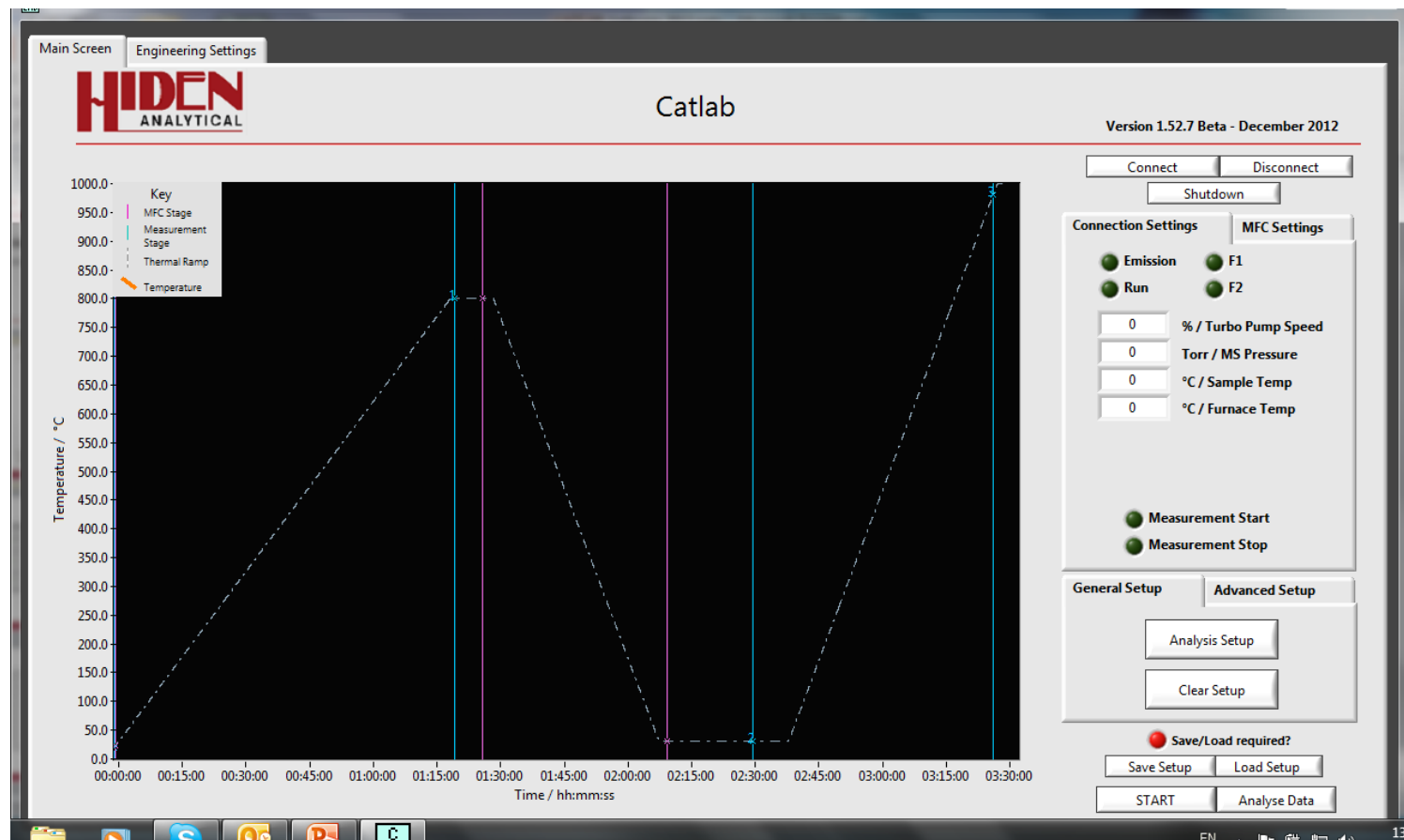


Hidden CATLAB Software

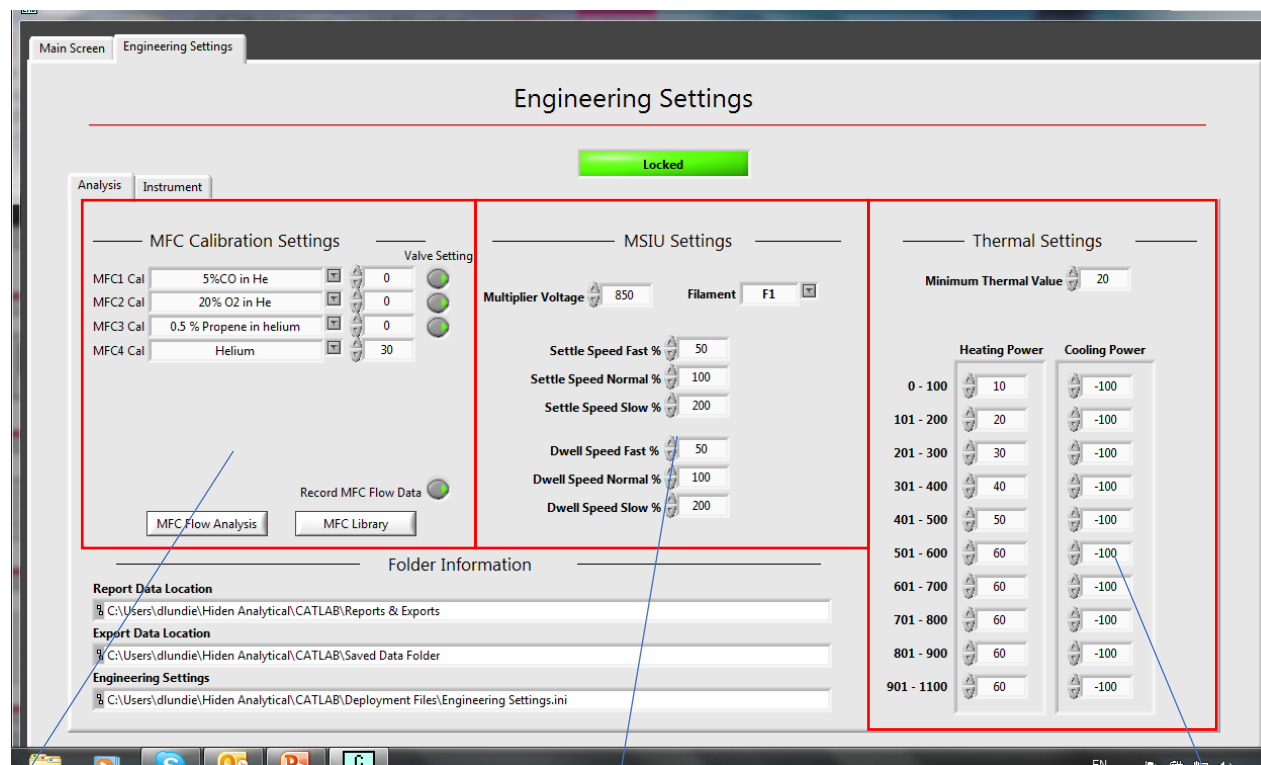
Complete Control of Experimental Parameters

