

Bettersizer

S3 and S3 Plus

„The next generation“ of
particle size and shape analysis

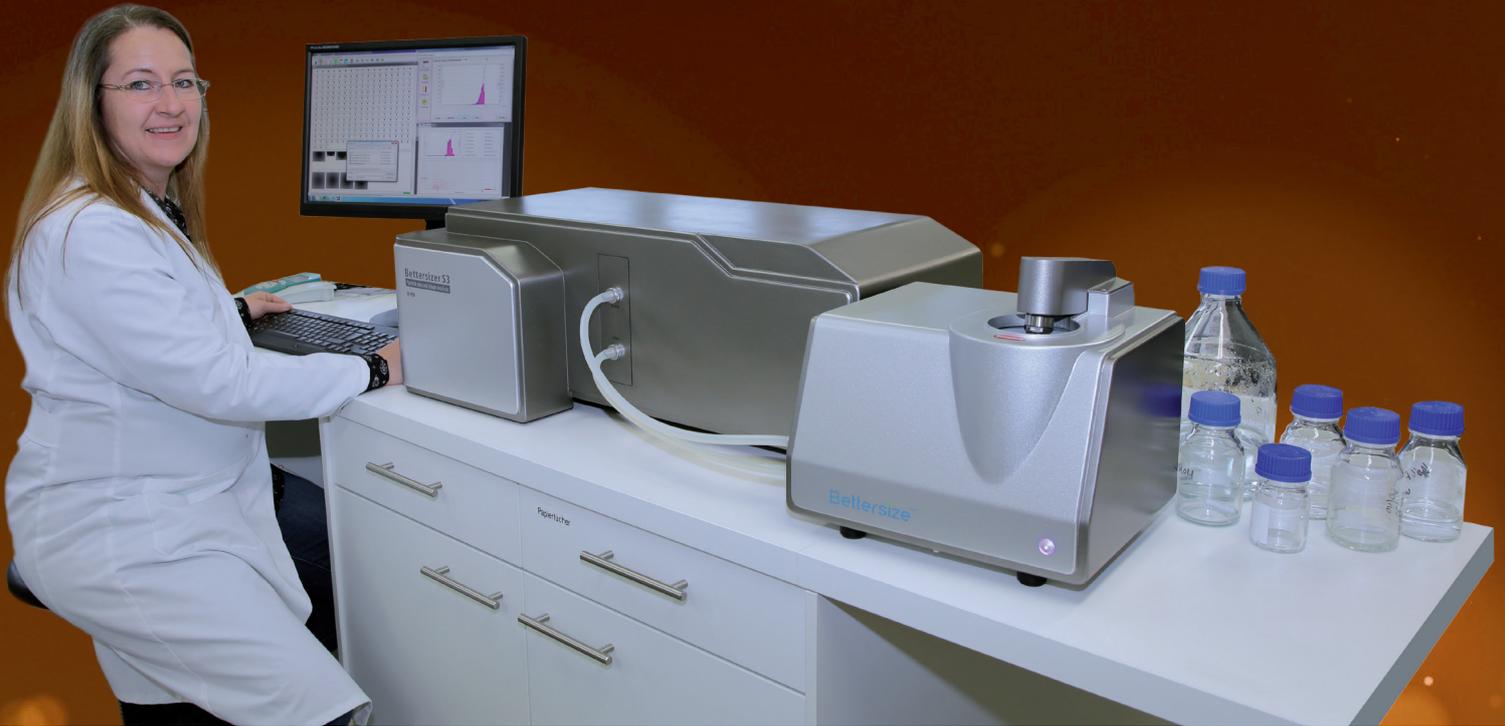


- precise measurement starting at 10 nm
- realistic measurement up to 3.5 mm
- combined size and shape analysis
- perfect price-performance ratio!



