

# Software for Hiden Mass Spectrometers

Gas Analysis, Thermal Analysis and Residual Gas Analysis

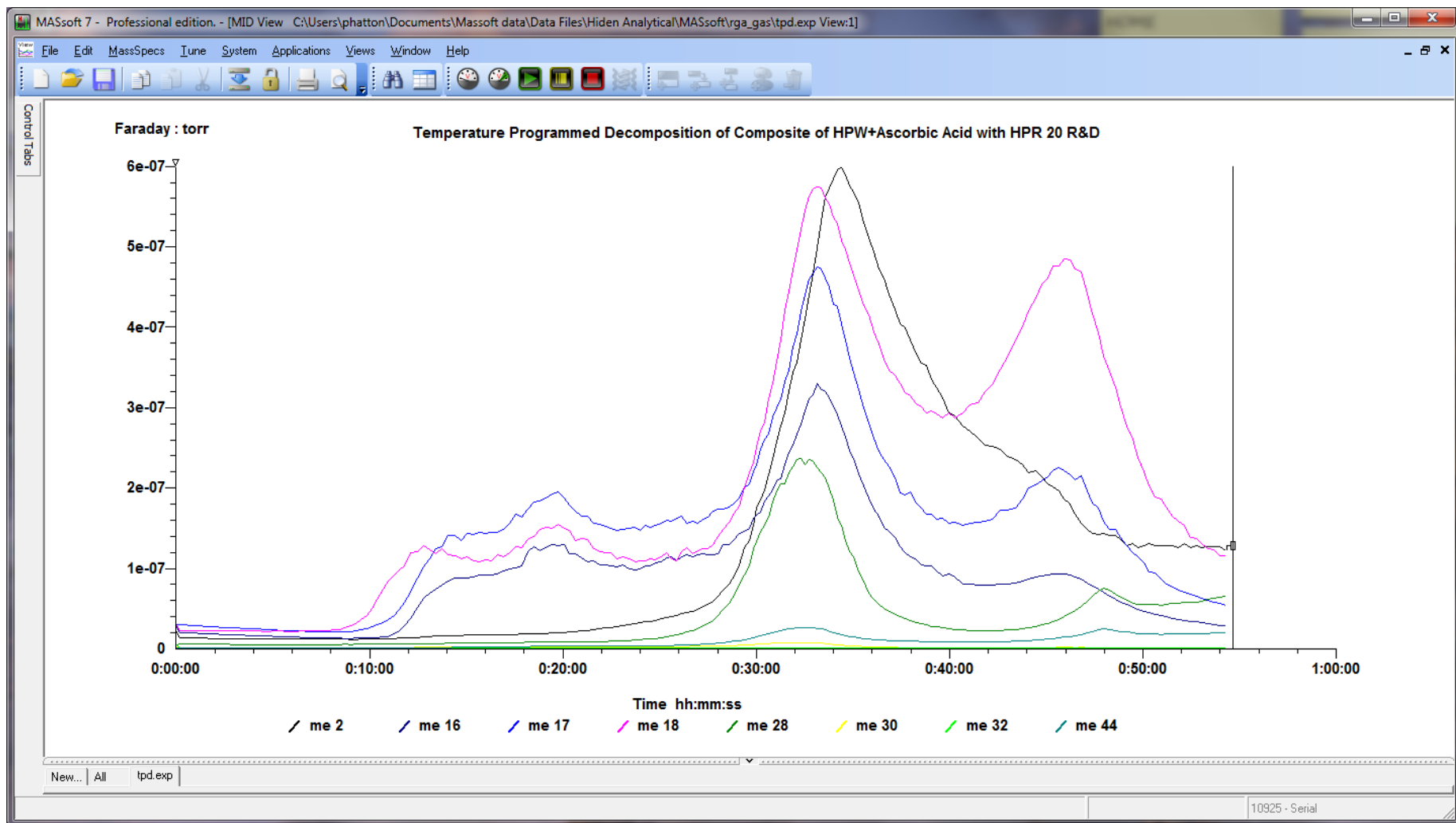
Including application specific software packages for:

Quantitative gas analysis

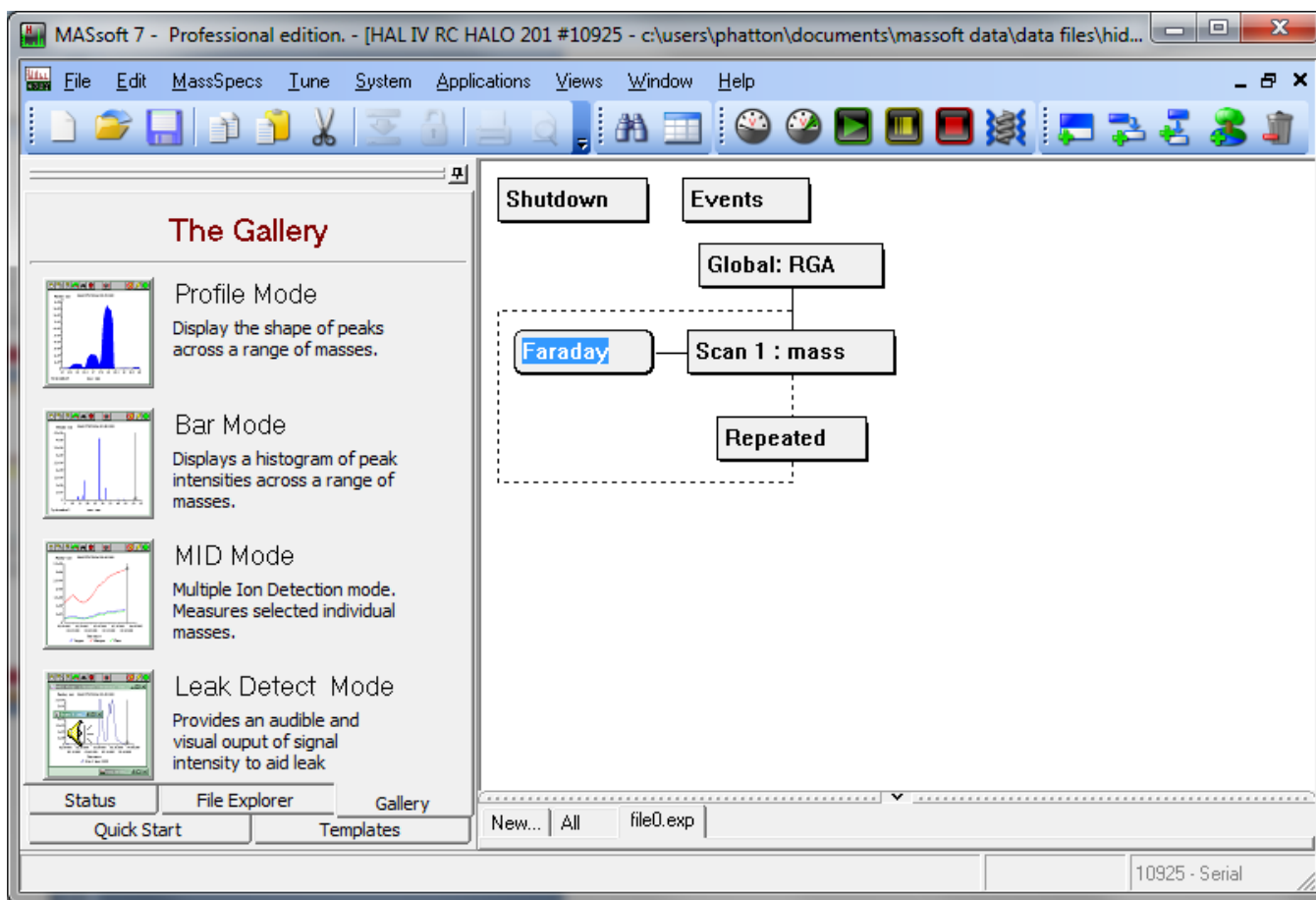
Evolved gas analysis – TA-MS

UHV -TPD

# MASsoft Control Software



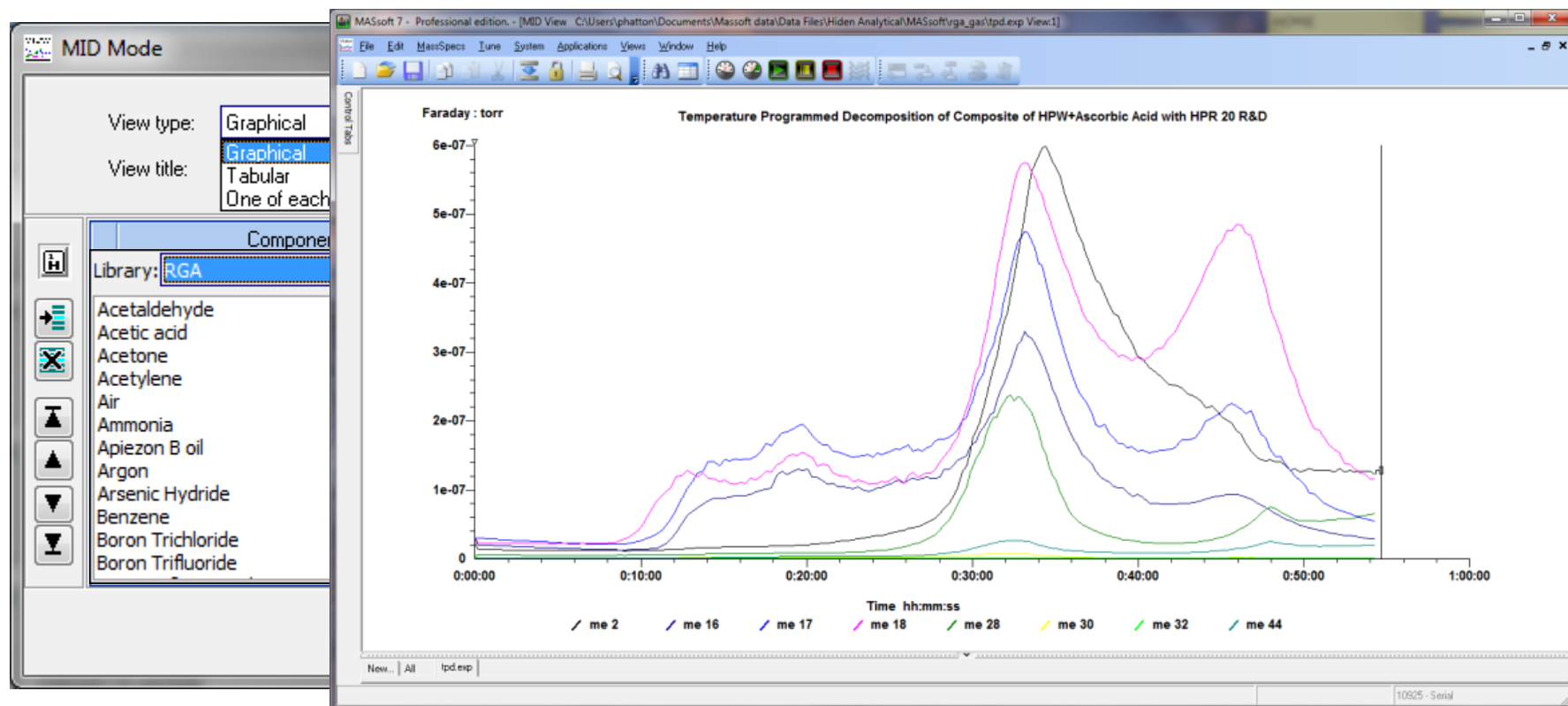
# Mass Spectrometer – easy start



Pre set modes of operation, templates and full control of mass spectrometers parameters.

