

New Product Information

Release: HAPR0020

Release date: immediate

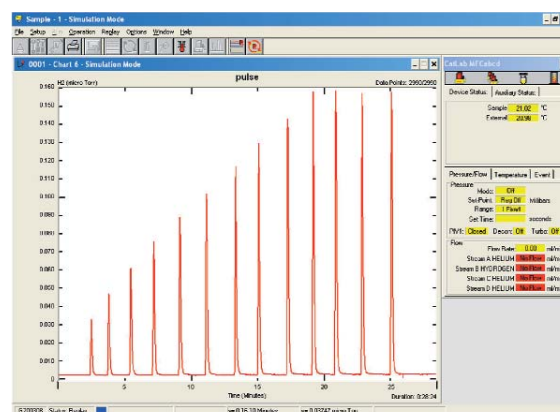
Hidden CATLAB Includes Pulse Chemisorption Mode For Improved Catalyst Characterisation

The Hidden Catlab, a system developed specifically for characterisation and evaluation of catalytic activity, is further advanced by introduction of the new Pulse Chemisorption (PCS) Mode for determination of adsorption isotherms, metal dispersion and surface acidity. An integrated microreactor and mass spectrometer system for temperature programmed desorption (TPD), reduction (TPR) and oxidation (TPO) experiments, the addition of the PCS mode now enables sample exposure to precisely controlled repeat doses of a reactive gas injected into the primary gas stream, simultaneously with continuous monitoring of each gas species of interest.

Catlab operates under continuous flow conditions with reactor temperatures to 1000°C together with dynamic control of up to eight gas streams. The modular bench top system features a fast-response low thermal mass furnace with integrated air-cooling, a precision quadrupole mass spectrometer, and the Hidden QIC Series quartz inert capillary with 'hot zone' inlet for continuous close-coupled catalyst sampling with minimal dead volume and memory effects. The novel Catalyst Cartridge System provides simple, reproducible sample placement with minimal changeover time, the in-bed thermocouple ensuring optimal measurement of catalyst temperature and reaction exotherms.



Hidden Analytical CATLAB-PCS



Typical pulse adsorption profile

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The analysis cycle is fully pre-programmable and automated for linear ramp rate, temperature range and temperature dwell periods. The mass spectrometer may additionally be operated as a stand-alone analyser under the powerful Hiden MASsoft software suite for full control and manipulation of mass spectrometer parameters. MASsoft enables real-time integration of auxiliary parameters with the mass spectral data, including temperature, weight and pressure, and includes precise mathematical manipulation functions for data quantification and ease of analysis and reporting.

For further information on this or other Hiden products please contact Hiden Analytical at info@hiden.co.uk or visit the main website at www.HidenAnalytical.com

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