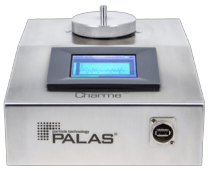
CHARME®



Charme® is a high-capacity Faraday cup aerosol electrometer that measures the electrical charges on aerosol particles. For years, aerosol electrometers have been used in research applications to measure the mean charge of an aerosol. If the charge state of the particles for monodisperse aerosols is known, then these devices can quickly and easily determine the number concentration of particles with an approx. size ≥ 2 nm.

An on-site correlation between the measured current (particle charges) and the mass concentration can be determined using a gravimetric filter, which the user can switch out. As a result, the Charme® aerosol electrometer is particularly well suited for verifying high particle loads in the environment and in the workplace, as well as for calibrating condensation particle counters (CPCs).

BENEFITS

- Reliable current measurement (charge/time) for aerosols
- Quick measurement (10 Hz) of the particle concentration
- Intuitive operation using touch screen
- Graphical display of measured values for particle concentration and electrometer current
- Gravimetric filter that can be switched out for on-site correlation between the measured current and the mass concentration
- Integrated pump
- Integrated data logger
- Low maintenance
- Easy to operate
- Reduces your operating expenses

APPLICATIONS

- Aerosol research
- Environmental measurements (high concentrations)
- Workplace measurements
- Emission studies
- Process control
- Calibration of condensation particle counters (CPC)

Measurement range (number C_N)	1,000–1.6 • 10^7 particles/cm^3
Measurement range (size)	> 2 nm
Volume flow	1 – 5 l/min (internal pump) 1 – 10 l/min (external pump)
Interfaces	USB, Ethernet (LAN), RS-232
Data logger storage	10 MB
Data acquisition	24 bit AD-converter
Measurement range (current)	1 fA – 22,500 fA
Power supply	19 V
Accuracy	0.1 fA (0.1 Hz), 1 fA (1 Hz)