Vocus Aerosol Inlet

Online analysis of the molecular composition of aerosols with Vocus PTR-TOF

Features

• High sensitivity
• Simple design without aerodynamic lens
• Efficient measurements of wide size range
• Automated filter blanks and alternating gas- and particle-phase sampling
• Install or uninstall in less than 10 minutes
• Fully integrated into Vocus control software

Applications

• Atmospheric aerosol sampling
• Combustion particle analysis
• Cigarette / e-cig emission analysis
• Industrial emissions of particulate matter
The Vocus Aerosol Inlet is an add-on device for the Vocus PTR-TOF that expands the instrument’s capabilities to the particle phase. An activated charcoal denuder is used to remove gas-phase species from the sampled air. The stainless steel thermal desorption unit then evaporates particles, driving constituents into the gas phase for analysis with the Vocus PTR-TOF. Programmable valves allows automated filter blanks or switching between gas and particle-phase.

**Specifications**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit of Detection</td>
<td>&lt; 5 ng m⁻³</td>
</tr>
<tr>
<td>Size Range</td>
<td>60 - 1000 nm</td>
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<tr>
<td>Maximum Temperature</td>
<td>230 °C</td>
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<tr>
<td>Response time</td>
<td>60 s</td>
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</tbody>
</table>

**Real-time chemical speciation of aerosols**

The Vocus aerosol inlet module enables real-time molecular analysis of aerosols in addition to gas-phase VOCs measurements.

![Graph of C₆H₄O₂H⁺ (Xylic acid) concentration over time](image)