

IsoProbe² – The Second Generation Single Focussing MC-ICPMS

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3 years ago Micromass introduced the worlds first single focussing multi-collector ICPMS. The success of this instrument has been unrivalled. IsoProbe² combines all of the technology of the IsoProbe with new advanced features to make analysis even better yet easier.

The IsoProbe uses a hexapole collision cell between the ICP and the magnetic sector analyser to reduce the energy spread of the ions leaving the ICP source to less than 1eV. This unique approach also enables 'chemical resolution' of many traditional interferences making isotopic measurements of elements such as sulphur, iron and calcium possible. The IsoProbe² utilises all of the unique features of the IsoProbe to produce an advanced platform for isotope ratio and elemental analysis:

The main technical advances include:

- Windows NT operating software, based upon the Micromass MassLynx platform. This encompasses full automation of all elemental and isotope ratio acquisition with minimal key strokes by the user. All data reduction is accomplished by a new module, IsoLynx which utilises Microsoft Visual Basic and

Excel for full user flexibility. Full time resolved isotope ratio capability is standard.

- New motorized collector system with direct readback of collector movement for both ion counting and faraday collectors. Both the internal and external components of the motorized collector block has been redesigned.
- All new electronics system with all analogue and digital data transfer along fibre optic loops.

The main analytical improvements include:

- Ultra-high sensitivity for lower masses - in excess of 50v/ppm for Li.
- Sensitivities in excess of 300v/ppm for Nd, Pb and U.
- Ultra-low backgrounds at full sensitivity conditions allowing determination of U-series isotopes on femto-gram sized samples.
- Medium resolution (up to 2000 resolving power) on multiple faraday channels.

In conjunction with the above technical details state of the art data will be presented for several isotopic systems both traditional and 'new'.