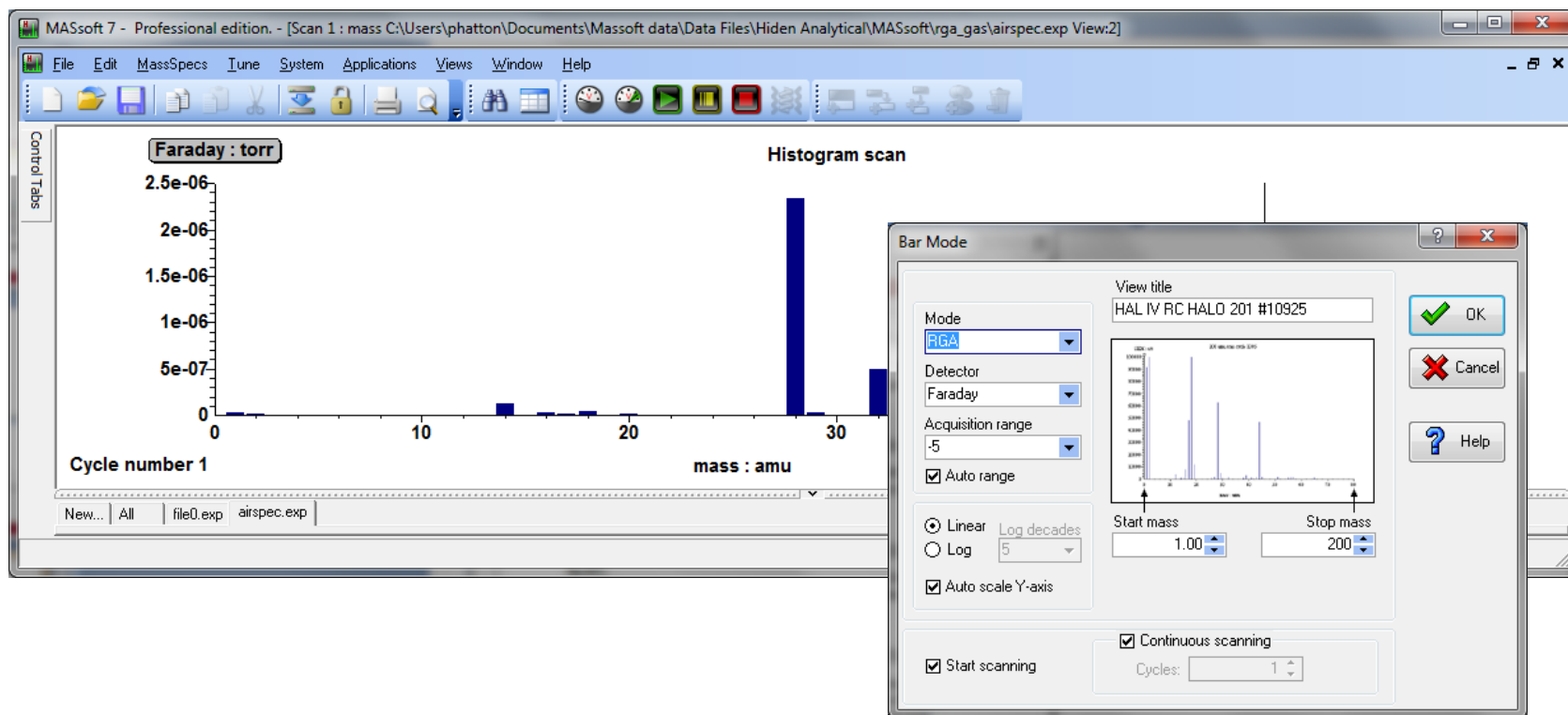
# Trend Analysis

- Unlimited number of mass channels.
- Full mass spectrometer control on a per channel basis.
- Automatic mass peak selection from on board user editable library.
- Quantitative analysis with user editable algorithms.