CATLAB Control Software



- Control of MS/Temperature/Gas Flows in one software package

Hardware Control Parameters



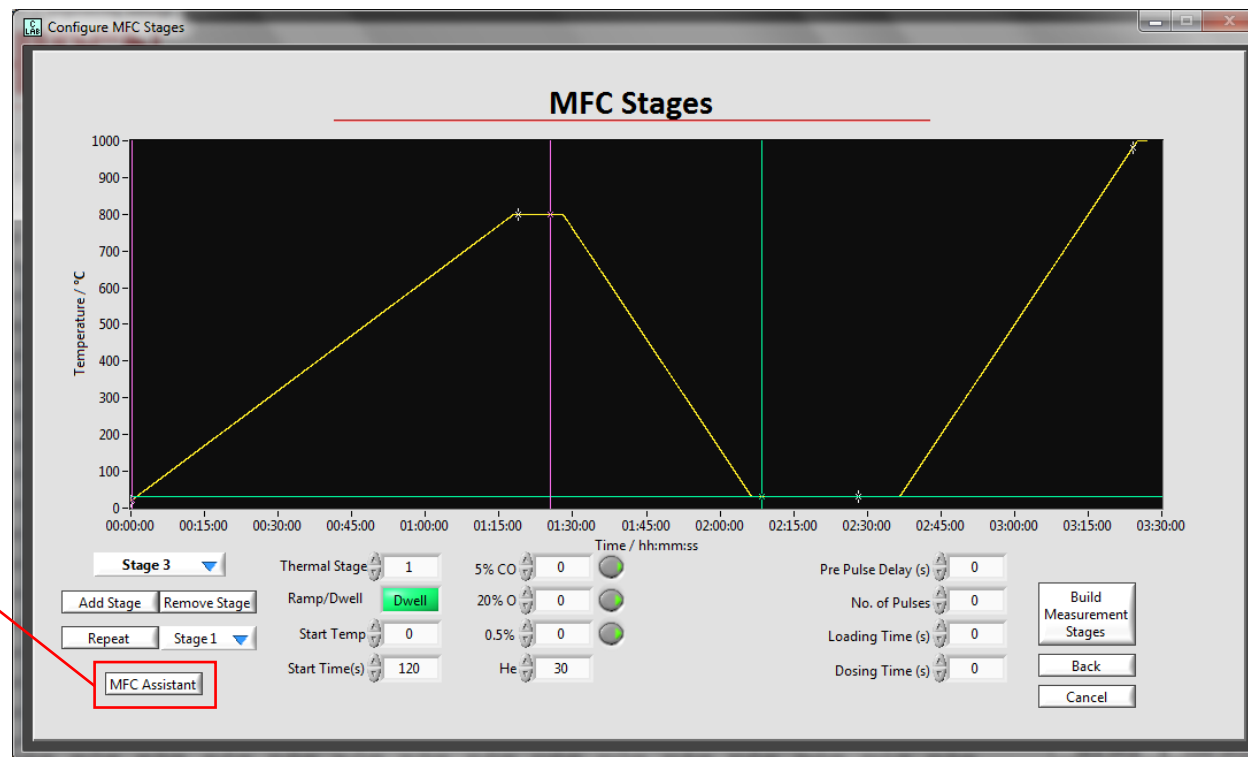
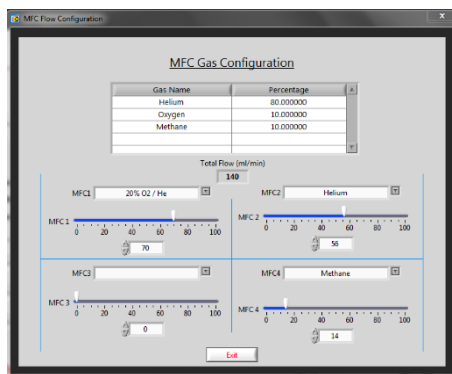
Control and calibration
of MFCs for different
gases

