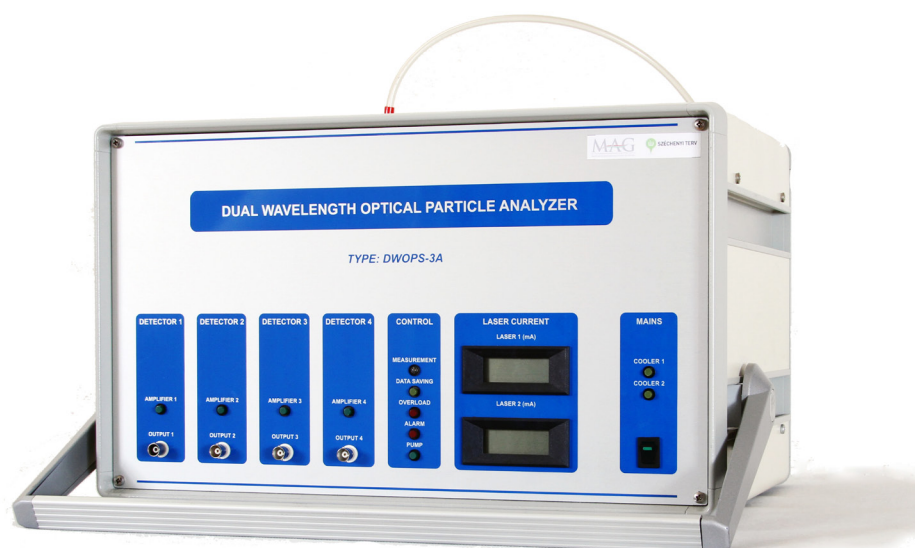


DWOPS

DUAL WAVELENGTH OPTICAL PARTICLE SPECTROMETER/ANALYZER



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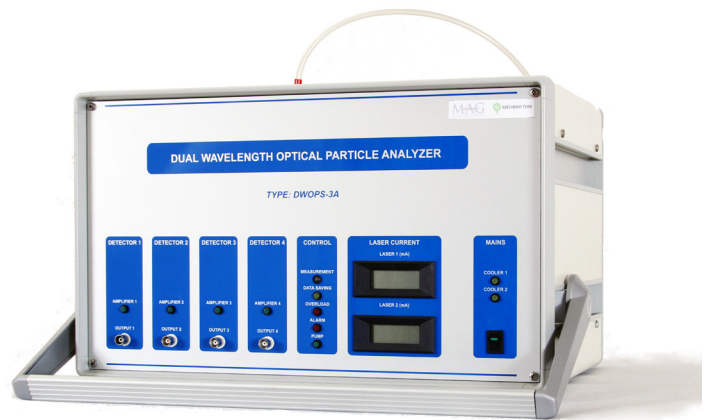


Company Profile

Technoorg-Linda Ltd. has already proved its expertise and innovative approach for two decades. The novelty and sensibility of our equipment satisfies the special measurement technology needs in electron microscopy, environmental protection, computer-, medical-, biological- and material science research areas.

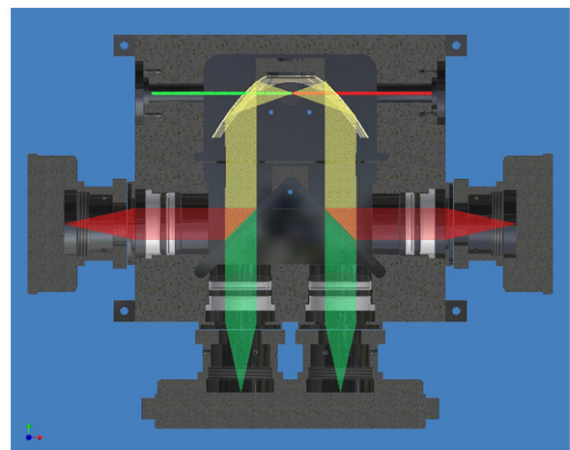
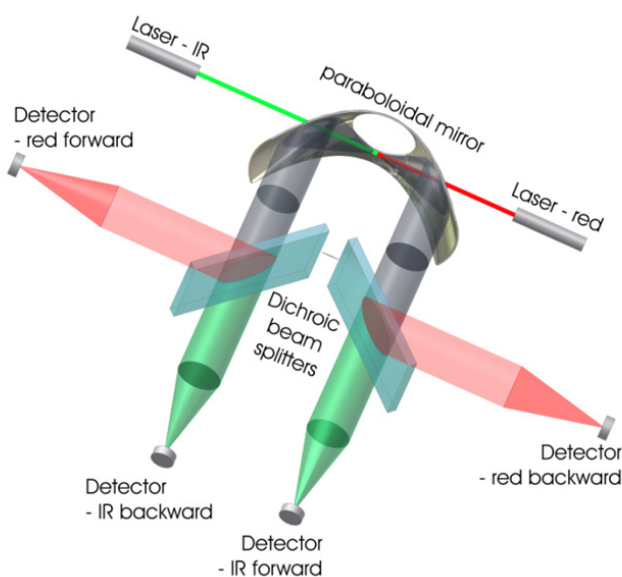
Our New Equipment

