



# pQA- Portable Quadrupole Analyser

A compact transportable case mounted gas analyser configured for environmental field studies

The Hiden pQA, a versatile user configurable mass spectrometer system, is available with a range of sample inlets for real-time analysis of evolved or dissolved gases and vapours. A compact transportable case operated with a 12 V or 24 V electrical supply makes it ideal for in-situ measurements in the field, providing a distinct advantage in time and efficiency over traditional analysis methods.

Equipped with an extending handle and base wheels, detection to sub-ppb levels and a 200 amu mass range the pQA is an all-in-one solution enabling the acquisition of laboratory quality data on the go. Hiden MASsoft and QGA Professional software packages are supplied for quantitative analysis of gas species and both include soft ionisation capability for reduced spectral fragmentation and simplified data interpretation.

## Applications

- ▶ Environmental monitoring
- ▶ Soil core analysis
- ▶ Water analysis in reservoir, river, estuary or sea
- ▶ Groundwater studies
- ▶ Contamination tracking
- ▶ Microbiological / Enzyme activity studies
- ▶ Swimming pool analysis

## Inlet Options



**Denitrification inlet** – flow through probe with low flow design for denitrification studies, including stainless steel U-tube connection.



**Flow through probe** – circular carrier type inlet, with liquid flow connections. Includes the X44 membrane selected for high sensitivity to rare earth gases such as in ground water studies. A thermocouple and signal conditioning module are included for simultaneous acquisition and display of real time measured sample temperature data with mass spectrometer data.

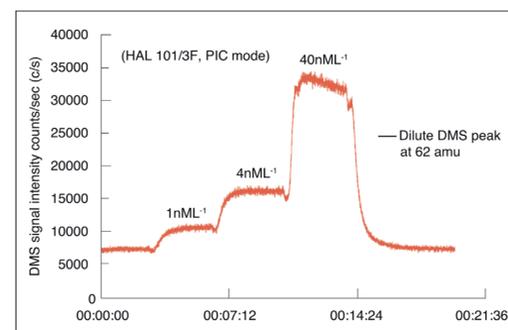


**Direct membrane inlet probe** – 500 mm long, for analysis of dissolved species in fermentation cultures, soil samples, and general applications where analysis of dissolved species in a liquid sample is required.

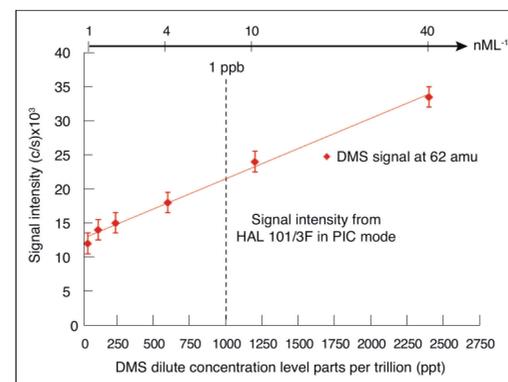
## Application

Hiden membrane inlet mass spectrometry has been deployed on ocean going vessels on extended expeditions for making real-time measurements of species in sea water with trend analysis showing the concentrations of a range of species vs depth with geo location recorded.

Dimethylsulphide (DMS), a trace substance implicated in global climate change and regulation was detected and analysed at low level concentrations in British Columbian water. **Figure 1A** and **Figure 1B** show the data obtained using the Hiden MIMS system, comfortably detecting sub-ppb concentrations of DMS.



**FIGURE 1A** : Data obtained with assistance from P.D. Tortell, Department of Botany, University of British Columbia



**FIGURE 1B** : Data obtained with assistance from P.D. Tortell, Department of Botany, University of British Columbia

