

COMPACT PTR-MS



Compact Real-Time VOC Monitoring Station >> 500 PPTV - 10 PPMV

The IONICON® Compact PTR-MS instrument is a very sensitive **monitoring system** for volatile organic compounds (VOCs) that allows for **continuous online VOC quantification**.

Developed for **VOC monitoring in production processes or in the field** this PTR-Quad-MS product offers a **straight forward user interface** and is **ready to measure 15 minutes after power-on**.

The Compact PTR-MS can be **carried by hand**, is **space-saving** and nevertheless offers a **low online detection limit** even for **complex gas mixtures**.

Direct injection of sample gases **without preparation** combined with **selective qualitative and quantitative analysis** of trace compounds makes the Compact PTR-MS the perfect tool for online VOC monitoring.

Our unique **soft ionization (PTR) technology** together with our extensive experience in gas-phase ion chemistry and engineering of online monitoring instruments accounts for the **reliability, low detection limit, very low mass fragmentation, fast response time and robustness** of our PTR-MS systems.

- > real-time VOC quantification
- > small dimensions and low weight
- > short start-up time
- > fast and easy direct sample injection

Find out more: www.PTRMS.com/products



COMPACT PTR-MS



ONLINE VOC DETECTOR - 500 PPTV SPECIFICATIONS*

- > Mass range 1-300 amu
- > Resolution < 1 amu
- > Response time: 100 ms
- > Measuring time: 2 ms/amu to 60 s/amu
- > Detection limit**: 500 pptv
- > Linearity range**: 500 pptv - 10 ppmv
- > Adjustable flow: 50 - 500 sccm
 - >> Inlet system (inlet system options available on request):
 - > 1.2 m long inlet hose - with internal inert (PEEK) capillary
 - > Inlet system heating: up to 150°C (302°F)
- > Reaction chamber heating range: 40 - 120°C (104 - 248°F)
- > Power supply and max. consumption: 100-230 V, 650 W
- > Dimensions (w x h x d): 63x47x63 cm (24.8 x 18.5 x 24.8 in.)
- > Weight: 55 kg (122 lbs)
 - >> Interfaces:
 - 1x Ethernet 10/100 Mbit RJ45 (TCP/IP)
 - 1x RS 232
 - 5x Digital outputs

*Specifications are subject to change without prior notice.

**Actual detection limit and linearity range are dependent on the substances measured, integration time and system set-up.

TECHNOLOGY

The innovative technology all IONICON Analytik products are based on is called PTR-MS (Proton Transfer Reaction - Mass Spectrometry).

This unique soft ionization method is based on proton transfer from H_3O^+ ions to all compounds with a higher proton affinity than water. Common constituents of air such as N_2 , O_2 , Ar, CO_2 etc. have lower proton affinities than H_2O and are therefore not detected. This is one of the main reasons for our market-leading low online detection limit for trace compounds in the range of a few pptv.

ROBUST & EASY TO USE

The Compact PTR-MS is completely software controlled and connected via a LAN-cable to a laptop computer. 15 minutes after power-on the system is ready to measure. No gas supply is necessary and the instrument can be operated in nearly every environment. The Compact PTR-MS can be carried by hand, is light weight, space-saving and thus often used for field campaigns or variable location measurements.

SERVICE & SUPPORT

We offer service contracts on our high-end PTR-MS systems and strongly recommend you to top up your solution with one of our maintenance vouchers to ensure optimum performance.

We offer one, two, three or more years service contracts covering the regular maintenance intervals, thus giving you the chance to concentrate on the important things. Please ask us for your individual solution!

Our instruments are designed to continuously satisfy the needs of our customers, requiring little maintenance and being easy to use.

IONICON Analytik welcomes special wishes from customers and has long-standing experience in developing customized systems. Our in-house software department knows what your needs are in the lab or in the field and continuously improves our software's performance and the straight-forward experience you have with our instruments.

PROCESS MONITORING

The Compact PTR-MS was developed to be a robust online VOC monitoring instrument for industrial applications.

It can be deployed as a stand-alone process mass-spectrometer and easily used in multiple locations or as a scalable and cost-efficient monitoring station with multiple sampling points and a customized software package to monitor low concentrated VOCs in real-time.

APPLICATION EXAMPLES



- Emissions monitoring
- Food quality control
- Indoor air VOC detection (SBS monitoring)
- Cleanroom environment monitoring
- Passenger cabin air VOC detection
- Waste incineration process control
- Engine exhaust monitoring
- Online VOC monitoring in chemical plants