

precisIION FLEXIBILITY

We offer a broad portfolio of peripheral inlet systems which are designed specifically for stable isotope analysis. The choice of inlet system depends on your experimental requirements but whichever inlet you choose, you can be sure that your samples are handled exactly and faithfully with absolutely no isotope fractionation. Complete automation and switching makes **precisIION** the most dynamic and flexible stable isotope mass spectrometer ever created.

ELEMENTAL ANALYSIS

Conversion of bulk organic and inorganics in solid and liquid sample matrices to pure gases prior to isotope analysis.

HEAD SPACE

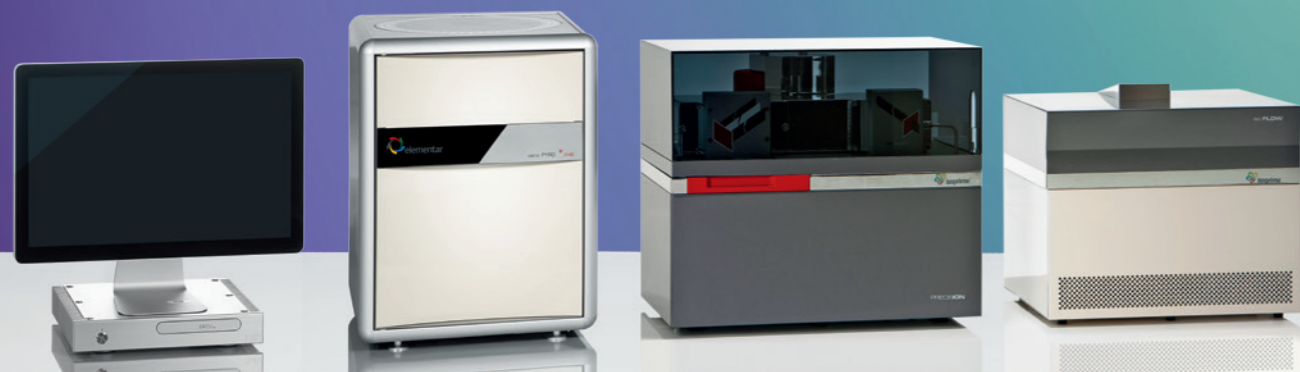
Preparation, separation and analysis of air, breath, liquid, and carbonate samples in septum sealed vials.

CHROMATOGRAPHY

Column separation of complex organic mixtures using GC & LC techniques and conversion in real time to sample gases.

GAS ANALYSIS

Concentration and separation of various gaseous sample types prior to isotope analysis.



RESEARCH AREAS SERVED

CHEMICAL

- Medical
- Pharmaceutical

AGRICULTURE

- Food & Flavorings
- Soil Science
- Geology

ENERGY

- Oil & Gas

FORENSIC

- Sports Doping
- Criminal
- Archaeology

ENVIRONMENTAL

- Ecology
- Oceanography
- Pollution
- Climate Change



Great Flexibility

Complete integration of all inlet systems, including novel inlets



High Sensitivity

Analyze the most challenging samples with exceptionally high ion source sensitivity



Small Footprint

Almost 50% smaller than any other commercial stable isotope ratio mass spectrometer



High Data Quality

Achieve the highest analytical performance with the most precise instrument available

Elementargroup – your partner for elemental analysis

Elementargroup is the world leader in high performance analysis of organic elements. Continuous innovation, creative solutions and comprehensive support form the foundation of the Elementar and Isoprime brands ensuring our products continue to advance science across agronomy, chemical, environmental, energy, materials and forensics markets in more than 80 countries.

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elementargroup.
elementar | isoprime

