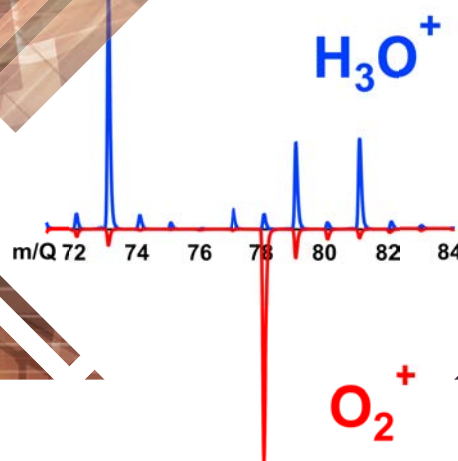




Reagent Ion Switching

An expanded suite of reagent ions increases chemical scope and specificity



Features

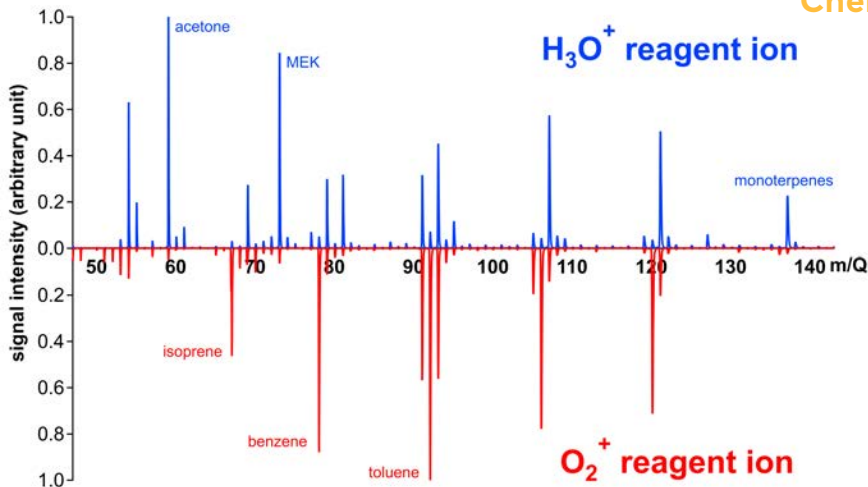
- Increased range of detectable compounds, using up to three different reagent ions with the Vocus PTR-TOF
- Automated switching and optimization within seconds
- Identification of isomers
- Quantification of highly functionalized, difficult-to-measure species

Applications

- Air monitoring
- Food, Flavor and Fragrances
- Beverage and Alcohol
- Security

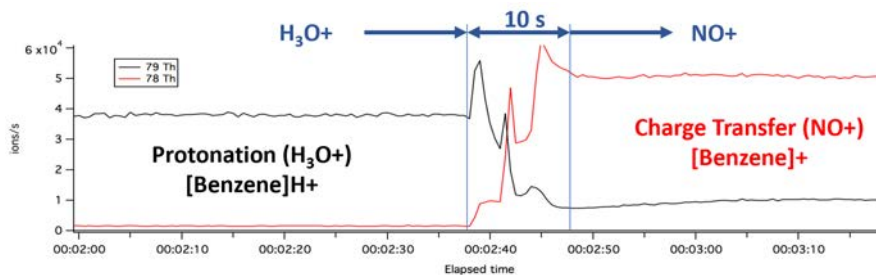
Vocus PTR-TOF

Chemical flexibility and specificity



Different classes of VOCs can be seen by comparing the H₃O⁺ (blue) and O₂⁺ (red) reagent ion spectra of this sample of aromatic and hydrocarbon-rich air.

Fast switching between reagent ion modes



Acquisition can switch between reagent ions automatically and within seconds.

Switching reagent ions takes approx. 10 s

Available Reagent Ions

	H ₃ O ⁺ (PTR)	NO ⁺	NH ₄ ⁺ adduct	O ₂ ⁺
Features	<ul style="list-style-type: none"> Clean, easy-to-interpret spectra Simple to determine sensitivities Independent of ambient humidity 	<ul style="list-style-type: none"> Gentle ionization: low fragmentation Chemically specific measurement of isomers 	<ul style="list-style-type: none"> Automatic quantification without complicated calibration systems 	<ul style="list-style-type: none"> Broad spectrum ionization of many VOC classes
Target compounds	Small oxygenated compounds, polar molecules, BTEX, PAHs, and other aromatics	Alcohols, substituted aromatics, cyclic and branched alkanes, long-chain semivolatile alkanes	Highly functionalized VOCs, oxygenated compounds, peroxides	Alkanes, carbon disulfide, ammonia, halogenated compounds
Example applications	<ul style="list-style-type: none"> Air quality analysis Food and flavor Environmental contamination 	<ul style="list-style-type: none"> Vehicle exhaust Wine contaminants 	<ul style="list-style-type: none"> Explosives and narcotics detection Photochemical oxidation products 	<ul style="list-style-type: none"> Ambient air monitoring Vehicle exhaust