Mini-AMS System

Measure real-time, non-refractory aerosol particle mass and chemical composition.

Applications:
- Continuous on-line measurement of ambient aerosol mass concentrations.
- Size resolved composition analysis for particulate ammonium, nitrate, sulfate, chloride, and organic species.
- Field measurements of aerosol chemical composition from high-pollution at urban sites to pristine background at remote locations.
- Routine air quality monitoring.
- Aerosol chamber studies.
- Source characterization.
- Optical/CCN closure.
- Industrial process monitoring.

Advantages:
- Aerodynamic particle lens for efficient gas-particle separation.
- Linear universal detection through two-step thermal vaporization (~600 C) and electron impact ionization process.
- Mass spectrometric analysis (0-400 amu).
- ePTOF sizing module.
- Compact vacuum system, minimal maintenance.
- Remote control ready.
- Separation and quantification of organic aerosol species including HOA (hydrocarbon-like organic aerosol, linked to primary combustion sources) and OOA (oxygenated organic aerosol, linked to...
Mini-AMS System

**SPECIFICATIONS:**

**Sensitivity**
(ng m⁻³, 10 minute, 3σ):
- Organic LOD: 50
- Sulfate LOD: 2
- Nitrate: 7
- Ammonium: 60
- Chloride: 3
- Resolution: (M/ΔM) 900

**Size Range:**
40 - 1000 nm aerodynamic diameter standard or PM 2.5 option

**Data Rate:**
Adjustable, 10 minutes is typical

**Sample Flow:**
85 cc min⁻¹ (volumetric flow)

**Operating Pressure:**
Ambient

**DAQ Control:**
Hi-speed USB 14 bit acquisition card, PC embedded in instrument rack.

**Size/Weight:**
Bench top, 25.6” x 20.1” x 23.6”, 165 lbs [65 cm x 51 cm x 60 cm, 75 kg]

**Electric Power:**
600 W Max; 350 W typical, 90-260 VAC, 50-60 Hz

**Software:**
Custom acquisition and analysis routines. Specialized routines for PMF analysis of the organic fraction.

**Available Options:**
Sample flow line controller, aerosol dryer, PM 2.5 lens, efficient particle time-of-flight (ePTOF)