

GC GC-MS BEST PRACTICES IN METHOD DEVELOPMENT/OPERATION & TROUBLE SHOOTING

12th - 16th
AUGUST 2024

What will you learn on this course?

This course provides the theory of gas chromatography (GC) and mass spectrometry (MS) essential to any participant, along with hands-on practical elements in the laboratory to practice and re-enforce the theoretical knowledge. These courses are 20% theory and 80% practical in a lab environment.

This course addresses gases and plumbing, sample introduction, analytical columns, GC detectors (FID and ECD), mass-spectrometry and data analysis. The knowledge is then used to create methods, perform injections and change parameters to see the effects. The course discusses the need for maintenance along with practicals to carry out maintenance on both a GC and a GC-MS system such as liquid auto sampler, inlet, columns, FID/ECD and Quadruple MS including tuning and ion source cleaning. A day is spent on troubleshooting a GC or GC-MS instrument and learning what problem can occur, with solving on the instruments and data analysis software.

Advantages of the Training Program:



GC-MS finds application in fields like Medicine, criminal forensics, environmental monitoring and cleaning, explosives detection, etc. Thus the training is beneficial for the people who are working in industries which relate to chemicals, pharmaceuticals, food, oils, agriculture, cosmetics, analytical testing laboratories and many others.

Chrom Africa Instrumentation Services Limited

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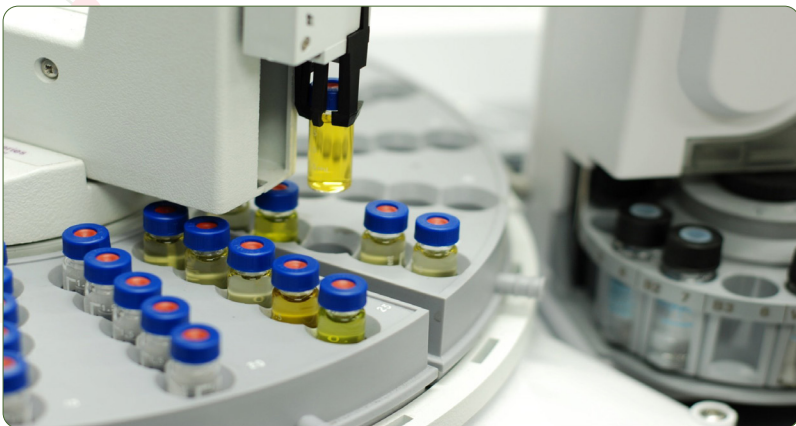
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Day 1	12-08-24	Activity
9.00 – 9.30 am		Registration and Climate Setting
9.30 – 10.30 am		• Introduction & instrumentation, of, GC, parts, function. and operations of individual components, GC configuration.
10.30 – 11.00 am		TEA- BREAK
11.00 – 12.30 p.m		• Cont: Introduction & instrumentation, of, GC, parts, function. and operations of individual components, GC configuration.
12.30 – 14.00 p.m		LUNCH - BREAK
14.00 – 16.30 p.m		• Introduction & instrumentation, of GC-MS, parts, functions and operations of individual components.

Day 2	13-08-24	Activity
9.00 – 10.30 am		• GC-MS Configuration, parts and components • Procedure for powering on the GC/GC-MS, pumping down
10.30 – 11.00 am		TEA- BREAK
11.00 – 12.30 p.m		• Explaining Pre-Acquisition software: Tuning and Calibration, Calibration report generation, MS Tune File, Explanation of MS Method and GC Method
12.30 – 14.00 p.m		LUNCH - BREAK
14.00 – 16.30 p.m		• Introduction to Data acquisition software, System and method Parameter setup. • Set up method for Full Scan and Single Ion Monitoring Operation, On-column injection, Split/Split less injection

Day 3	14-08-24	Activity
9.30 – 10.30 am		• GC/GC/MS Sample Preparation
10.30 – 11.00 am		TEA- BREAK
11.00 – 12.30 p.m		• GC/GC/MS Sample Preparation
12.30 – 14.00 p.m		LUNCH - BREAK
14.00 – 15.30 p.m		• Introduction to Quantitative software, Qualitative software, Library search Concepts, integration, report generation.

Day 4	15-08-24	Activity
9.00 – 10.30 am		• Creating sequence for multiple sample analysis. • Creating Calibration, curve and producing report files • Individual sample analysis
10.30 – 11.00 am		TEA- BREAK
11.00 – 12.30 p.m		• Qualitative and quantitative data analysis with a set file • Quantitation using single internal standard
12.30 – 14.00 p.m		LUNCH - BREAK
14.00 – 15.30 p.m		• Quantitation using external standard



Day 5	16-08-24	Activity
9.30 – 10.30 am		• Interpreting MS data, ie positive & negative ion ionization
10.30 – 11.00 am		TEA- BREAK
11.00 – 12.30 p.m		• Discussion of results and possible deviations
12.30 – 14.00 p.m		LUNCH - BREAK
14.00 – 15.00 p.m		• Directors speech and issue of certificates

Deadline: 1st August 2024

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Cost Kes. 92,800.00
or USD 928.00

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