



Automated Trace VOC Monitoring

Real-time quantification with minimal user interaction

The VOCentinel provides continuous, real-time quantitative results of a wide range of VOCs with only minimal user interaction required, making it an ideal choice for long-term air-quality, environmental and industrial monitoring applications. Built on IONICON's experience in robust industrial systems, the VOCentinel brings fully automated VOC monitoring to complex environmental applications.

The VOCentinel has a simple user interface for monitoring a predefined set of VOCs in real-time, including various relevant chemical classes, such as: amines, aldehydes, ketones, alkenes, monoterpenes, siloxanes, and aromatics. Still, all gathered raw data is accessible for evaluation and

- Real-Time VOC Monitoring
- Compact & Industrial-Grade
- User-Friendly Interface

further scientific research. The instrument offers all benefits of a small footprint and low weight in a robust industry-proven setup. It is available as a benchtop instrument or as 19-inch rackmount version for easy integration into your monitoring station or mobile platforms.

THE SOLUTION FOR REAL-TIME TRACE GAS ANALYSIS



VOCentinel Specifications

Mass resolution

$m/\Delta m > 3\,500$ (FWHM)

Separating isobaric compounds.

Limit of Detection

< 5 pptv (60 s)

Exceeds requirements of most applications.

High sample frequency

< 1 min/sample point

Full mass spectra in < 1 s

Dimensions

48x80x66 cm (WxHxD)



Weight

~ 90 kg

Typical operation

< 500 W

Suitable for integration into mobile platforms.

The backbone of the VOCentinel is the PTR-TOF 3000 platform that was developed for industrial grade robustness and stability, while conserving the highest degree of analytical performance.

The VOCentinel leverages recent technological advancements in PTR-MS, such as the new ultra-clean Invion source that allows for fast switching between different selective reagent ions including H_3O^+ , NO^+ and O_2^+ within one second. To ensure quick response times, all wetted surfaces are treated with IONICON's extended volatility range (EVR) technology.

Our new Dynamic Humidity Control (DHC) ensures a stable sampling matrix by eliminating interference from environmental humidity variations.

The Automated Measurement and Evaluation (AME) software gathers the complete chemical information by cycling through multiple ionization modes. The resulting spectra are automatically analyzed using peak fitting and advanced pattern matching for minimal chemical interferences.

VOCentinel – The ideal solution for trace gas monitoring



Air Quality

Compact and field-ready for the detection of VOCs and air monitoring of a broad range of harmful indoor and outdoor emissions.



Environmental

Automated monitoring of a wide range of VOCs originating from biogenic and anthropogenic sources, including ozone and aerosol precursors.



Industrial Safety

For industrial and emergency response scenarios, including the detection of odor sources, hazardous chemical spills, identifying pipeline leaks, confirming safe conditions before maintenance, or during facility dismantling.



Fenceline

Real-time monitoring of volatile organic compound emissions to ensure regulatory compliance and drive operational improvements for the oil and gas industry around property lines.