

## Mass Spectrometer for Bioreactor Quantification

The Hiden HPR-40 DSA mass spectrometer systems are engineered specifically for monitoring dissolved gaseous content in aqueous solutions. All systems feature a media interface with semi-permeable membrane to enrich the transition of gases and vapours and simultaneously inhibit the transfer of water vapour. Applications include diverse areas of microbiological study including fermentation culture analysis, biofuel research, methane generation, soil core sampling, seawater and freshwater evaluation.



***HPR-40 DSA Dissolved Species Analyser***

The systems enable real-time monitoring of dissolved gaseous species in bioreactor operation and in evolved fermenter offgas, including continuous measurement of CO<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, organic vapours. Interface types include slim immersion probes for static media and circular flowthrough membrane carriers for flowing media, with choice of membrane and membrane area to optimise sensitivity for specific gaseous species. For photo-responsive studies, cuvette-style vessels are available with integral agitation and capacities ranging from 2mL to 500mL. Our most recent additions are the range of DEMS cells for real-time electrochemical reaction studies.

Systems can be process integrated to enable monitoring and control of media parameters including temperature and media flow rate. Multiple probes can be configured to enable automated stream sequencing for process laboratory multistream monitoring.

For further information on all Hiden Analytical products contact Hiden Analytical at [info@hiden.co.uk](mailto:info@hiden.co.uk) or visit the main website at: [www.HidenAnalytical.com](http://www.HidenAnalytical.com).