



## **HANDS ON TRAINING WORKSHOP ON GAS CHROMATOGRAPHY ( GC )**

### **Module One - Introduction to Gas Chromatography**

**Topics include:** The theory of GC, The GC System, Column types and packings, Mobile phases, the chromatogram, Familiarization with the instrument, Basic Operation

### **Module Two - Method Development**

**Topics include:** Sample solvents, Column selection, Partition coefficient, Mobile phase selection, Gradients, Effect of flow rate, Temperature effects and Sample preparation

### **Module Three - System Suitability**

**Topics include:** Resolution, Efficiency, Asymmetry, Capacity factor, Selectivity, Signal to noise ratio, Precision and accuracy, System suitability limits and manual calculation of parameters, setting up software to perform system suitability calculations.

### **Module Four - Care of GC System & Columns**

**Topics include:** Storing of the GC system, Column storage, Changing between mobile phases, Developing a clean-up and shut down method.

### **Module Five - Troubleshooting**

**Topics include:** Order of troubleshooting, Examples of common problems and causes, Practical examples.

### **Module Six – Routine Maintenance**

**Topics include:** Routine Maintenance Topics include: Theory & PRACTICAL maintenance of Pumps, Filters, Injector, and Detector.

### **Module Seven - Hardware / System Validation.**

**Topics include:** Hardware validation for injectors , Oven Temperature , auto samplers, Gas Ports and detectors, and overall system check.

### **Module Eight - Method Validation.**

Topics include: Accuracy, Precision, Intermediate Precision, Specificity, Detection limit, Quantization Limit, Linearity, Robustness, Acceptance criteria, Samples with more than one active.

**Eligibility :** Scholars from Biotechnology / Microbiology / Bio-Chemistry / Pharmacy / Forensic Science / Nanotechnology / Applied Chemistry / Industrial Chemistry Stream etc.

**Duration :** Two Days ( Saturday & Sunday-Full Time

**Fee :** Rs 3,000 / -

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