



Press release – Innsbruck - 04. June 2014

IONICON launches the new ultra-sensitive PTR-QiTOF trace VOC analyzer

Welcome to the future: 25x more sensitive than the world's bestselling PTR-TOFMS instrument

IONICON Analytik, the Austrian based leading manufacturer of PTR-MS real-time trace gas VOC analyzers, unveils its new [PTR-TOFMS series](#) flagship instrument: the [PTR-QiTOF](#).

Featuring a Quadrupole ion guide (Qi), the PTR-QiTOF achieves a performance, no other commercial PTR-TOFMS system has ever been able to demonstrate before.

Scientists can expect up to 25x more sensitivity, one order of magnitude lower detection limit and 20% higher mass resolution than the world's current bestselling and up to now also best-performing PTR-TOFMS instrument*.

The market-leading specifications of the new PTR-QiTOF are the result of our continuous investment in innovation and herald a new generation of IONICON PTR-TOFMS technology:

Using a specially crafted high-resolution time of flight (TOF) mass spectrometer including the new Quadrupole ion guide (Qi) in combination with the refined IONICON PTR technology, the PTR-QiTOF achieves a mass resolution of more than 6000 (up to 10,000 $m/\Delta m$ FWHM), a limit of detection well below 1 pptv (in 30 sec), and an unmatched sensitivity of more than 1500 (up to 4500 cps/ppbv).

This boost in sensitivity is especially beneficial for cutting edge applications like [eddy-covariance flux measurements](#), where ultra-low VOC concentrations have to be quantified with more than 10 Hz.

The high time-resolution and sensitivity of IONICON PTR-TOF instruments enable flux measurements of biogenic VOCs, providing new insights to our understanding of the atmospheric VOC budget by studying active atmosphere-ecosystem exchange of a vast number of BVOCs.

*The IONICON PTR-TOF 8000 was introduced into the market in 2007 as the first high-resolution Proton Transfer Reaction Time of Flight Mass Spectrometer. Since then IONICON had tremendous success with its PTR-TOFMS series, selling more than 50 PTR-TOF 8000 instruments to leading scientists, institutions and multinational corporations, predominately in the area of environmental research and food & flavor science.



Recent peer-reviewed article:

P.Sulzer et al: "A Proton Transfer Reaction - Quadrupole interface Time-Of-Flight Mass Spectrometer (PTR-QiTOF): High Speed due to Extreme Sensitivity", *Int. J. Mass Spectrom.* vol. 368, 1-5, 2014, <http://dx.doi.org/10.1016/j.ijms.2014.05.004>.

About IONICON

IONICON Analytik GmbH was founded in 1998 to commercialize the unique [Proton Transfer Reaction – Mass Spectrometry \(PTR-MS\)](#), recently adding the proprietary [Selective Reagent Ionization – Mass Spectrometry \(SRI-MS\)](#) technology.

Over 250 leading scientists, institutions and multinational corporations are among IONICON's customers. They rely on [PTR-MS instruments](#) for results in real-time at one out of a trillion parts (LoD < 1 pptv) but without time-consuming sample preparation procedures.

Learn more about IONICON [here](#).

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