Mass Spectrometer Control

Furnace Control

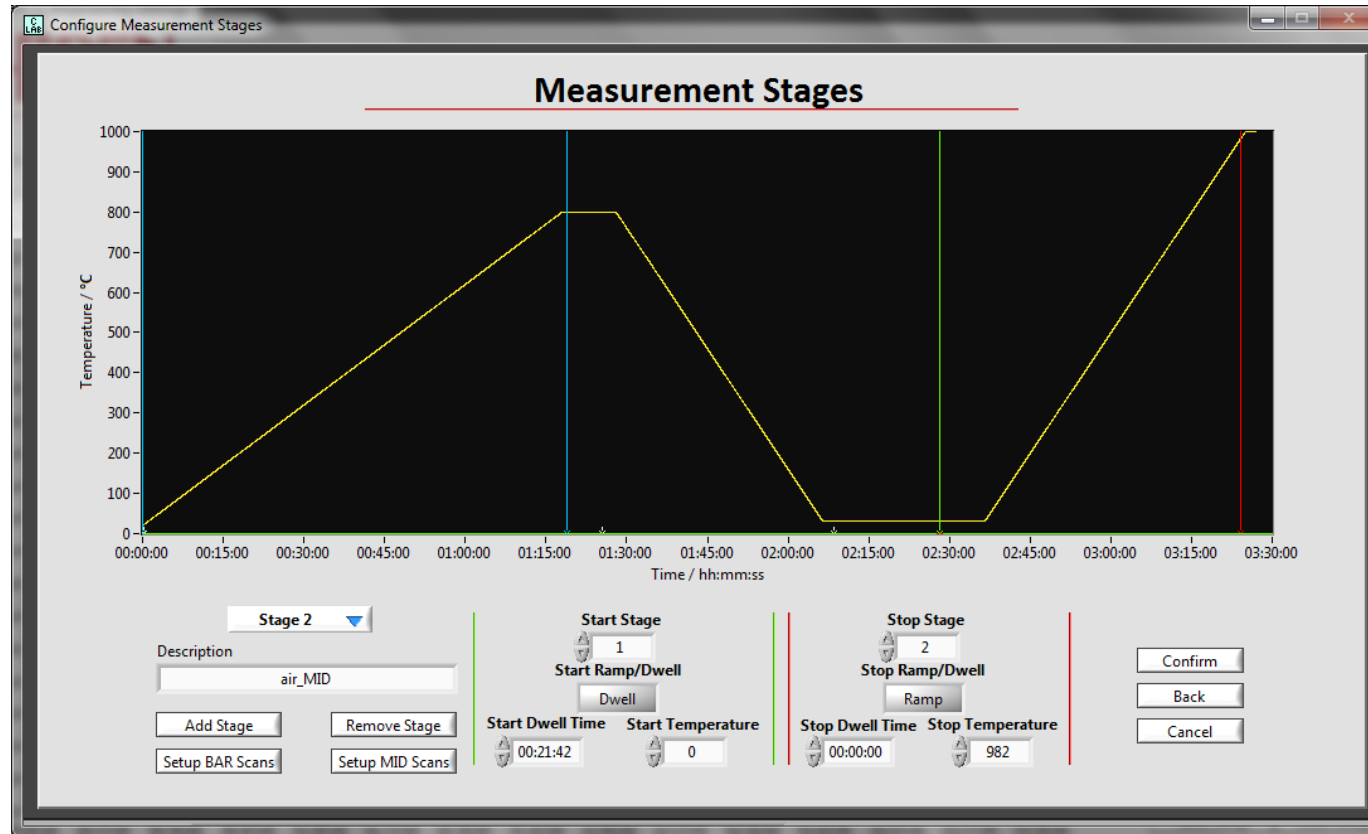
Experimental Setup

MFC Assistant



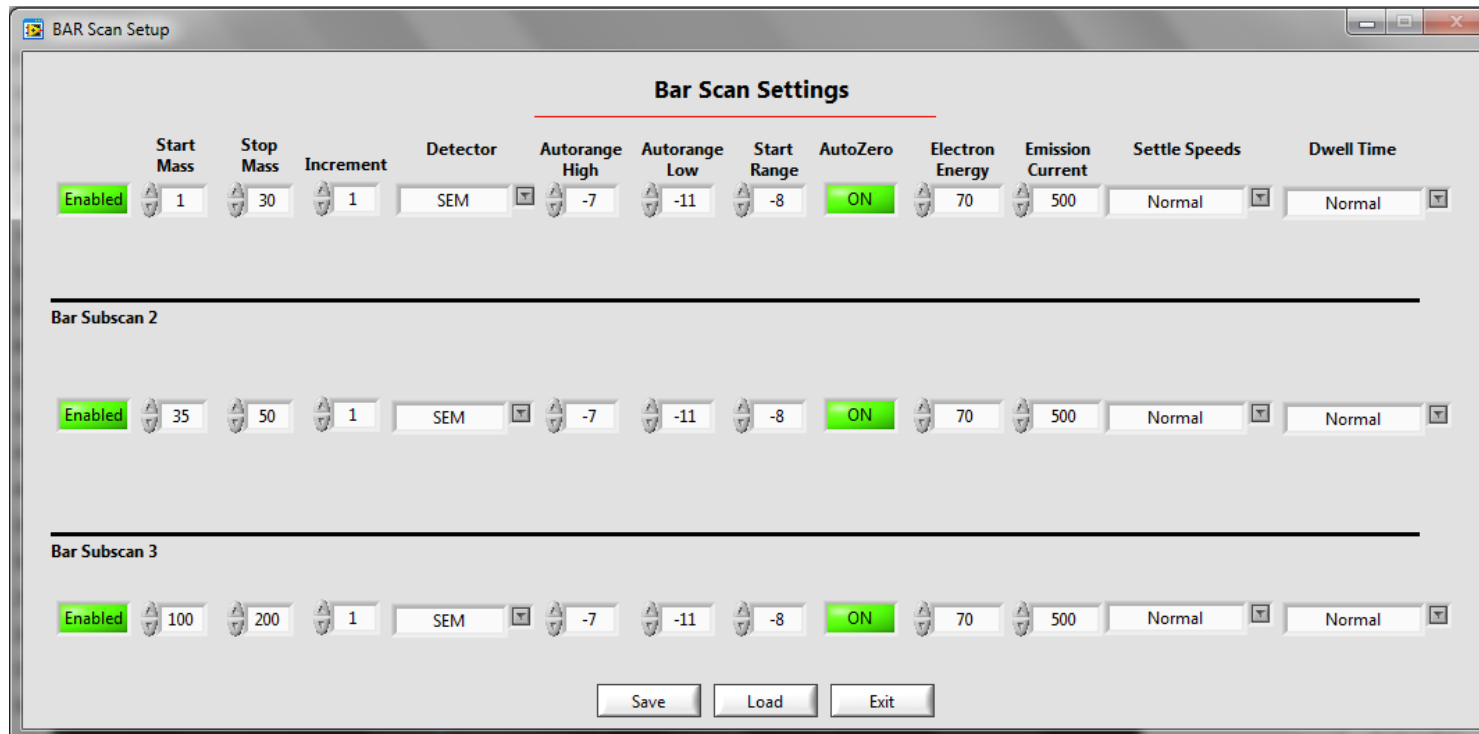
- Stage 2: Configure gas flows/Pulses for each stage of the experiment - MFC Assistant to help calculate percentage composition of each component in gas mixture for the selected flow

Experimental Setup



- Stage 3: Add measurement stages. Stages are triggered by time or temperature depending where on the temperature profile the start/stop is placed - Different MS analysis types can be configured for each stage of the experiment.

MS Control - BAR Mode



The screenshot shows the 'BAR Scan Setup' window with the following settings:

Bar Scan Settings												
	Start Mass	Stop Mass	Increment	Detector	Autorange High	Autorange Low	Start Range	AutoZero	Electron Energy	Emission Current	Settle Speeds	Dwell Time
Enabled	1	30	1	SEM	-7	-11	-8	ON	70	500	Normal	Normal
Bar Subscan 2												
Enabled	35	50	1	SEM	-7	-11	-8	ON	70	500	Normal	Normal
Bar Subscan 3												
Enabled	100	200	1	SEM	-7	-11	-8	ON	70	500	Normal	Normal

Buttons at the bottom: Save, Load, Exit

- Multiple Bar scans can be configured in 3 subscan sections for optimised sampling of unknowns.
- Ion source control.