In this recently developed instrument we implemented a new method for simultaneous measurement of size distribution, concentration, optical absorption and complex refractive index of aerosol particles. These parameters allow to identify the sources of pollutant aerosol particles that can be a main advantage in environmental protection, health and safety and the detection of industrial aerosol sources.



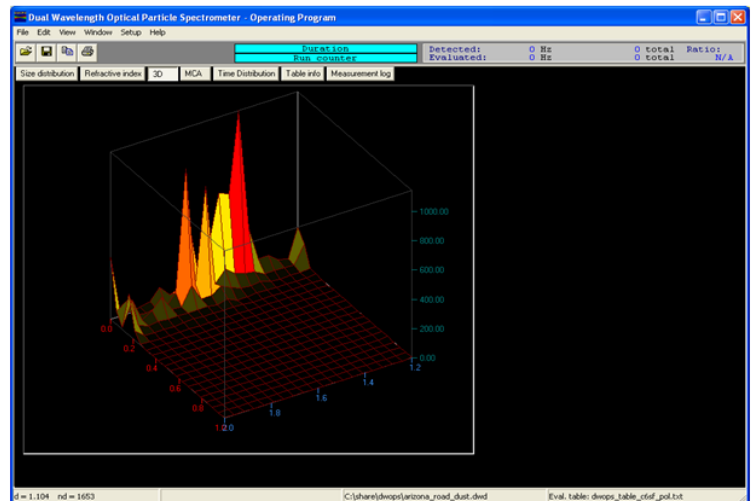
Measurement Method

The method is based on a dual wavelength illumination system where the scattered light is collected over four angular ranges, forward and backward scattering directions compared to the two illumination laser light beams.



Software

With our own developed, multi-module software, the concentration, real and imaginary parts of the refractive index and size distribution can be determined and shown in real time diagrams during the measurement. These data are stored in a dynamically linked database, which allows continuous data recording. Particle concentrations can also be shown in 2D and 3D diagrams.



Application

The instrument can be used in all fields where the presence of aerosol particles are of significance. For example:

- Environment monitoring
- Health and safety
- Industrial facility
- Waste incinerators

Field measurements

During the tests the instrument was incorporated in a mobil laboratory and field measurements were carried out. At different measurement campaigns data obtained enabled the identification of the pollution sources.

The main benefits of the instrument

- Simultaneous measurement of 4 independent parameters of aerosols – concentration, size distribution, refractive index and optical absorption
- Short sampling time (several seconds) enabling high time resolution
- Wide concentration range
- Identification of the origin of aerosol fractions
- Possibility to determine the sources of aerosol contamination
- User-friendly software allow measurements in different environment
- Versatility of modular blocks and flexibility of the applications
- Portable performance enabling wide applicability



SPECIFICATIONS:

Size range – 0,3 – 10 mm

Size resolution – 10 %

Concentration range – 10 – 10⁷ particles/litre

Concentration resolution – 10 %

Optical refractive index – 1.2 – 2.0

Optical refractive index resolution – 0.1

Optical absorption – 0 – 1

Optical absorption resolution – 0.05

Sampling time – 1 – 1000 sec

Sample flow rate – 1 litre/min

Number of samples – max 10 000

Display – in 2D, 3D diagrams or different tables

Counting mode – cumulative and differential

Supply – 220 V, 50 Hz, 400 W

Weight – 18 kg



*With your general questions, please contact our
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