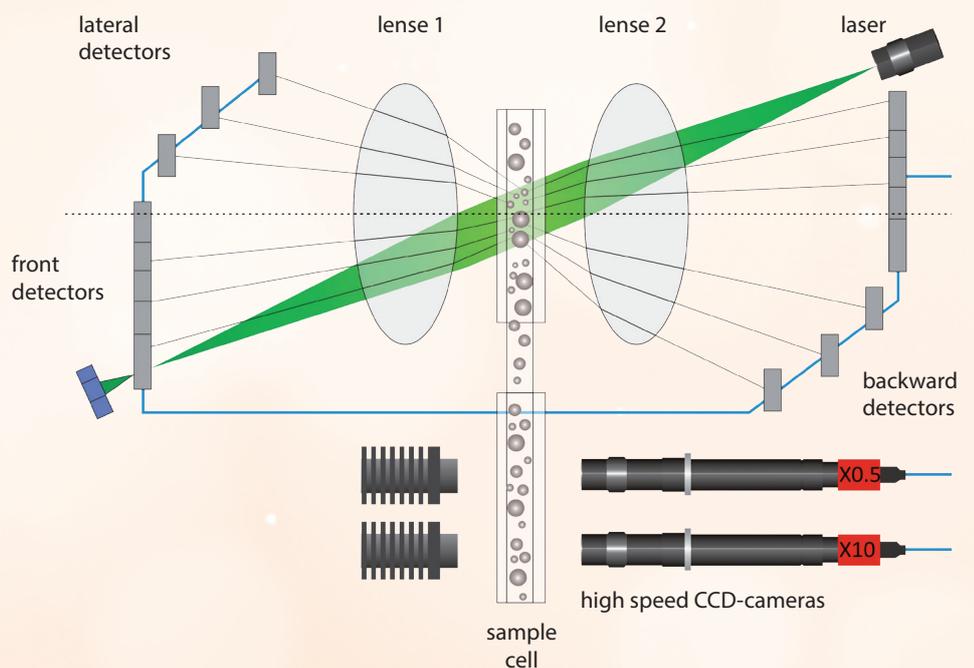
Bettersizer S3 and S3 Plus

Compared to common-standard instruments, the BETTERSIZER S3 series analyzers help you benefit from considerable advantages in particle size analysis – not to forget about a perfect cost-performance ratio.



Static light scattering and dynamic image analysis

Innovative and patented setup help BETTERSIZER S3 and S3 Plus to combine static light scattering (laser diffraction) and dynamic image analysis. Offering a **measuring range from 0.01 to 3500 μm** , the newly developed particle size analyzer is capable of characterizing a wide range of particles using **FRAUNHOFER and MIE evaluation**.



Bettersizer S3 and S3 Plus

there is no real alternative for the testing of the next generation particle analyzers...



Innovative dual lenses technology (DLOIS)

Even nanoparticles starting at just 10 nm can be reliably analyzed with the unique dual lenses and oblique incidence optical system (DLOIS): on the one hand, the additional lens between laser and sample chamber converts the divergent laser beam into a parallel beam. On the other hand, it allows for the detection of backscattered light. Using just one laser provides a continuous spread spectrum with consistent wave length, and the steep light incidence allows for a detection range of up to 165°.

Combined particle size and shape analysis

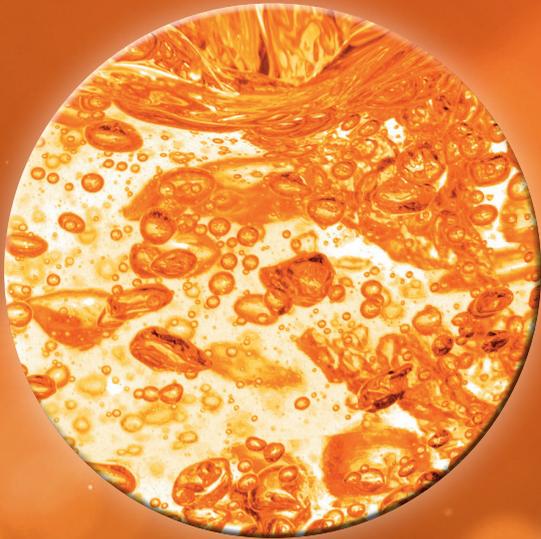
BETTERSIZER S3 Plus incorporates a second camera in the measuring system, and the particle shape analysis can either be run simultaneously with the size analysis or self-sufficiently. Beside laser diffraction, images of single particles can be recorded, while the most important shape parameters such as aspect ratio, circularity, image sharpness etc. are calculated. Thanks to its dynamic image analysis, BETTERSIZER S3 Plus even provides valuable information on the agglomeration degree!

Integrated camera technology

As the maximum scattered light intensity of large particles can only be detected using a very small angle, the results with classic static light scattering analysis are only insufficiently accurate. In contrast to other laser diffraction systems, image analysis systems of BETTERSIZER S3 and S3 Plus, ensure a reliable detection of larger particles allowing realistic measurements up to 3.5 mm.

3P INSTRUMENTS analytical methods

Beside the BETTERSIZER S3 series 3P INSTRUMENTS offers a range of further innovative analytical instruments for the comprehensive characterization of dispersions, powders and porous materials



Characterization of dispersions

- Particle size from nanometer to millimeter range and particle shape
- Stability of original emulsions, dispersions and foams
- Zeta potential and particle size of concentrated suspensions
- Viscosity depending on the shear rate of dispersions and liquids
- Rheology of emulsions and suspensions in stable state
- Drying behavior of films and coatings

Characterization of powders

- Particle size ranging from nanometers to millimeters, including particle shape
- Specific surface (BET surface area)
- Pore analysis (pore volume and pore size distribution)
- Density, raw density, bulk density, TAP density
- Water adsorption (dynamic vapor sorption)
- Repose angle, dispersity, flowability

Characterization of porous material

- Specific surface (BET surface area), pore volume, density and raw density
- Pore size distributions of various materials
- Characterization of through-pore size (filter, membrane)
- Characterization of active catalyst surfaces
- Adsorption gases and vapors from low to high pressure range
- Breakthrough curves of gas and vapor mixtures

LabSPA (Lab for Scientific Particle Analysis)

The LabSPA offers a broad field of contract analyses for the characterization of dispersions, powders and porous materials, and we handle both single analyses and call orders, but also comprehensive lab projects and quality control.