MS Control – MID Mode

MID Setup

Gas	40	20	36	38	0	0	0	0	0	0
Gas 1 Argon	40	20	36	38	0	0	0	0	0	0
	999	107	3	1	0	0	0	0	0	0
Gas 2 Hydrogen	2	1	0	0	0	0	0	0	0	0
	999	100	0	0	0	0	0	0	0	0
Gas 3 Water	18	17	16	2	20	19	0	0	0	0
	999	230	11	7	3	1	0	0	0	0
Gas 4 Oxygen	32	16	34	33	0	0	0	0	0	0
	999	114	4	1	0	0	0	0	0	0
Gas 5	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Gas 6	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Gas 7	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Gas 8	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0

Page 2

Save Load

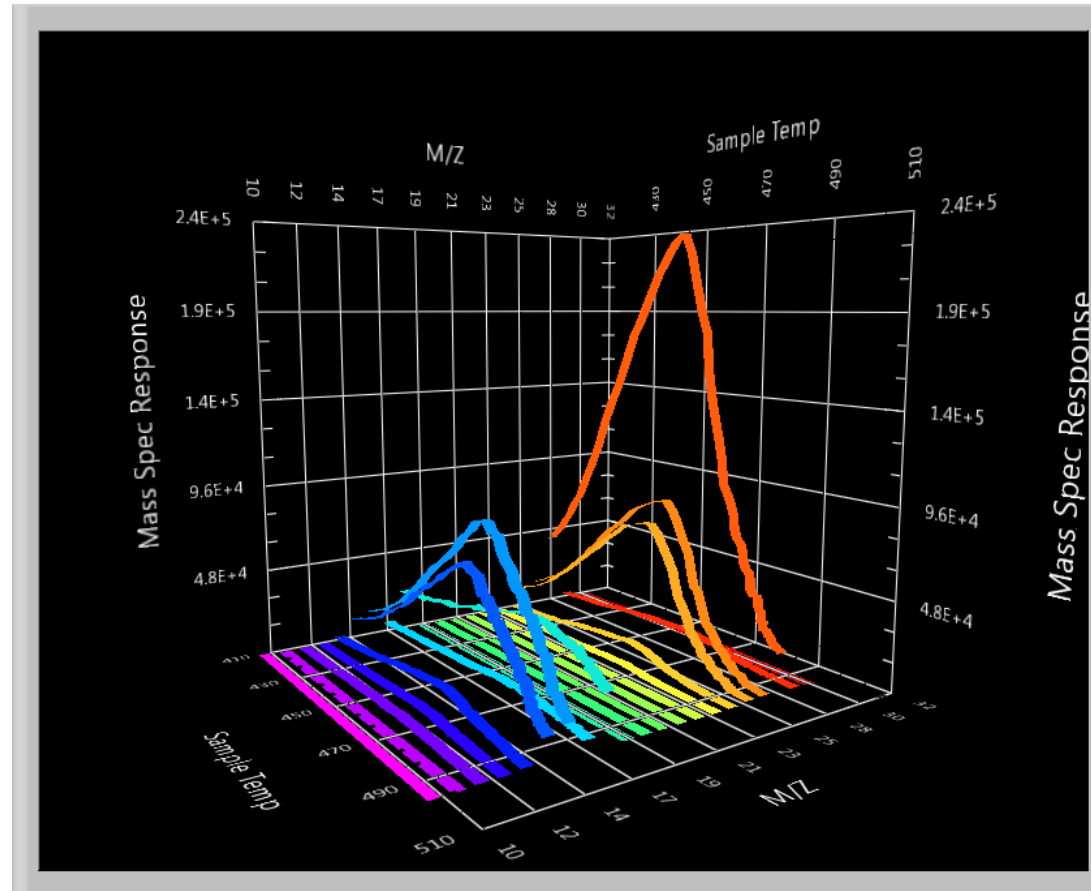
Exit

Show Advanced Settings

Show Limits

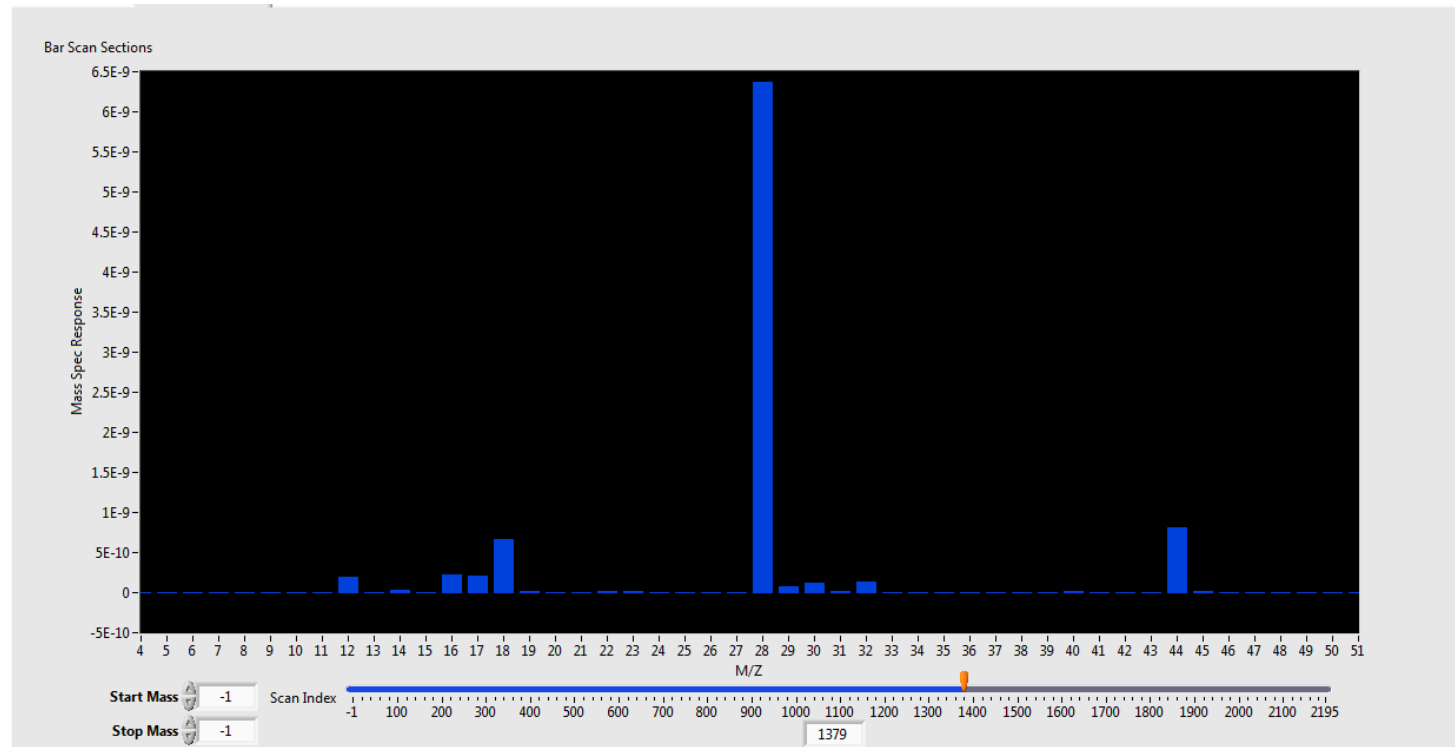
- MID Scan setup for known species .
- Automatic overlap removal.
- Includes library of most common gases.
- Ion source control for each species – preferential ionisation of some overlapping gases

