

# EnvirovisiON

*A complete solution for stable isotope analysis  
in Environmental Sciences*



Small footprint



Ease of use



Advanced data analysis



Low cost of ownership

# Envirovision

*Natural or  
Contaminant?*

**Humankind's chemical legacy of industrialization has resulted in the long-term contamination of Earth's environment. Many of these organic chemicals are resistant to degradation through chemical, biological and photolytic processes. As such they persist in the environment, can be transported vast distances and eventually bioaccumulate in human and animal tissues. Only through developing an intimate understanding of the source of these compounds can their eventual remediation be realized.**

Stable isotope analysis has the power to deliver unparalleled insight into the complex interactions of organic pollutants in the environment. It can elucidate the often complex sources and fates of pollutant chemicals on land and at sea, aiding remediation strategy and shaping waste and resource management policy for protection of the environment. Developing our understanding of these processes aids our stewardship of the natural world to ensure that future generations enjoy the same wonders that we do today.

Envirovision brings the insightful power of stable isotope analysis at a level of simplicity that has not been possible before, allowing more laboratories access to this incredible technique.

*A powerful combination.*

Ⓢ **Isoprime**  
Market Leading **vision**  
stable isotope analyzer



Ⓢ **Agilent Technologies**  
Market Leading 7890B Gas  
Chromatograph

**IONOS** is the most advanced stable isotope software ever produced.

**IONOS** works in concert with the **vision** and **centrION** 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.

Enviro**vision** reclaims responsibility for sample analysis from the user by offering incredible functionality both pre- and post-acquisition significantly reducing instrument contact time.

## IONOS KEY FEATURES



- Incredible new capabilities for acquisition and data processing.
- Elegant user interface with contextual control.
- Intelligent and automatic instrument performance optimization.
- Instantaneous data processing with dynamically updating results.
- Import your data from 3<sup>rd</sup> party instruments.

**vision** is the most elegantly simple stable isotope analyzer ever created.

Simplicity is what **vision** is about. Creating something simple seems, well, simple. In fact, simplicity can only be achieved once the fundamental requirements of our customers are understood. With this clarity, **vision** offers a completely new experience of stable isotope analysis. An experience where the user is free from the routine chores of maintenance allowing them to focus on the science, not the instrumentation.

**vision** offers exceptional bulk and compound specific isotope analysis through market leading technology from Elementar and Agilent Technologies. Harnessing this technical ability through the **vision** finally opens the power of stable isotopes to practically any laboratory.

## vision KEY FEATURES



- Almost 50 % smaller instrument than any other currently available
- Straightforward analysis and intelligent control for incredible ease of use
- Significantly reduced consumption of laboratory resources
- Powerful **IONOS** Peak Mapping reduces data processing time of complex chromatograms to minutes rather than hours, generating a large increase in lab productivity
- Intelligent monitoring gas injection and inlet handling with **centrION**
- 100 V amplification for large dynamic range samples such as VOCs
- Good-For-Go control significantly reduces instrument contact time
- Multi-dimensional analysis is made possible with  $\delta^{13}\text{C}$  and  $\delta\text{D}$  analysis of target compounds, to enhance the power of discrimination and tracability of chemicals in the environment
- Includes specialized autosampler for SPME and headspace analysis, vastly increasing the range of applicable environmental sample types and compounds for isotope analysis. Maximize pesticide detection limits with PTV inlet for cryofocussing or large volume injection

## Enviro**vision** ENHANCEMENTS

- For complete confidence in your GC-IRMS analysis, add the Agilent 5977A mass selective detector for simultaneous compound detection and isotope analysis, ideal for positive identification of pesticides or other contaminants in a complex chromatogram
- Expand your capabilities by adding complementary bulk elemental and isotope analysis of contaminated soils, sediments or tissue samples
- Ground water analysis can be performed with the vario LIQUID sampler

*Expand your research further.*

### Ⓢ Elemental Analysis

Conversion of bulk materials to sample gases prior to isotope analysis

### Ⓢ Isotope Analysis

Intelligent analysis of sample gases from GC & EA inlets

### Ⓢ Gas Chromatography

Separation of volatile organics and real time conversion to sample gases



## RESEARCH AREAS SERVED

- Academic environmental research groups
- Contract environmental analytical labs
- Public environment and public health protection agencies
- National and global environmental consortia and initiatives

## SAMPLE TYPES ANALYZED

- Organic extracts including persistent organic pollutants such as PCB, dioxins, Pesticides/Biocides, PAHs, BTEX
- Volatile organic compounds from environmental water samples
- Contaminated soils, sediments and tissue samples



### Small footprint

Almost 50 % smaller than any other commercial stable isotope analyzer



### Ease of use

Good-For-Go control allows one click instrument set-up



### Advanced data analysis

The most powerful stable isotope data processing software ever created



### Low cost of ownership

Instrument sleep / wake-up functions for reduced consumption of resources

### 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 agriculture, chemical, environmental, energy, materials and forensics markets in more than 80 countries.

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