



GC Troubleshooting & Maintenance

A logical approach to troubleshooting is explored using both the component (hardware based) and symptomatic (chromatogram based) perspectives.

Best practice for instrument maintenance and column handling, as well as, routines for cleaning and deactivating inlet and detection systems are discussed.

The causes of peak shape and baseline anomalies are fully covered, this course is invaluable to anyone who wishes to gain further insight into the problems associated with GC analysis.

Course Contents

Approaches to Logical Troubleshooting

- Logical troubleshooting
- System overview
- Component perspective
- Symptomatic perspective
- System maintenance records
- Symptom / Causes / Diagnosis & Solution

Component Perspective

What to look for / what can go wrong with:

- Injectors: on-column / split - splitless / large volume
- Detectors: FID / ECD / NPD / FPD
- Temperature and pressure control

Columns

- Installation and conditioning
- Operating principles
- Optimisation
- Operating range / bleed
- Band broadening

Symptomatic Perspective - Baselines

- Baseline spikes
- Noisy baselines
- Cycling baselines
- Rising / falling baselines

Symptomatic Perspective - Peaks

- No peaks
- Fronting / tailing peaks
- Split peaks / shoulders
- Broad shoulders
- Ghost shoulders
- Retention stability
- Solvent incompatibility
- Loss of sensitivity

Maintenance

- Maintenance schedules
- Correct maintenance procedures injectors and detectors



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