Measurement range for aerosol particles*

Particle type	Diameter (nm)	Expanded measurement uncertainty of the diameter (%)	Number concentration (Particles/cm^3)	Expanded measurement uncertainty of the number concentration (%)	Examples of instruments to be calibrated
Polystyrene spheres	100 to 15 000†	< 5	0.5 to 1000 (depending on particle size)	< 10	• Optical particle counters (OPC and OPSS) • Aerodynamic particles sizers (APS) • Condensation particles counters (CPC)
Polystyrene spheres	50 to 1 000	< 5	$< 5 \times 10^4$	< 10	Dilution units
Polystyrene spheres	100 – 200	< 5			Differential Mobility Analysers

Combustion particles (polydisperse aerosol)	20 to 200	5	$< 5 \times 10^6$	< 5	CPC, ELPI, diffusion chargers, SMPS
Combustion particles (monodisperse aerosol)	10 to 200	2 to 4	1 000 to 80 000 (depending on particle size)	< 5	CPC, ELPI, diffusion chargers
Other substances (e.g. Tetracontane, emery oil, salt particles)	30 to 100	On enquiry	$< 10^5$	On enquiry	• CPC, OPC, • Volatile particle remover • Laser/Flame photometers
Ambient-like aerosols	PM2.5 and PM10		Mass concentration ($\mu g/m^3$) 15 to 300	<10 % (in mass concentration)	PM devices and sensors

* The list comprises only the standard services, but we are also happy to undertake customer-specific projects.
† Calibration point at 20 µm available upon request.