



## Vocus B Series

Fast polarity switching for real-time, comprehensive measurements of gas phase organics and inorganics



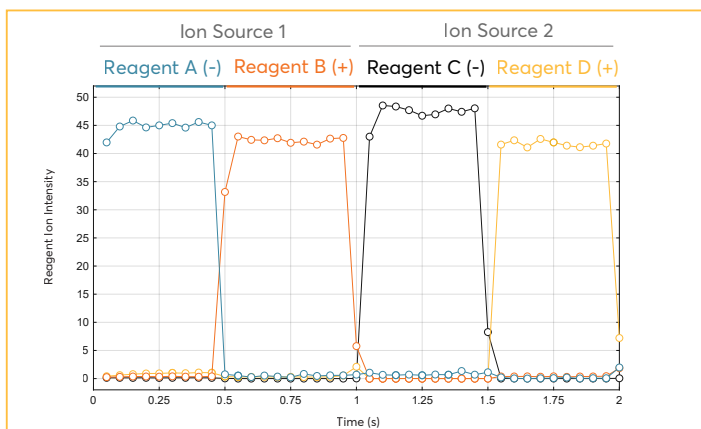
A robust solution for air quality monitoring, atmospheric chemistry research, and other challenging applications where speed and sensitivity are essential.

The TOFWERK Vocus B mass spectrometer combines cutting-edge, millisecond polarity switching with ultra-soft ionization technology.

Simplified mass spectra, comprehensive compound coverage, negligible fragmentation and real-time sampling using up to six positive and negative reagent ions provides unprecedented flexibility within one compact instrument.

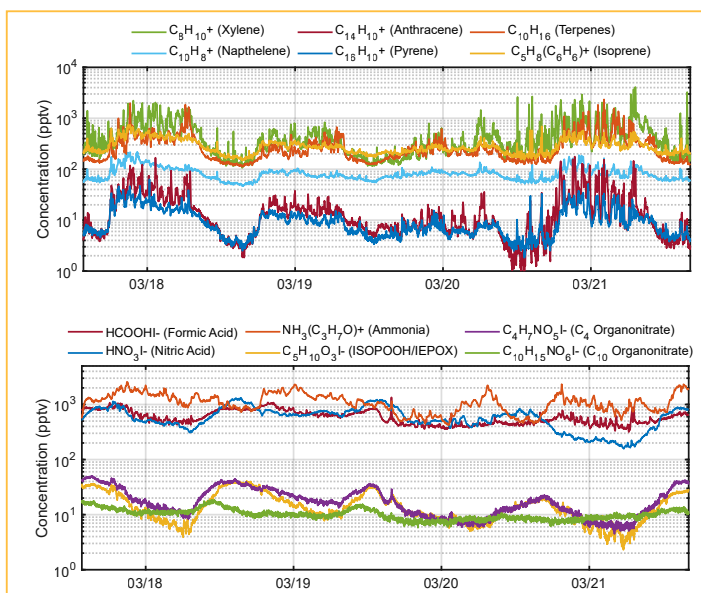
- Fast, real-time, direct analysis for use in stationary or mobile labs.
- pptV limits of detection.
- High mass resolution for accurate compound identification.
- Ultra-soft ionization for negligible fragmentation and easy-to-interpret results.
- Polarity and reagent ion switching in milliseconds.

## Rapid Reagent Ion and Polarity Switching with the Vocus B



Fast polarity switching with the Vocus B enables four different ion chemistries within two seconds. Every half second the reagent ion polarity is switched, enabling a new ion chemistry in the reaction chamber. The switching duty cycle is greater than 80%, demonstrating that little data is discarded due to the switching transients.

## Ambient Air Timeseries with the Vocus B



In measurements taken in Thun, Switzerland over four days, the Vocus B was able to simultaneously measure a wide array of organic compounds, acids and bases, as well as trace oxidation products from biogenic VOC oxidation spanning single-digit pptv to ppbv concentrations.

## Specifications

Example Vocus B LODs, pptv	Xylene	TMB	HCOOH	NH <sub>3</sub>	PGME	PGMEA	HNO <sub>3</sub>	TEOS
	6	5	6	50	5	7	10	5
Model	Vocus B			Vocus B2			Vocus B4	
Reagent Ion Switching	Typical configuration: 4 reagent ions in 2 seconds							
Concentration Range	ppqv - 500 ppbv							
Resolution   LOD*	>1000 M/ΔM   1-50 pptv			>4500   0.1-10 pptv			>10 000   0.1-10 pptv	
Dimension   Weight	480 x 615 x 850 mm   140 kg			480 x 615 x 1335 mm   170 kg			480 x 618 x 1335 mm   185 kg	
Power	<1100 W (600 W typical)			<1100 W (600 W typical)			<1100 W (600 W typical)	

\*Representative LODs evaluated using 3 standard deviations with an integration time of 1 minute for selected compounds.