MS Display – 3D Bar



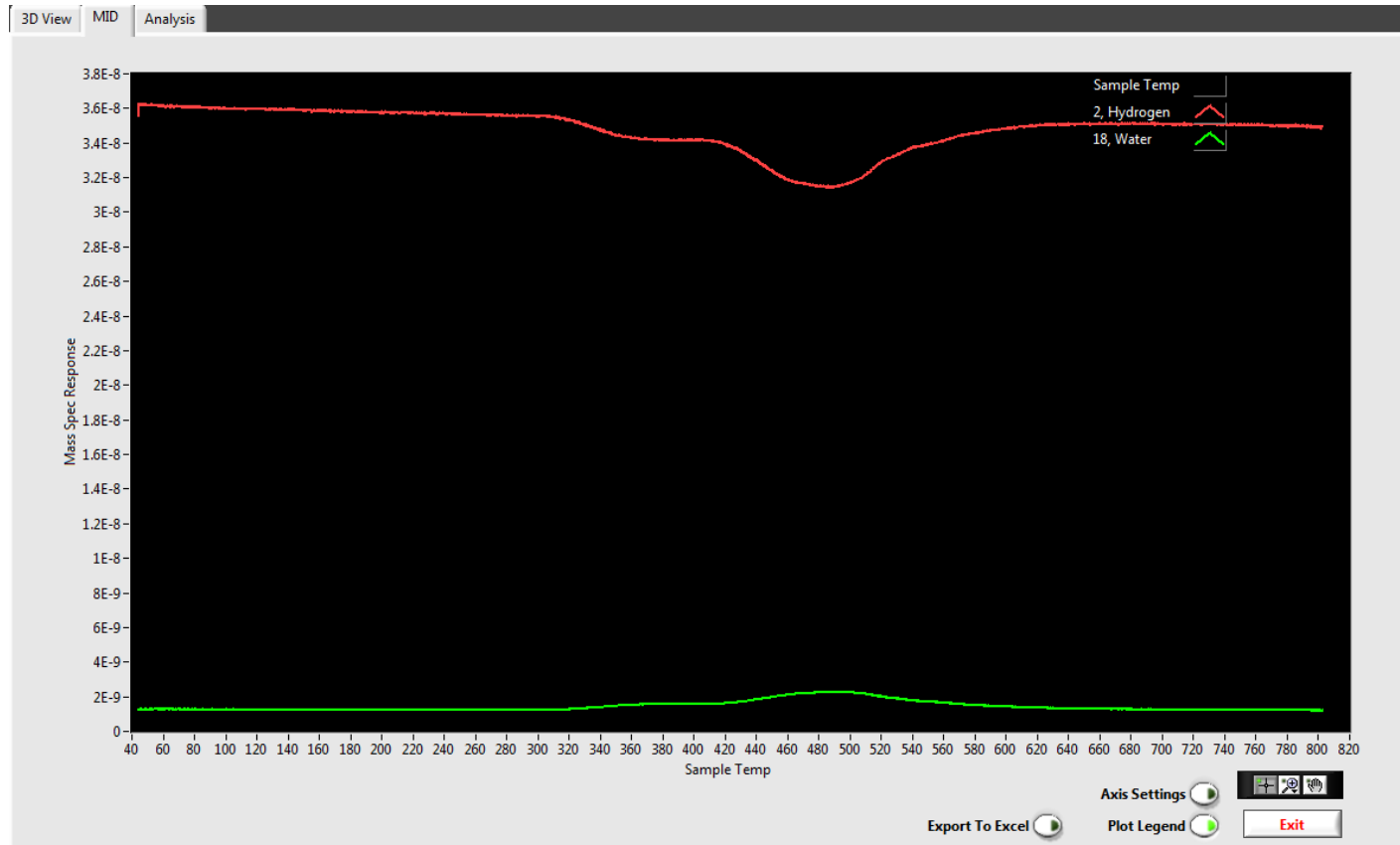
- 3D Bar Graph mode for easy identification of bar mode trends.
- Rotate or zoom in on regions of interest.

