

GC Analysis Software (GCAS)

MetSolv
METERING SOLUTIONS & VALIDATION

FOR THE EFFECTIVE
MANAGEMENT AND
VERIFICATION OF METERING SYSTEMS

MetSolv operate and utilise new IIoT (Industrial Internet of Things) products to provide the highest standard of support and service to our clients.

One of the products MetSolv is currently using is GCAS.

What is GCAS?

GCAS® (Gas Chromatography Analysis Software) is a software tool specifically designed for gas chromatographs (GC) conditional-based monitoring. The main purpose of the monitoring embedded in the software is:



1. To analyse instantaneous GC data and to provide a live uncertainty to see if it is operating within its stated accuracy.
2. To provide and analyse historical data in order to identify changes and predict failures.
3. To support extended reproducibility tests so that the GC uncertainty may be determined.
4. Identifies errors and self-troubleshoots to advice on the best corrective action to rectify the error and reduce prolonged financial exposure.
5. Removes the need for conventional GC maintenance activities.

What can GCAS Detect?

GCAS validates the gas chromatographs performance by detecting:

- Calibration Gas Errors
- Gas Chromatograph Leakage
- Column Deterioration
- Valve Timing Issues
- Poor Handling Procedure
- Heavy End Drop Out
- Fault in Repeatability Test Interpretation
- Fault in Control Chart Interpretation
- Fault in Composition Comparison

Live Uncertainty

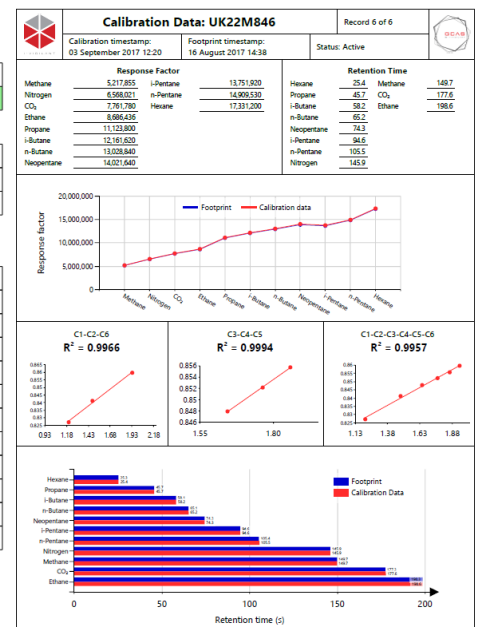
With the unique patented method for calculating reproducibility GCAS is able to give you live uncertainty calculations after every routine calibration. Until recently this could only be achieved with laboratory analysis.

UK22M846 Performance History

GC Status	
Healthy	

Footprint Data		
Date	C1-C2-C6	C3-C4-C5
16 Aug 2017 14:38	Pass	Pass

Calibration Data		
Date	C1-C2-C6	C3-C4-C5
22 Aug 2017 12:21	Pass	Pass
25 Aug 2017 12:22	Pass	Pass
28 Aug 2017 12:19	Pass	Pass
31 Aug 2017 12:20	Pass	Pass
03 Sep 2017 12:20	Pass	Pass
06 Sep 2017 12:21	Pass	Pass
09 Sep 2017 12:21	Pass	Pass
12 Sep 2017 12:22	Pass	Pass
15 Sep 2017 12:22	Pass	Pass
19 Sep 2017 14:51	Pass	Pass



For fiscal applications GCAS can apply these values to ISO6976, to routinely calculate representative uncertainties for Calorific Value, Molecular Weight, Wobbe Index, Relative and Standard Density.

Supported Gas Chromatograph Brands

GCAS is compatible with any gas chromatograph device using thermoconductivity detector (TCD) and peak area formula to calculate response factor. GCAS supports the below gas chromatographs:

1. Brand-specific:
 - a. Daniel (Emerson)
 - b. ABB
 - c. Siemens
 - d. Elster (Honeywell)
2. Non brand-specific:
 - a. LNG chromatographs (Liquid Natural Gas, up to pentane)
 - b. BTEX analysers (aromatic hydrocarbons)
 - c. Single gas analysers