# Mass Spectrometer – mass scanning -1

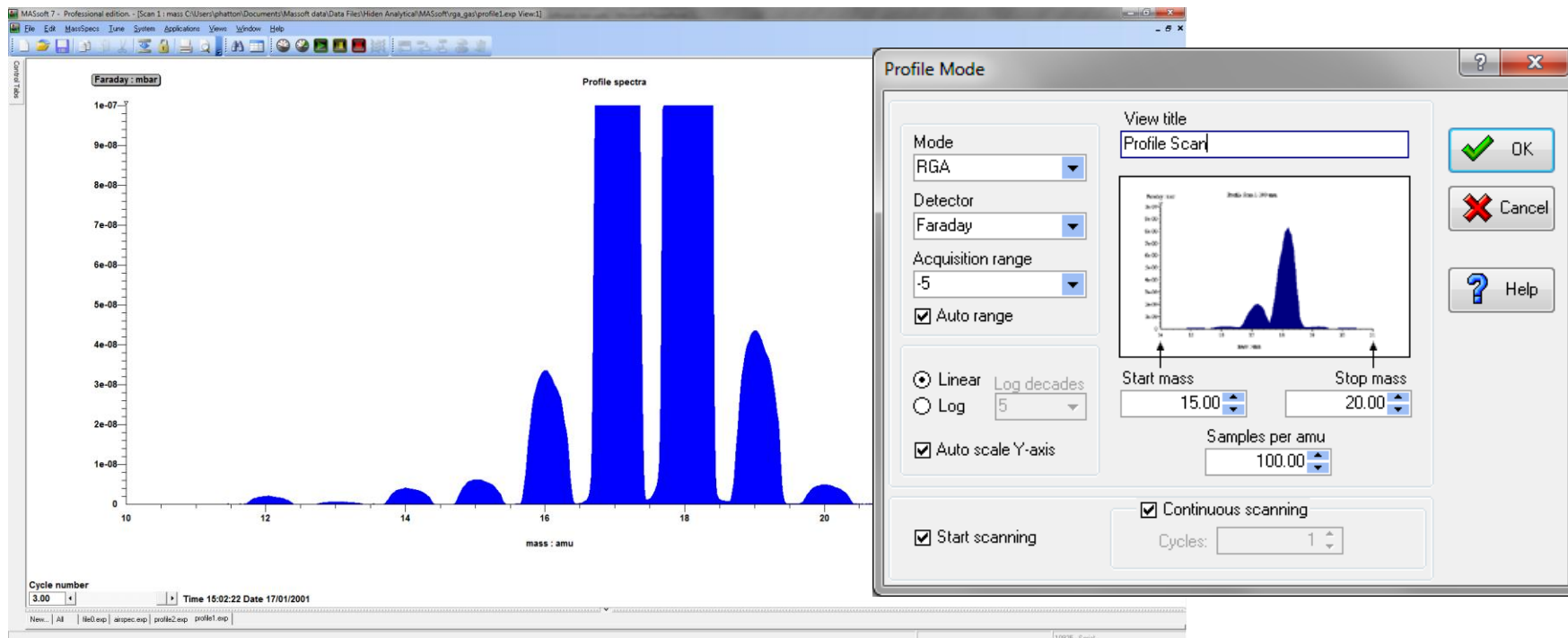
- Histogram scanning mode



- Extract trend analysis for any mass peak(s) within the scan.
- New 4, 6 or 8 decade dynamic range scan.

