



Overview of Measurement Technologies for Air Pollutants and Air Quality Metrics

Pollutant Type:

Particulate Matter

Pollutant/Metric Name:

Nitrate (NO_3^-)

#	Technology	Characteristics and performance	Availability and current use of instruments	Suggested area of application
1	Multi Component Analyzer. Wet sampling systems with on line detection	<ul style="list-style-type: none"> – Steam induced PM collecting systems – Determination of PM anions and cations – PM10, PM2.5, PM1 – Concentration range: 0.05 – 500 $\mu\text{g}/\text{m}^3$ – Time resolution 10 minutes to one hour – Detection by ion chromatography – Sample flow 0.1 – 1 m^3/hr – Precursor gases, anions, cations but no organics 	Commercially available	Urban; Rural
2	Multi Component Analyzer. AMS - Mass Spectrometry	<ul style="list-style-type: none"> – Size resolved – Size range: 0.04 – 1 micrometer – Sample flow 0.85 l/min – Detection limit 1-30 ng/m^3 – Time resolution 1-5 minutes – Anions, ammonium and organics but no metals 	Commercially available	Urban; Rural

Author(s):	R. Otjes	ECN / Netherlands
Co-author(s)		
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