

## One-Day Intensive Hands on Workshop on Chemical Clues: The Role of Chromatography and Spectroscopy in Forensic Analysis

Learn how HPLC, GC, Elemental Analysis and FTIR are used for Crime Investigations

Organized by VC AnalytiX at Venture Center

<b>Gains</b>	<ul style="list-style-type: none"> <li>The workshop is a part of a series intended to introduce applications of analytical chemistry, using modern analytical equipments, to solve cases in forensic science.</li> <li>Participants will get hands-on experience to learn the proper use of analytical instrumentation as it applies to forensic chemistry.</li> <li>They will develop the skills necessary to properly handle unknown substances, for daily laboratory work, develop a step-wise analysis approach, and analyze forensic evidence.</li> <li>Group discussions and dummy crime scene investigation.</li> </ul>								
<b>Organized by</b>	Venture Center – A Technology Business Incubator								
<b>For whom</b>	<ul style="list-style-type: none"> <li>You should have an interest in forensics and the laboratory environment. Whilst no specialized forensic training is required, a working chemistry knowledge will be beneficial.</li> <li>The course is open to anyone looking to further their practical knowledge of analytical chemistry</li> </ul>								
<b>When</b>	<b>14, January 2025   Time: 09:00 am – 05:30 pm</b>								
<b>Where</b>	Lecture Theater & Lab block, Venture Center, 100 NCL Innovation Park, Pashan Road, Pune-411008								
<b>Registration</b>	<p><b>Maximum 24 seats; First-come-first-serve.</b></p> <table border="1"> <thead> <tr> <th>Category</th><th>Fees for GC</th></tr> </thead> <tbody> <tr> <td>Students with valid ID card</td><td>1500 INR</td></tr> <tr> <td>Micro and small enterprises/ individuals</td><td>2500 INR</td></tr> <tr> <td>Medium and large companies/ others</td><td>4000 INR</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/EWioGUyFxAe5BAFz8">https://forms.gle/EWioGUyFxAe5BAFz8</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>More details at: <a href="https://www.venturecenter.co.in/analytical/home/technical-workshops-training-programs/">https://www.venturecenter.co.in/analytical/home/technical-workshops-training-programs/</a></li> <li><b>REGISTRATIONS AND FINAL PAYMENT DEADLINE</b> Registration closes once 24 seats are full or on 10th January 2025 (whichever comes sooner)</li> <li><b>Fees paid is not refundable and non transferable under any circumstances</b></li> </ul> <p>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</p>	Category	Fees for GC	Students with valid ID card	1500 INR	Micro and small enterprises/ individuals	2500 INR	Medium and large companies/ others	4000 INR
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## Introduction

Forensic chemistry is the application of chemistry and chemical methods, to assist in the identification of unknown materials found at a crime scene. A wide range of analytical techniques like – fourier transform infrared spectrometry (FTIR); Gas chromatography (GC), high pressure liquid chromatography (HPLC), and atomic absorption spectrometry (AAS) are popularly employed in forensic investigation. These techniques help in identifying the nature and composition of the evidence and predicting the source as well as matching the evidences collected from the crime scene with the control sample. Thus, forensic chemistry plays a decisive role in establishing a link between the accused and the crime and thereby helps in solving a case.

This workshop aims to provide an overview of forensic chemistry and its applications in forensic evidence analysis. The workshop will be conducted by experts having vast experience of working on commonly used analytical techniques namely, HPLC, GC, FTIR and MP-AES. In addition to instruction in proper lab techniques and safety, students will also get hands-on training in the above mentioned techniques.