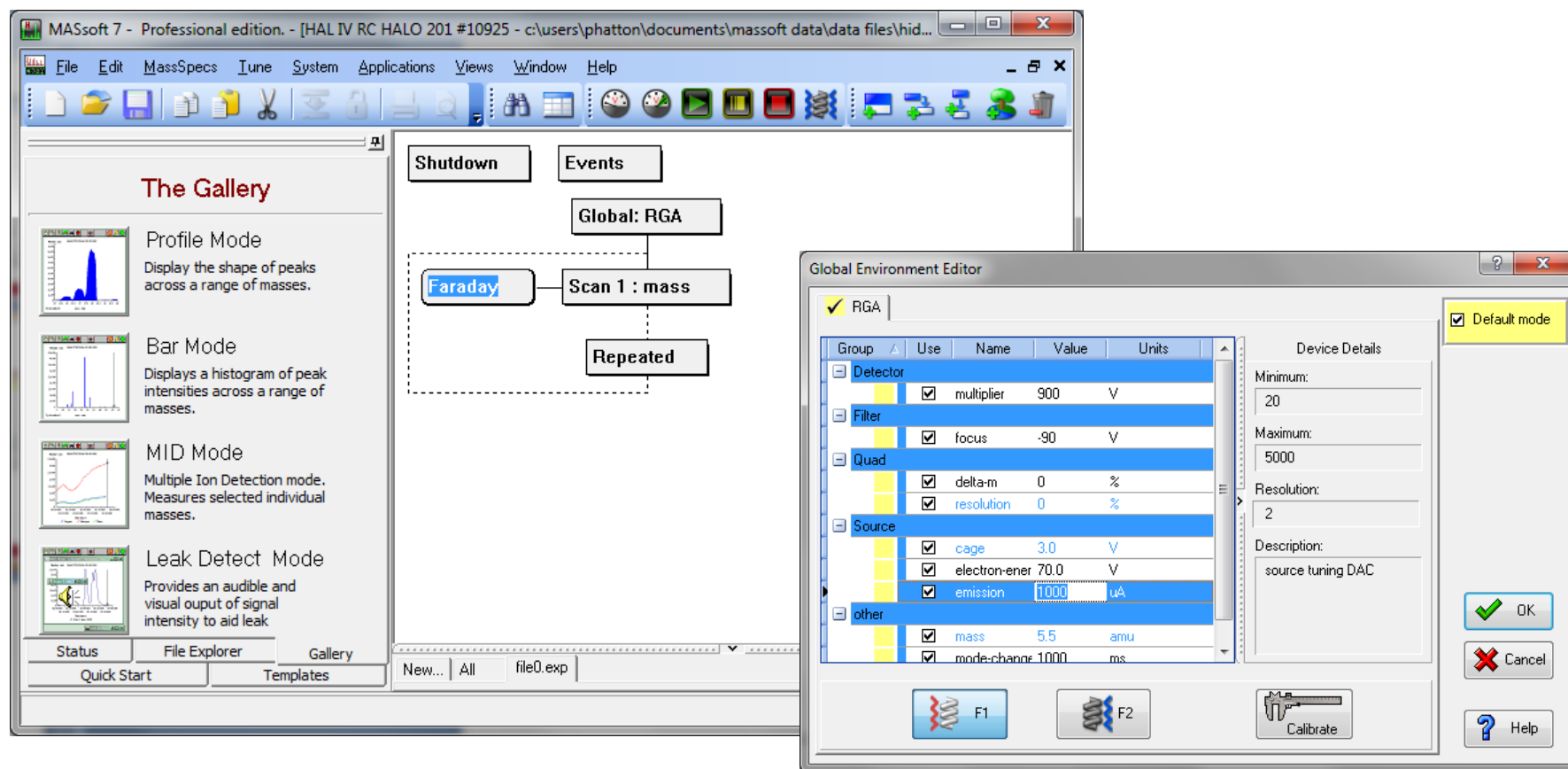
# Mass Spectrometer – mass scanning-2

- Peak profile diagnostic mode



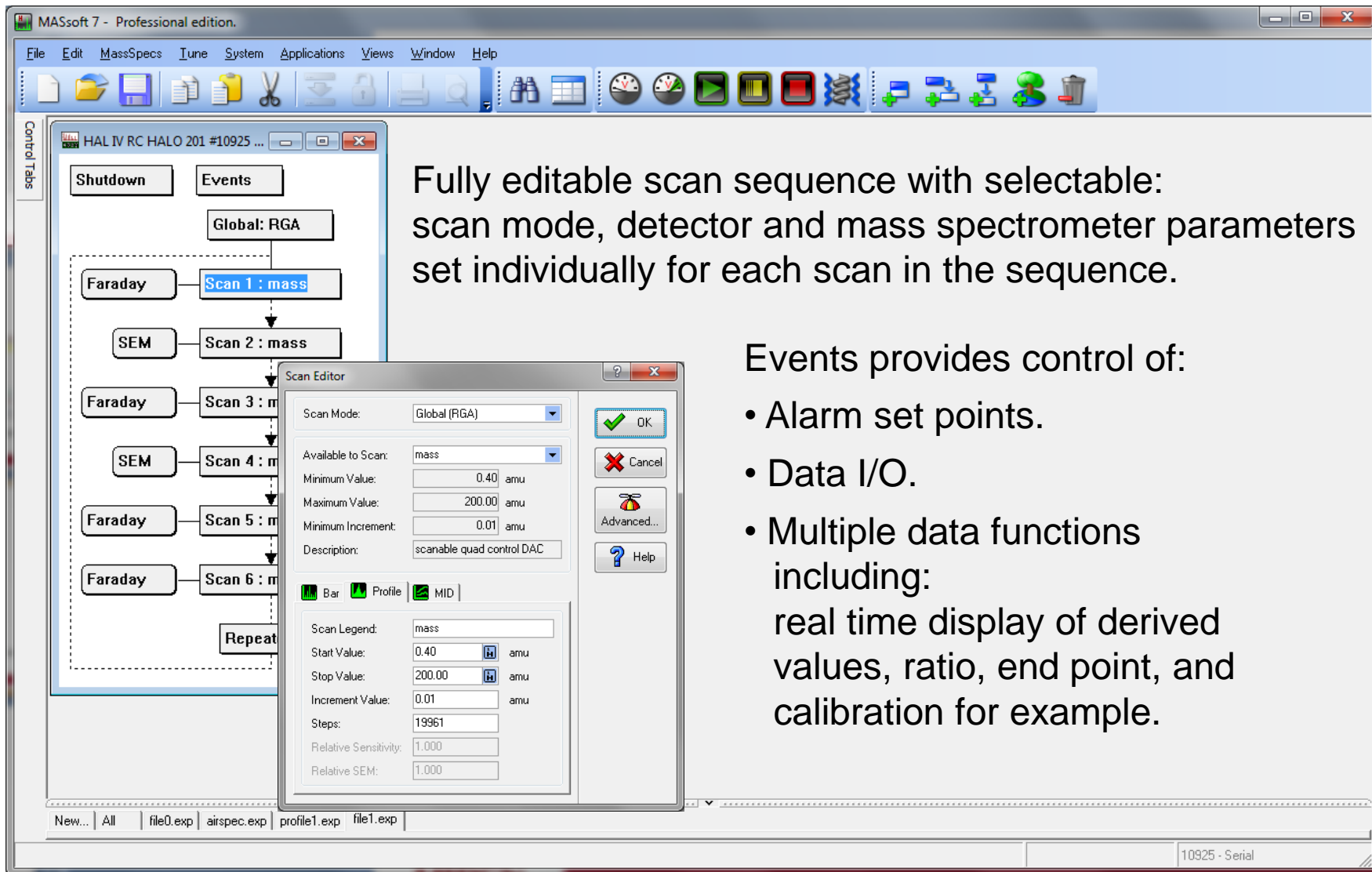
- Optimised multistage analysis - configure different analysis for different parts of the experiment

# MS Control



Pre set modes of operation, templates and full control of mass spectrometers parameters

# MS Control



The screenshot displays the MASoft 7 - Professional edition software interface. On the left, a 'Control Tabs' panel shows a sequence of steps: Shutdown, Events, Global: RGA, Faraday, Scan 1: mass, SEM, Scan 2: mass, Faraday, Scan 3: mass, SEM, Scan 4: mass, Faraday, Scan 5: mass, Faraday, Scan 6: mass, and Repeat. The 'Scan Editor' dialog box is