



Technical Workshops Series – 2015

One-Day Workshop on Gas Chromatography Mass Spectrometry (GC-MS)- Wave 1

- Organized by Bioincubator, CAMS and Venture Center -

Learn	<p>Concepts of Gas Chromatography - Mass Spectrometry (GC-MS); GC theory, MS operation, including the operation of the most popular GC-MS interfaces; How a mass analyser works; MS calibration and optimization; Ion production, fragmentation and detection; Operation in MS, MS-MS, Structure determination by product ion analysis. Live demonstration of experiments; Mini-workshop on data interpretation with real data; Quick update on latest techniques/developments; Workshop is intended to be basic.</p>						
Organized by	<ul style="list-style-type: none"> BioIncubator at Venture Center Center For Applications of Mass Spectrometry (CAMS) at Venture Center Venture Center – a Technology Business Incubator 						
Supported by	<ul style="list-style-type: none"> Biotechnology Industry Research & Assistance Council (BIRAC) 						
For whom	<ul style="list-style-type: none"> Students, Researchers Industry professionals wishing to expand their skill sets 						
Course Director	Dr. Bharathi Nuthakki						
VC Organization Team	Ajeet Singh, Sujaya Ingale, Edna Joseph, Deepa Bhosle						
When	Tuesday, 1 December 2015 9 am – 5:30 pm						
Where	Training Room & CAMS Venture Center, 100 NCL Innovation Park, Dr. Homi Bhabha Road (Pashan), Pune 411008.						
Contact	Mr. Ajeet Singh Phone: +91-20-2586-5877 Email: cams@venturecenter.co.in						
Cost	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Large companies</td> <td style="text-align: right; padding: 2px;">4000/-</td> </tr> <tr> <td style="padding: 2px;">Micro, small and medium enterprises/Individuals</td> <td style="text-align: right; padding: 2px;">2000/-</td> </tr> <tr> <td style="padding: 2px;">Students with valid ID card</td> <td style="text-align: right; padding: 2px;">900/-</td> </tr> </table> <p>Limited seats: 20 ; First come first serve Register online at: http://www.venturecenter.co.in/workshops/ Note:-</p> <ul style="list-style-type: none"> Fees paid is not refundable and non transferable under any circumstances. Organizers reserve the right to accept or refuse or delay registrations so to optimize the composition of the group and hence maximize learning for all participants. 	Large companies	4000/-	Micro, small and medium enterprises/Individuals	2000/-	Students with valid ID card	900/-
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Introduction

This workshop aims to give an introduction to the principles and practices of GC-MS for industry professionals and students. The workshop will be conducted by Experts, having vast experience working in Mass Spectrometry. The workshop includes lab demonstrations and data interpretation exercises. The workshop shall also discuss some recent trends and new developments in research and industry relating to GC-MS.



Course Outline

- **Understanding the Gas Chromatography**
 - Concept: How does gas chromatography work?
 - Instrumentation (Injector, oven and detector)
 - Method development
- **Understanding the Mass Spectrometry**
 - Principle of Mass Spectrometry
 - Instrumentation (ion source, analyzers, detectors)
 - hyphenation with chromatography
 - Data interpretation and processing
 - Laboratory practices for mass spectrometry
- **Applications of GC-MS in research and commercial analysis**
- **Demo sessions at CAMS**
 - Targeted analysis
 - Untargeted analysis
 - Characterization of small molecules

Course includes



- Course material including slides, case studies and application notes
- Access to restricted website with online compilation of resources for GC-MS
- One-on-one feedback on data interpretation exercise
- Certificate of Participation issued by Venture Center
- Course includes tea and lunch at Venture Center cafeteria

Workshop Schedule			
Time	Session title	Lead	Venue
9:00 to 9:30	Registration		Foyer Learning center, VC
9:30 to 9:40	Introduction to the course and faculty	Dr. V.Premnath	Training Room, VC
9:45- 11:00	Understanding the Gas Chromatography	Dr. BharathiNuthakki	Training Room, VC
11:00 to 11:10	Tea		
11:10 to 13:15	Understanding the Mass Spectrometry	Dr. Ajeet Singh	Training Room, VC
13:15 to 14:00	Lunch		Cafeteria, VC
14:00 to 16:30	Demo sessions	Dr. Ajeet Singh Dr. BharathiNuthakki	CAMS, VC
16:30 to 17:00	Tea		Foyer Learning center, VC
17:00 to 17: 30	Closure; Certificate Distribution & Feedback	Dr. V. Premnath	Training Room, VC

Anchor Faculty	
	<p>Dr. BharathiNuthakki has more than 10 years of research experience in analytical chemistry. She has Developed analytical methods for separation and quantification of reaction products by GC-FID, GC/MS and Chiral GC-MS. She worked as Researcher in Battelle India, Pune where she executed client-based projects involving key expertise is in chemical/biosensing, analytical chemistry, green chemistry and application driven research. She was Visiting faculty at IISER where she taught chemical separations with emphasis on column chromatography, GC, HPLC, GC-MS, HPLC –MS, Mass spectroscopy She is recipient of Pfizer Green chemistry fellowship and the ‘International Forum on Applied Electrochemistry Scholarship’</p>
	<p>Dr. Ajeet Singh has more than 7 years of research experience in mass spectrometry. He is a Scientific Consultant at the Center of Applications of Mass Spectrometry (CAMS), Venture Center and co-founder of Barefeet Analytics Private Limited.He has a M.Sc. in Analytical Chemistry from the Indian Institute of Technology (IIT), Roorkee and Ph.D. in Chemistry from NCL Pune (AcSIR).He specializes in Mass Spectrometry and Mass Analysis. His expertise lies in method development for proteomics, qualitative as well as quantitative analysis of small molecules, pharmaceuticals drugs, pesticides, food contaminants and metabolites.</p>



About the organizer

	<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 & Technology's National Science & 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 & engineering. For more information, visit http://www.venturecenter.co.in</p>
	<p>The BioIncubator at Venture Center aims to nucleate and nurture technology and knowledge-based enterprises leveraging knowledge in the areas of biotechnology (biopharma, agrobiotech, industrial biotech, clean technology), biomedical engineering/ devices/ diagnostics, biomass value addition/ renewable fuels/chemicals/materials, bioinformatics, bio/medical services and related disciplines. For more information visit: http://www.bioincubator.venturecenter.co.in/</p>

Supported by

	<p>Biotechnology Industry Research & Assistance Council is a new industry-academia interface and implements its mandate through a wide range of impact initiatives, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring innovation excellence to the biotech firms and make them globally competitive. For more information about BIRAC: www.birac.nic.in</p>
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