MS Display – 2D Bar



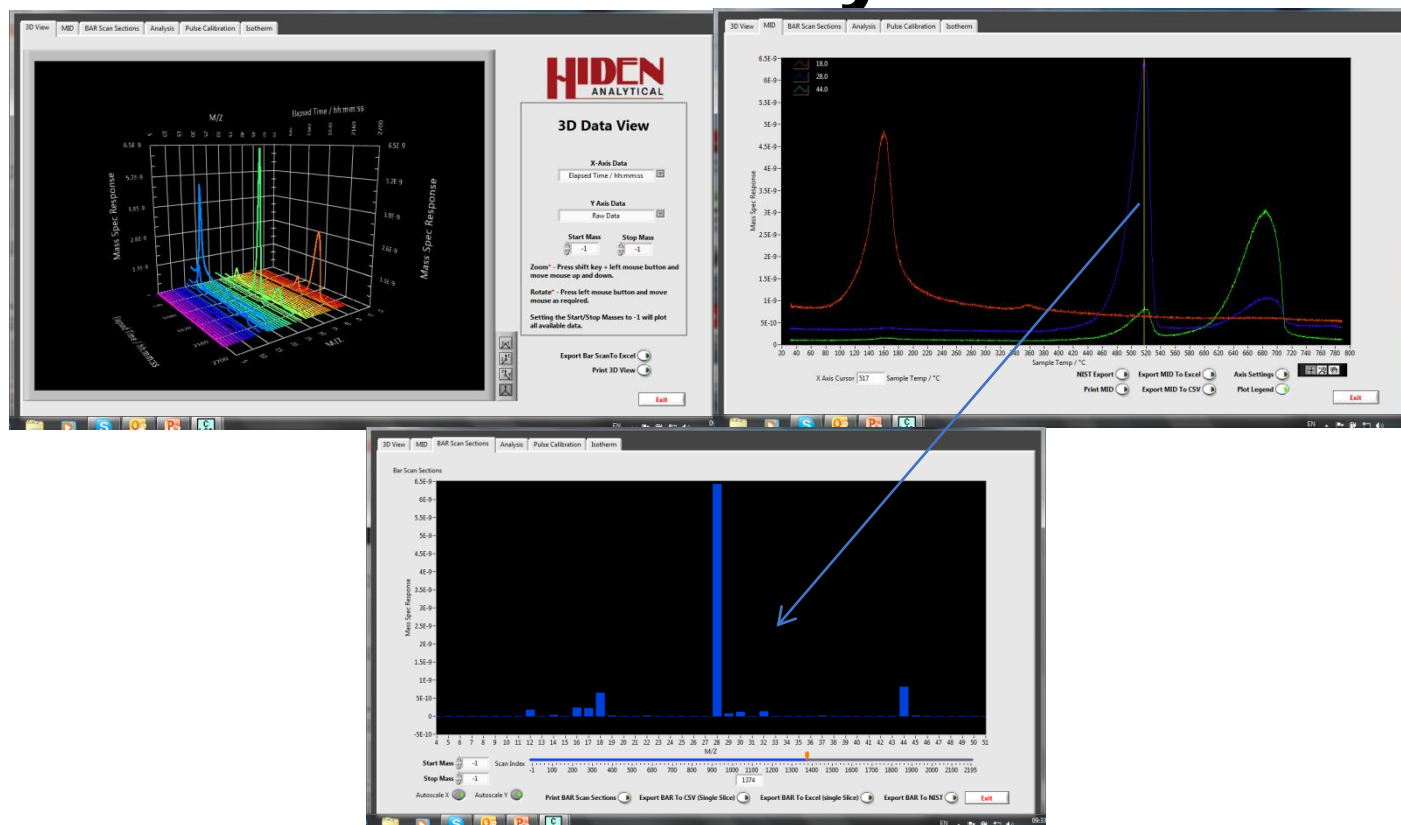
- View single cycle of BAR scan data

MS Display – MID



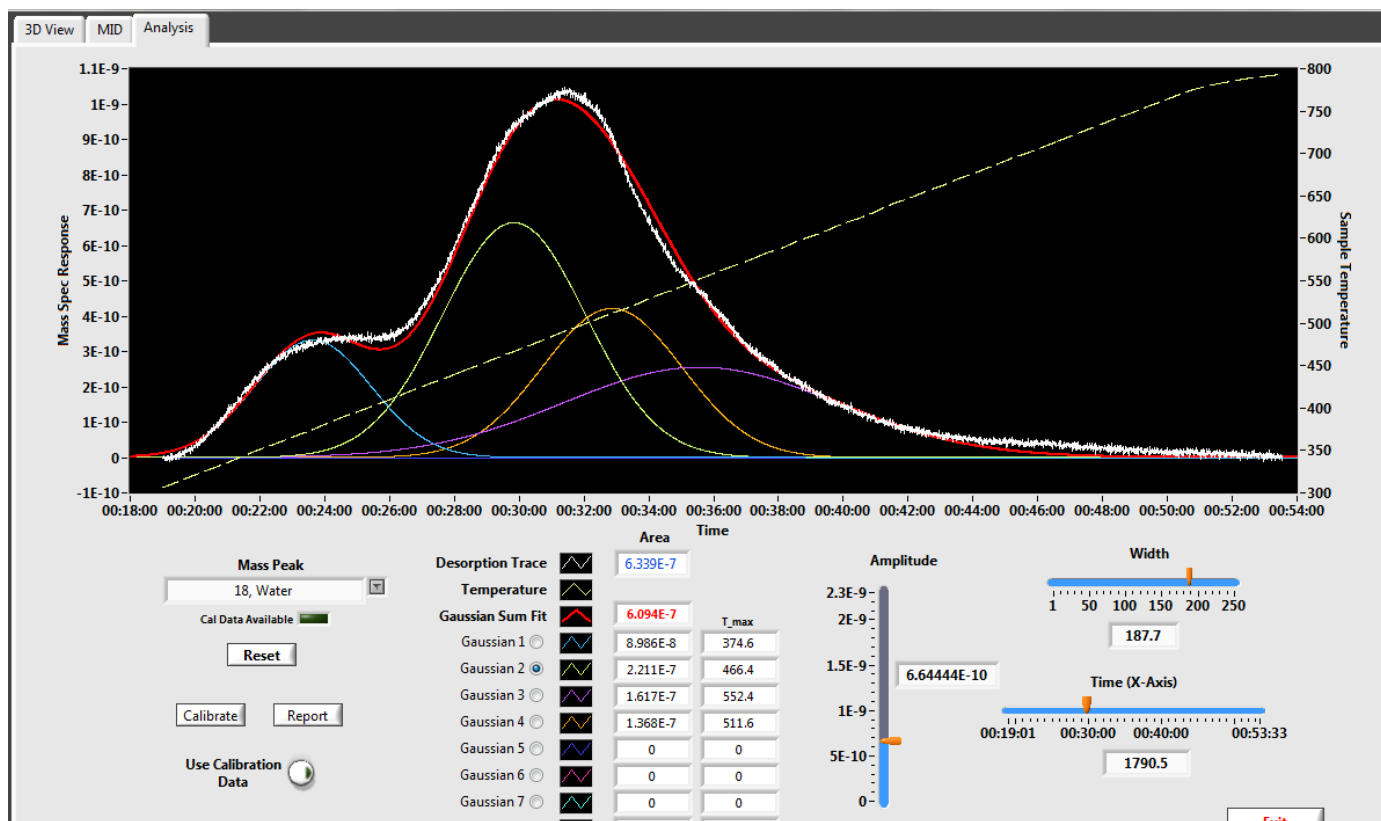
- Data plotted with x-axis as time or temperature
- Y2 axis for secondary plotting of m/z data, temperature or flow vs. time/temperature

