VSB TECHNICAL UNIVERSITY OF OSTRAVA | FACULTY OF SAFETY ENGINEERING

NanoScan SMPS 3910

SPECIFICATIONS

A portable instrument suitable for measuring the numerical concentration of nanoparticles. The range of the instrument is 10 nm to 380 nm. It can measure up to one million particles. The SMPS instrument is suitable when nanoparticles need to be measured, e.g. when monitoring workplace exposure, point source identification, etc.

MEASURING METHODS

E.g. ČSN EN 481 (833621) Workplace atmosphere. Size fraction definition for measurement of airborne dust. ÚNMZ, 1994; Government regulation No. 361/2007 Coll., which lays down the conditions for health protection at work, as amended.

OVERVIEW OF MEASURABLE PARAMETERS / OUTPUT INFORMATION

Real-time nanoparticles size measurement. Number of particles in individual size channels [particles.cm^{-3}], aerosol size distribution. Concentration range: 106 particles.cm^{-3}; size range: 10 nm - 350 nm. The device has two measuring modes:

- CSAN: real-time size distribution; output is the particle size distribution - number of particles in individual size channels [particles.cm^{-3}]; or surface, volume or weight can be selected as the output unit; the recording is in 1 min intervals.
- SINGLE: monitoring the concentration of particles of one size; output is the numerical concentration of particles of the selected size over time [particles.cm^{-3}]; the data record can be saved in 1 s interval.

TYPES OF SAMPLES SUITABLE FOR ANALYSIS / MEASUREMENT CONDITIONS

Atmosphere to concentration 106 particles/cm^3; temperature range 10 - 30 °C; humidity <45% RHF.

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