## Participants to note the following






- Course includes tea and lunch at Venture Center
- Course will include:
  - Introduction to Forensic science
  - Hands-on sessions
  - Data interpretation session
  - Lab tour
  - Online certificates to all participants
- This is an offline workshop. The outside participants will have to arrange for their own travel/local transport and accommodation as necessary.
- No sessions will be repeated if a participant is unable to attend due to any reasons.
- Online Certificate of Participation issued by Venture Center

## Event schedule

Time	Session title	Lead
9:00 to 9:30	Registration	Vineet
9:30 to 9:45	Introduction to the course and faculty	Deepti
9:45 to 10:30	<ul style="list-style-type: none"><li>• Introduction to forensic science</li><li>• Application of analytical techniques in forensic science</li></ul>	Deepti
10:30 to 11:00	Tea	
11:00-11:30	<ul style="list-style-type: none"><li>• Visit to crime scene</li><li>• Introduction to practical session</li></ul>	Deepti
11:30-1:00	Practical Session 1 <ul style="list-style-type: none"><li>• GC, MP-AES- Principle, Instrumentation and Sample analysis</li></ul>	Shubhangi, Saniya, Pooja
13:00- 14:00	Lunch	
14:00 to 16:00	Practical Session 2 <ul style="list-style-type: none"><li>• HPLC, FTIR- Principle, Instrumentation and Sample analysis</li></ul>	Shubhangi, Saniya, Pooja
16:00 to 16:30	Tea	

16:30 to 17:00	Data interpretation VC tour	Deepti
17:00 to 17:30	Closure – Feedback	Deepti

### Speakers (in alphabetical order of first name)

	<p><b>Dr. Deepti Khanvilkar</b> <b>Senior Specialist-Analytical Services</b></p>	<p>Deepti is a Senior Specialist at VC AnalytiX in Venture Center. She has more than 10 years of research and academic experience in analytical chemistry. She holds a PhD in Anal. Chem. from Ghent Univ. Belgium, and M.S. in Pharm. Anal. from NIPER, Mohali. Her specialization lies in separation, quantification and imaging of target molecules in biological and synthetic matrices using elemental analysis, chromatographic and spectroscopic techniques. She has been engaged in teaching theoretical and practical aspects of analytical chemistry for past several years in various esteemed institutions including IISER, Bharati Vidyapeeth. She has several international publications, presentations and collaborative research stays to her credit.</p>
	<p><b>Mrs. Edna Joseph</b> <b>Head - Analytical Services</b></p>	<p>Edna heads the Analytical Services Facility “VC AnalytiX” at Venture Center. She has a Masters in Organic Chemistry (Pune University), Masters in Business Administration –Marketing (Pune University), and holds a PG Diploma in Patent Law (NALSAR University). She also heads the Quality Assurance Unit at the GLP compliant Center for BioPharma Analysis (CBA) at Venture Center. She has demonstrated knowledge and understanding of many analytical instruments (e.g. elemental analysis, thermal analysis, chromatography etc.). She has run and assisted in proof-of-concept projects. Many technical and scientific workshops, especially those with hands-on lab exercises with lab instruments have been conceptualized, planned and organized by her.</p>
	<p><b>Ms. Pooja Patil</b> <b>Trainee--Analytical Services</b></p>	<p>Pooja holds a Master’s degree in Analytical Chemistry from Savitribai Phule Pune University. Her responsibility at Venture Center is to provide assistance to entrepreneurs and incubatees by offering lab services.</p>
	<p><b>Ms. Shubhangi Dherange</b> <b>Senior Associate-Analytical Services</b></p>	<p>Shubhangi holds a Masters Degree in Analytical Chemistry from the Department of Chemistry, Savitribai Phule Pune University. Her responsibilities at Venture Center includes supporting incubatees and budding entrepreneurs by offering lab services; Contributing and ensuring smooth operations of lab block at VC.</p>
	<p><b>Ms. Saniya Rade</b> <b>Trainee-Analytical Services</b></p>	<p>Saniya holds a Master’s degree in Biotechnology from Vellore Institute of Technology, Vellore. Her role at Venture Center encompass assisting incubatees and aspiring entrepreneurs through the provision of laboratory services.</p>



#### Organized by



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/>



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 [www.venturecenter.co.in/analytical/](http://www.venturecenter.co.in/analytical/)