her responsibilities include supporting incubatees and budding entrepreneurs by offering lab services, contributing and ensuring smooth operations, participates in installation of instruments & operating lab in coordination with scientific mentors and advisors.



**Amit Wankhede**  
**Scientist- Mass Spectrometry**

Amit is a Scientist at CAMS, Venture Center. He has a Masters in Pharmaceutical Chemistry (Sinhgad College of Pharmacy, Pune). He has 12 years of professional experience in Pharma and Bioanalytical (R&D) industry. He has previously worked in Sai Life Sciences, Pune and Alkem Lab Ltd., Mumbai. His key functional area was to develop and validate LCMS methods for drugs and metabolites at Bioanalytical GLP facility involving Pharmacokinetic Studies and In-vitro Assay (both clinical and non clinical).

			
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Organized by	
	<p>Entrepreneurship Development Center (Venture Center) – a CSIR initiative – is a Section 25 company hosted by the National Chemical Laboratory, Pune. Venture Center strives to nucleate and nurture technology and knowledge-based enterprises by leveraging the scientific and engineering competencies of the institutions in the Pune region in India. The Venture Center is a technology business incubator supported by the Department of Science &amp; Technology's National Science &amp; Technology Entrepreneurship Development Board (DST-NSTEDB). Venture Center's focuses on technology enterprises offering products and services exploiting scientific expertise in the areas of materials, chemicals and biological sciences &amp; engineering. For more information, visit <a href="https://www.venturecenter.co.in/">https://www.venturecenter.co.in/</a></p>
	<p>The mission of VC AnalytiX is to set up and operate a world class, efficient and reliable Analytical Services Center as an open access facility. VC AnalytiX also organizes various workshops and trainings for students of academic and research institutes. For more information, visit <a href="http://www.venturecenter.co.in/analytical/">www.venturecenter.co.in/analytical/</a></p>
	<p>The Center for Applications of Mass Spectrometry (CAMS) is a facility developed and managed by the BioIncubator at Venture Center, NCL Innovation Park, Pune, India as a resource center for foster collaboration between researchers and industrial/ entrepreneurial organizations leveraging mass spectrometry. CAMS plans to have a specific focus and emphasis on technology advancement, industrial applications and new venture creation (especially services leveraging mass spectroscopy to create value and tools enhancing the applicability of mass spectrometry). For more information, visit <a href="http://cams.venturecenter.co.in/">http://cams.venturecenter.co.in/</a></p>
	<p>Center for BioPharma Analysis (CBA) is an initiative of Venture Center supported by the National BioPharma Mission, BIRAC (Government of India). Services like Protein Characterization, Biosimilar testing, Bioanalytical analysis, Proteomics services are offered here. For more information, visit <a href="https://bioanalysis.in/">https://bioanalysis.in/</a></p>