PTR-QMS SERIES

IONICON ANALYTIK

THE WORLD's LEADING PTR-MS COMPANY PRESENTS

PTR-QMS 300

LoD < 300 pptv

The **IONICON PTR-QMS 300** instrument is a **real-time monitoring system** for volatile organic compounds (VOCs) that allows for **continuous VOC quantification at very low concentrations**.

The **PTR-QMS series** is based on quadrupole mass spectrometry and combines market-leading **low online detection limits** with high selectivity and a **very fast response time**.

Direct injection of sample gases **without preparation** contributes to the **speed and simplicity** that is common to all our instruments.

A modular software can be tailored to different industrial applications and individual, touchscreen operated monitoring solutions. The PTR-QMS 300 can optionally be equipped with multiplexing units.

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

Mass Range 1-300 amu

> Low detection limit < 300 pptv
> Real-time VOC quantification
> One-button touchscreen operation
> Process monitoring and multiplexing ready

Find out more:
www.PTRMS.com/products/ptrqms

THE SOLUTION FOR REAL-TIME TRACE GAS ANALYSIS

IONICON ANALYTIK

Picture: Rainer Sturm / pixelio.de

PTR-QMS 300

IONICON PTR-QMS 300 SPECIFICATIONS*

- Mass range: 1-300 amu
- Resolution** < 1 amu
- Response time: 100 ms
- Detection limit**: 300 pptv
- Linearity range**: 300 pptv - 10 ppmv
- Adjustable flow: 50 - 500 sccm
- Inlet system (Different inlet systems available on request):
  - 1.2 m long inlet hose - with internal inert (PEEK) capillary
  - Inlet system heating: up to 180°C (356°F)

- Reaction chamber heating range: 40 - 130°C (104 - 266°F)
- Power supply and max. consumption: 100-230 V, 1200 W
- Dimensions (w x h x d): 56x61x53 cm (22.1x24.1x20.9 in.)
- Weight (incl. SRI): 80 kg (177 lbs)
- Main interfaces: 1x Touch screen display
  1x Ethernet 10/100 Mbit RJ45 (TCP/IP)
  8x DO, 4x DI, 4x AI, 4x AO

*Specifications are subject to change without prior notice.
Product pictures and illustrations may differ from actual configuration.
**Detection limit, linearity range and resolution are dependent on the substances measured, integration time and system set-up.

TECHNOLOGY

The innovative technology IONICON PTR-MS products are based on is Proton Transfer Reaction - Mass Spectrometry (PTR-MS).
This unique soft ionization is realized by 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 ionized. This is one of the main reasons for our market-leading low online detection limit for trace compounds and due to precisely controlled ion source and drift tube parameters, absolute quantification of VOC concentrations is possible.

FEATURES

The new IONICON PTR-QMS 300 is a milestone for time critical process monitoring applications that require outstanding sensitivity, speed and the selectivity of a quadrupole mass spectrometer.

The PTR-QMS 300 is engineered as a very affordable, user- and maintenance-friendly, lean and innovative bench top set-up that focuses on industrial applications. It features a touchscreen display allowing for one-button control of the system and even preconfigured analysis tasks in combination with an optional embedded industrial computer and individualized software packages (see Fig. 1).
We provide flexible inlet solutions such as the integrated multi-position capability and the possibility to optionally upgrade the PTR-QMS 300 with multiplexing and data interface units thus bringing down the costs per sampling point and simplifying the integration in existing monitoring network infrastructure.
For research or laboratory use the PTR-QMS 300 is available as a fully functional entry-level PTR-MS instrument, being operated using the comprehensive IONICON PTR-QMS series software suite, available on an external notebook computer (the touchscreen display then being used as status indicator).

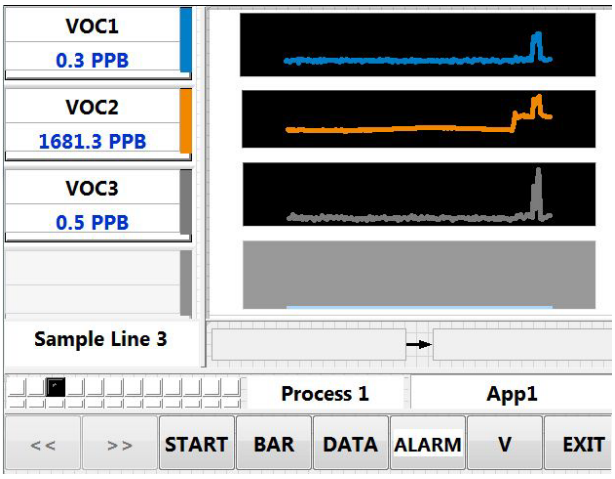

Fig. 1: Illustration of an automated monitoring software for different preset compounds and/or multiple sampling points.

PTR+SRI-MS
SWITCHABLE REAGENT IONS

Optionally available for all IONICON PTR-MS instruments: SRI (Switchable Reagent Ions) featuring NO^+ and O_2^+ as additional precursor ions.

Find out more about PTR+SRI-MS:
www.PTRMS.com/technology