Exact results and profound reporting

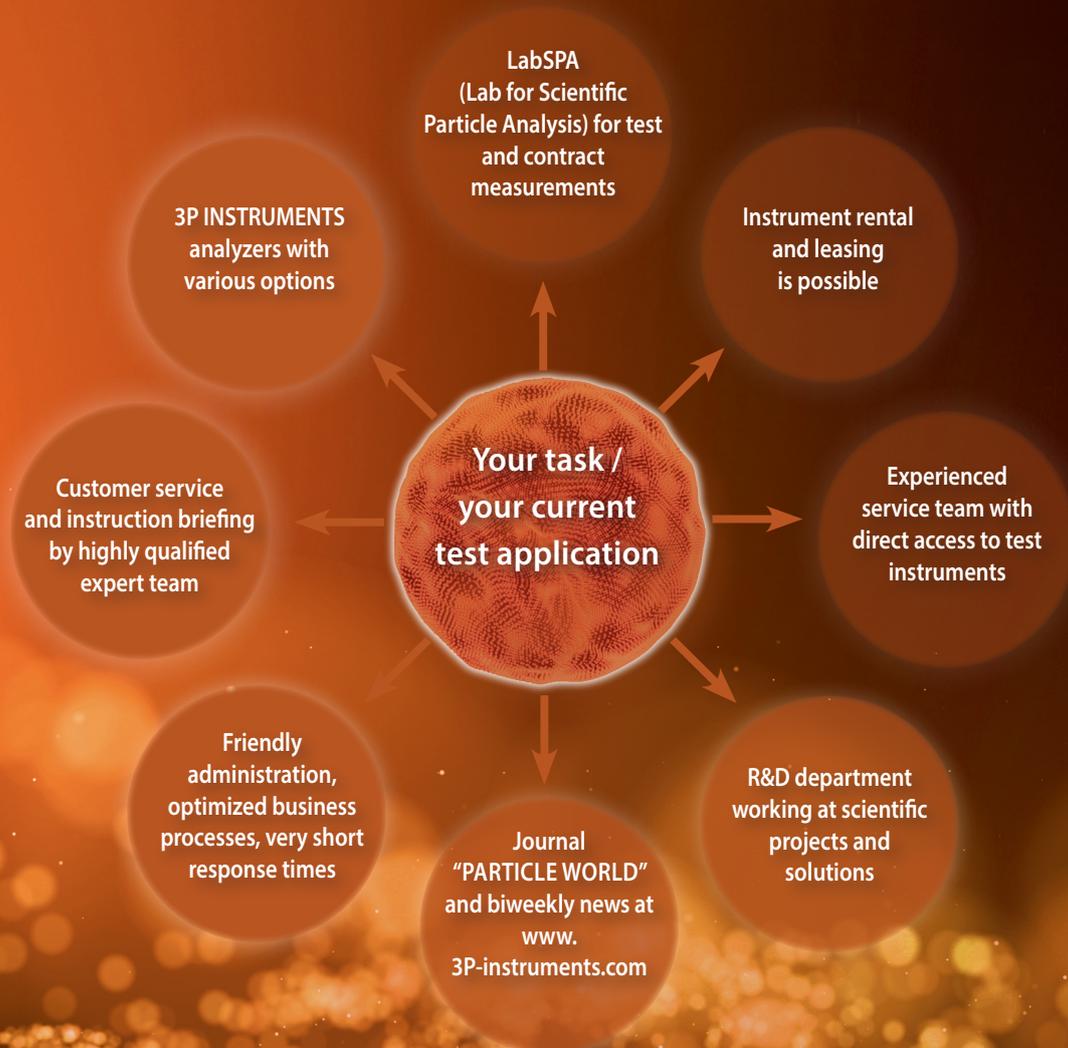
The interaction between our LabSPA (Lab for Scientific Particle Analysis) with our experts, the R&D department and technical service result in a unique and ever-growing 3P INSTRUMENTS competence structure in the area of particle measurement. We invite you to discuss your tasks with our LabSPA, as we might be able to solve them right here:

- Development of methods and project handling
- SOP measurements including measurement routine enhancements in consultation with customer
- Individual samples, sample series, external quality assurance of your products
- Strict confidence is a matter of course
- Short processing times and professional test reports

We permanently enhance our quality management converting LabSPA into a reliable partner for contract analyses. Further details on analysis options are available at www.3P-instruments.com and "Contract Analyses" and "Measurement methods".

Your partner in particle characterization

3P INSTRUMENTS offers profound expertise for the characterization of dispersions, powders and porous materials in Europe.



Characterization of
particles • powders • pores



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