Data Analysis



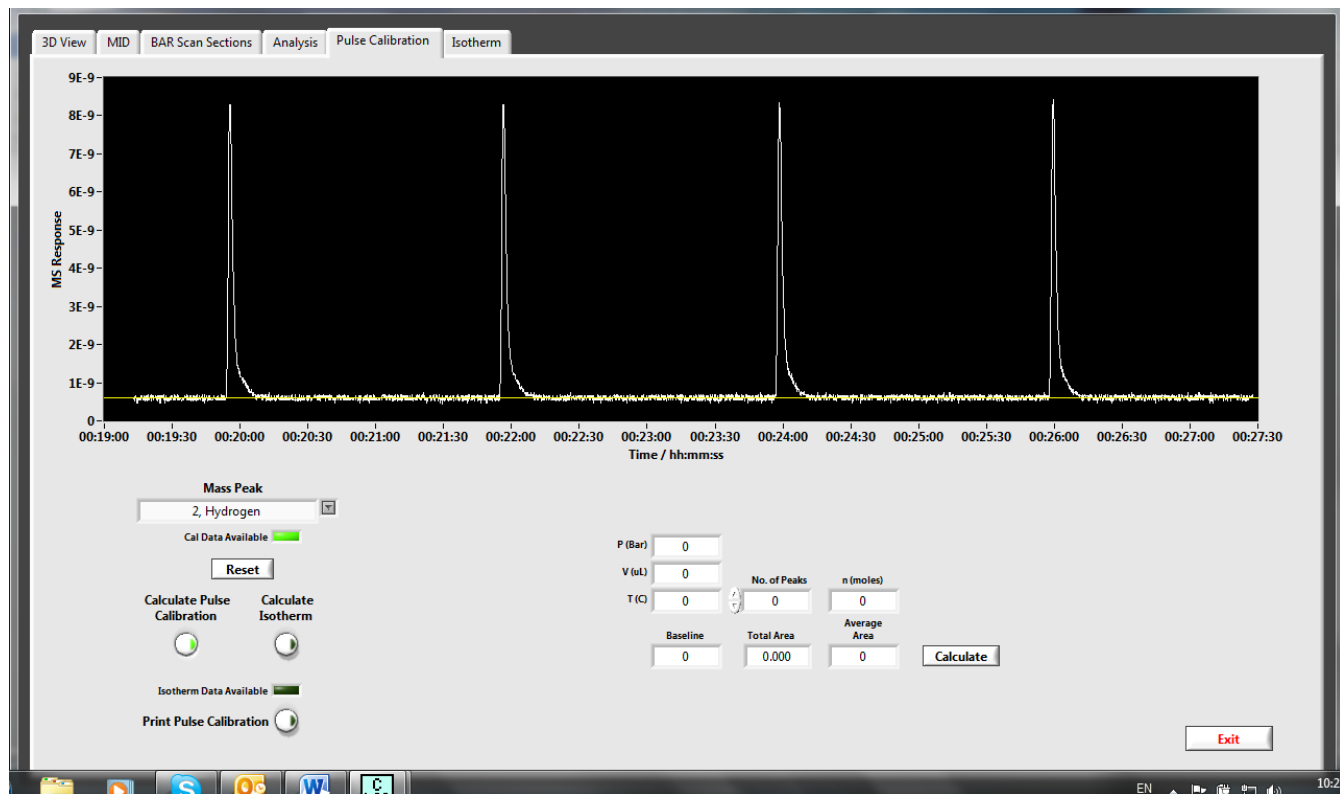
- 3D Bar, 2D Bar and MID modes all available in data analysis mode.
- Multiple export/print options.
- Export selectable masses or whole scan to NIST database for identification of unknowns
- 2D Bar and MID view linked to enable viewing of Bar scan at any point in the MID trace and vice versa.

Data Analysis



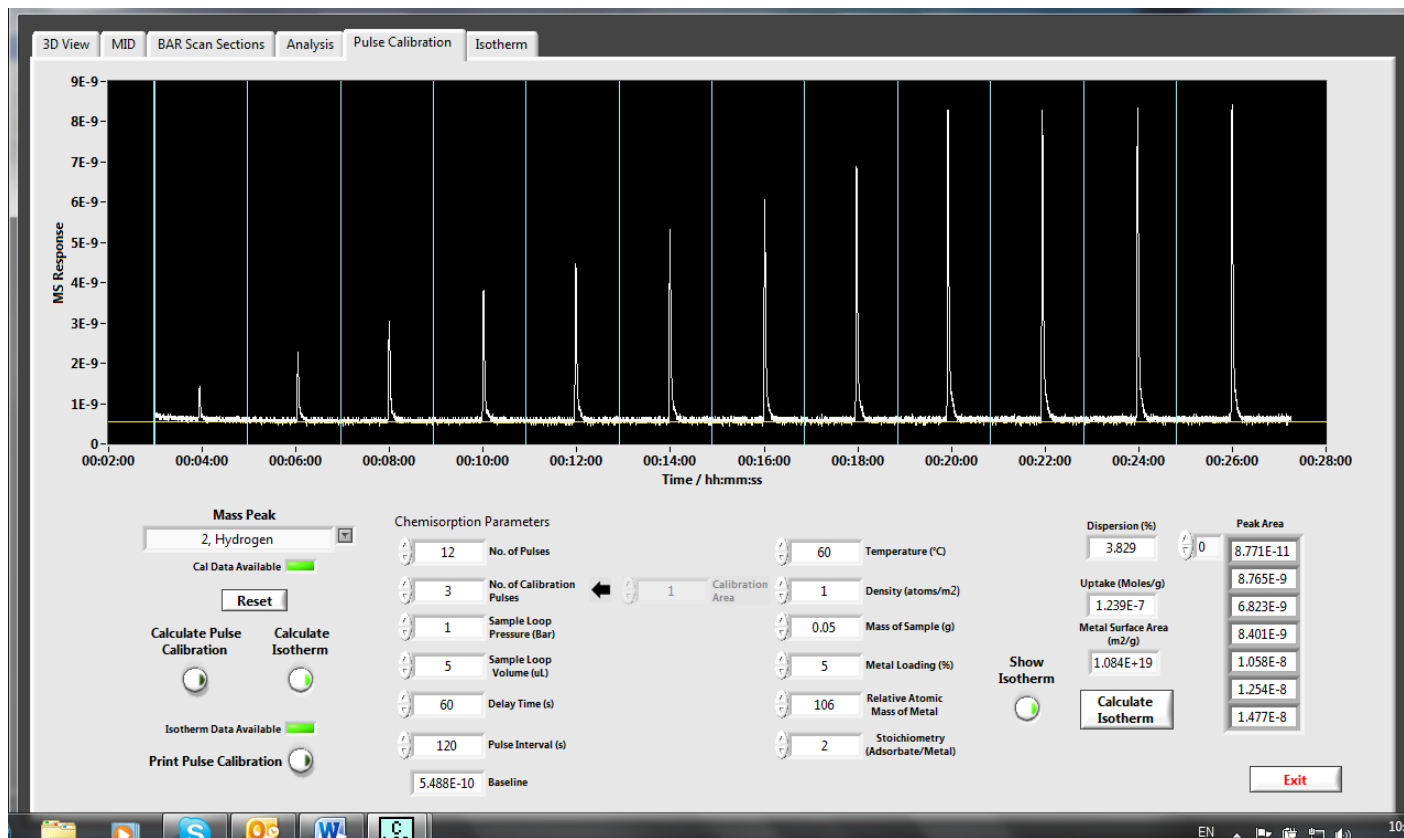
- Peak fitting analysis routines
- Integrated area
- Baseline subtraction