open, showing settings for 'Scan 1: mass'. The 'Scan Mode' is set to 'Global (RGA)'. The 'Available to Scan' is 'mass'. The 'Minimum Value' is 0.40 amu, 'Maximum Value' is 200.00 amu, and 'Minimum Increment' is 0.01 amu. The 'Description' is 'scanable quad control DAC'. The 'Scan Legend' is 'mass'. The 'Start Value' is 0.40 amu, 'Stop Value' is 200.00 amu, 'Increment Value' is 0.01 amu, 'Steps' is 19961, 'Relative Sensitivity' is 1.000, and 'Relative SEM' is 1.000. The 'OK' button is highlighted.

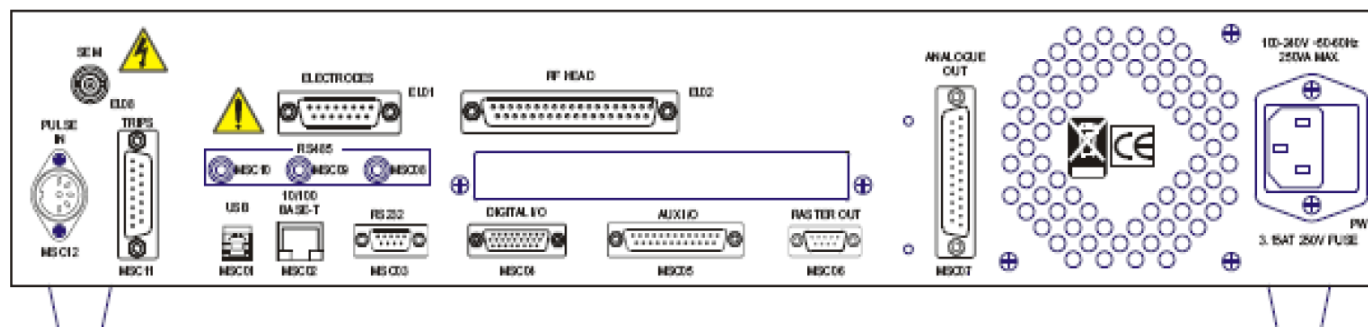
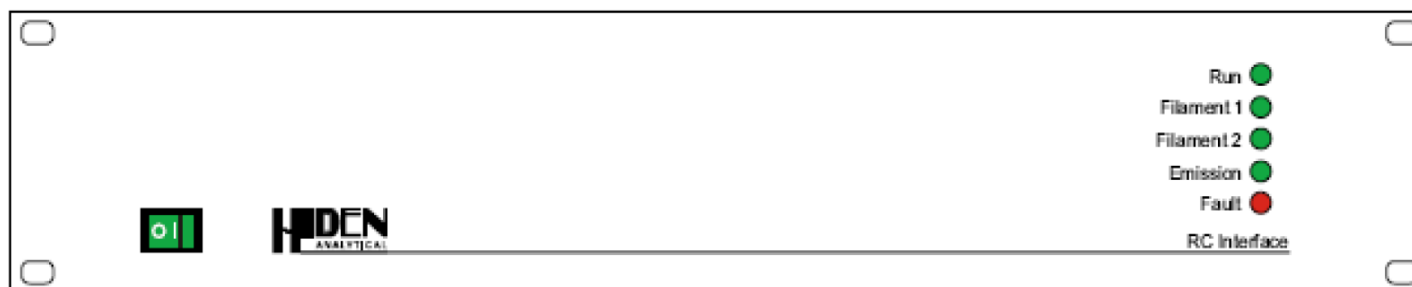
Fully editable scan sequence with selectable:  
scan mode, detector and mass spectrometer parameters  
set individually for each scan in the sequence.