precisIION

Take your research in any direction



Great flexibility



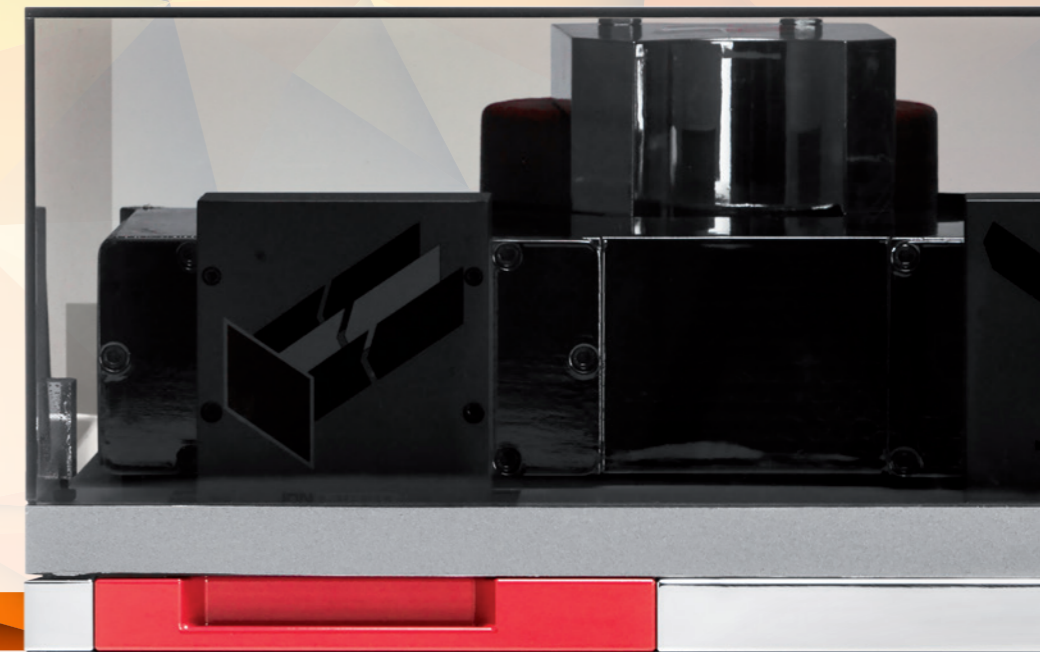
High sensitivity



Small footprint



High data quality



precisIION

Take your research further



IONOS is the most advanced stable isotope software ever created.

IONOS works in concert with the **precisIION** and **centrIION** to provide an unrivalled level of intelligent control. Designed completely from the ground up and uniquely for stable isotope analysis, **IONOS** is the most sophisticated yet simple software ever created. Its clean user interface belies the level of sophistication within, giving users unrivalled capabilities to generate exceptional data with ease.

A powerful yet simple tool, **IONOS** delivers a world of opportunity for your laboratory. With complete control of the hardware and simple programming with the Method Workflow Designer you can continue expanding your research horizons over time.

IONOS KEY FEATURES



- Develop unique experiments with the powerful and flexible Method Workflow Designer.
- Integrate standard and novel peripheral inlet systems with complete automation.
- Create unique user interfaces by adapting functionality from multiple devices into bespoke panels.
- Process, calibrate and report your results against international standards directly within **IONOS**.

Stable isotope analysis provides great insight into diverse applications and delivers a greater understanding of the micro and macro cycling mechanisms of the organic elements through the world around us. Though our collective knowledge continues to grow, so does our desire to explore further. The more we know, the more we question.

As your research grows into new and novel areas, answering questions you do not yet know means that you need an instrument which can grow with your research, whilst guaranteeing the highest performance for all analysis types.

precisIION is the highest performing stable isotope ratio mass spectrometer offering complete flexibility to move in any direction that your research leads.

Many applications in a tiny footprint.



precisIION is the most flexible, yet powerful IRMS ever created.

Analytical power and flexibility is what **precisIION** is about. With seamless integration of hardware and software delivered in a compact benchtop instrument, it is at the forefront of modern stable isotope ratio mass spectrometry.

precisIION forms the core of your system; a starting point from which to grow your research. Maximize the possible research options with your system by choosing any combination of inlet systems and automatically switch between them using the **centrIION** Continuous Flow Interface System which is directly incorporated into the instrument.

But perhaps your research topic demands something different? Then you can interface **precisIION** to your bespoke experimental system with the revolutionary Novel Inlet Control Module (NICM) which offers substantial control of additional apparatus with the elegant Method Workflow Designer. Adding multi-collector arrays with bespoke amplification resistor configurations will drive your experiment even further.

Providing against possible future research requirements is simple when you have an instrument which performs to the very highest levels. **precisIION** offers the highest gas ionization performance and mass resolution all in the most compact footprint possible.

precisIION KEY FEATURES



- 100 V amplification for large dynamic range samples with auto resistor switching
- Simultaneous measurement of up to 10 ion beams across a $\pm 25\%$ mass range for multi-collector experiments
- Improved gas ionization performance of 1100 molecules/ion (CO_2 in CF mode)
- Improved mass resolution of 110 m / Δm (@ 10% valley separation)
- **IONOS** Method Workflow Designer for developing bespoke control of your instrument
- Handle up to 6 monitoring gases and 5 inlets with **centrIION** Continuous Flow Interface System
- Vacuum grade stainless steel analyzer for the highest vacuum performance with optional bakeout.
- Automatic control of every aspect of the hardware with **IONOS**
- Bespoke DAC dual resistor configurations for non-standard isotopomer distributions
- Instant instrument status recognition with color LED warnings