Data Analysis



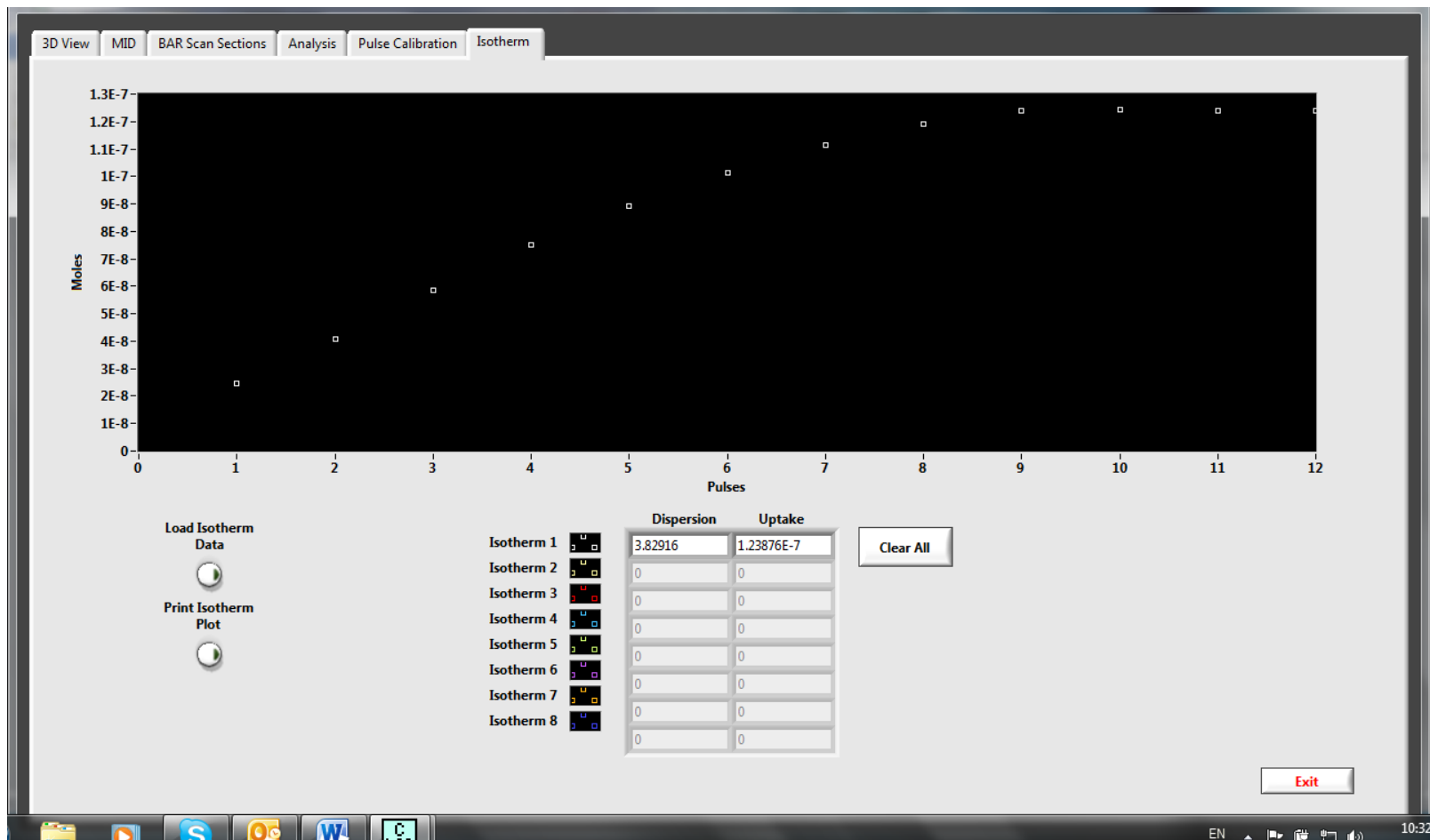
- Calibrate MS response vs injected gas amount for quantification of desorbed gases.

Data Analysis



- Pulse chemisorption algorithms to determine uptake, metal surface area and dispersion from pulse adsorption experiments

Data Analysis



- Calculate and plot the pulse adsorption isotherm

- 
- A photograph of a modern, two-story office building with a grey facade and large glass windows. The building has a prominent glass entrance on the left and a long row of windows on the right. A sign with the "HIDEN ANALYTICAL" logo is mounted on the upper part of the building. The building is surrounded by greenery, including trees and bushes, under a clear blue sky. A large, semi-transparent white circle is overlaid on the left side of the image, containing the text of the list.
- www.HidenAnalytical.com
 - The Hiden website is an excellent resource with product pages, brochures, catalogues, product pages with some application notes, presentation and other information.
 - Contact +44 1925 445225 for direct support.