Events provides control of:

- Alarm set points.
- Data I/O.
- Multiple data functions including:  
real time display of derived  
values, ratio, end point, and  
calibration for example.



# Mass Spectrometer Interface Unit



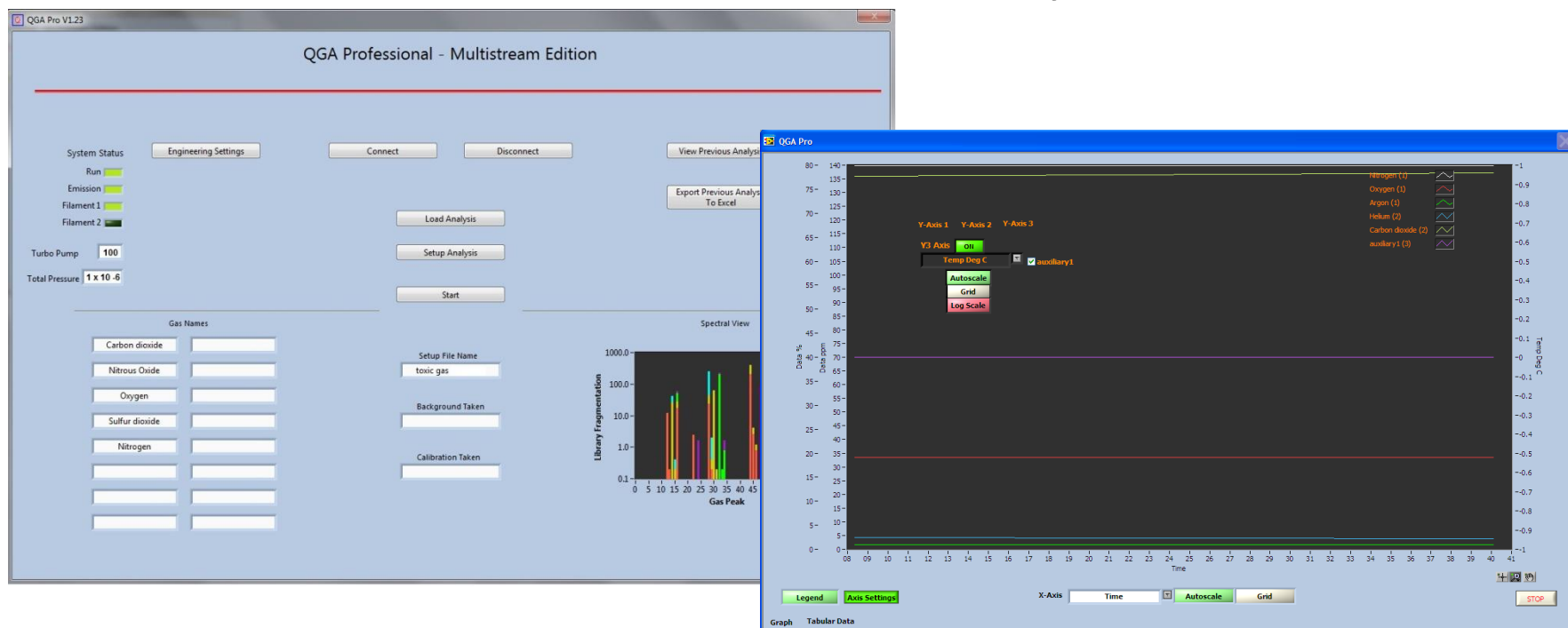
- Ethernet TCP/IP ,USB and RS232 communication links.
- I/O subsystem with:
  - multi protocol RS485 links for external devices, mass flow controllers, CO analyser, total pressure gauges for example.
  - 5 channel TTL for process control / automatic start - stop trigger.
  - Analogue inputs and analogue signal output options.

Application specific software packages  
for:

Quantitative gas analysis  
Evolved gas analysis – TA-MS  
UHV -TPD

- 1) QGA – Quantitative Gas Analysis
- 2) EGAsoft – Evolved Gas Analysis

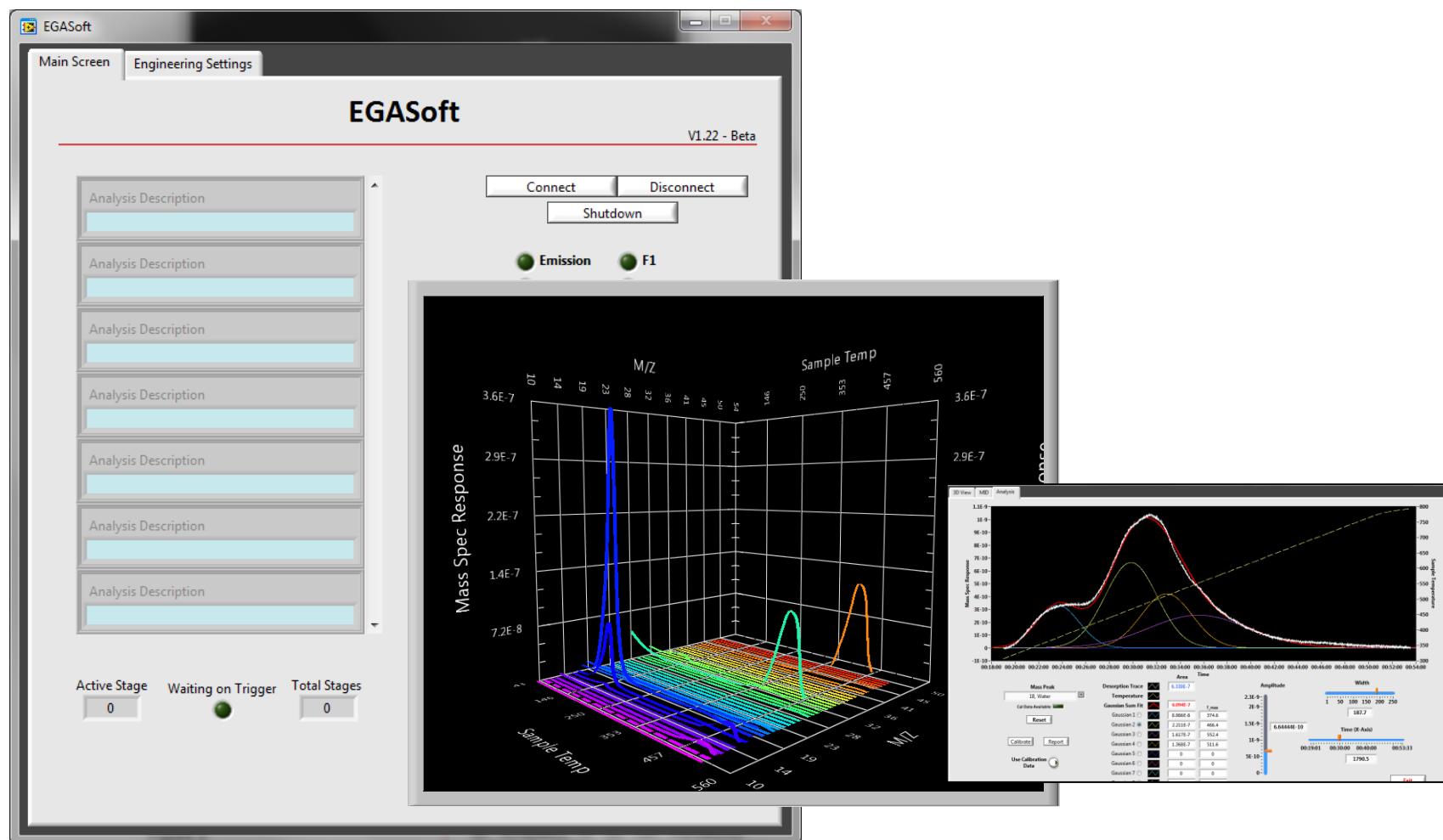
# QGA – Quantitative Gas Analysis



- Quantitative gas analysis of up to 16 gases.
- 10 peak spectral library with intelligent library scan feature.
- Flexible major and minor component gas calibration with background correction.
- Data view with three y axes for simultaneous display of quantitative data, corrected data and raw data and/or external signals temperature data for example.
- Capability to read multiple inputs, temperature or pressure for example.

- X- axis can display time or an external input, a temperature ramp for example..
- Data inputs for external gas analysers, a CO analyser for example to compliment the mass spectrometer analysis.
- Multi-stream analysis for automatic sequenced analysis of up to 80 connected gas streams.
- Automatic triggering of the start of analysis from an external input.

# EGASoft – Evolved Gas Analysis



EGASoft provides for data acquisition and analysis for TA-MS , TPD and UHV- TPD. Integration with TGA systems including auto stop/start trigger and data export.