

B1 SENSORS FOR REAL-TIME ONLINE NANOPARTICLE CHARACTERIZATION

- Monitors particle size, number-based size distribution and concentration during production
- Detects ultra-low concentrations, aggregates and large-particle tails
- Provides results 24/7



ONLINE MONITORING OF NANOPARTICLE SIZE DISTRIBUTION AND CONCENTRATION

The BRAVE B1 sensor integrates directly into your production plant and monitors your particles and nanoparticles continuously online during production.

You get:

- insight into sample behavior over time, e.g. from one second to several hours,
- insight into and control of your production processes,
- less wasted product,
- ensured product quality,
- data towards real-time release testing (RTRT),
- production line monitoring for predictive maintenance,
- in-depth knowledge of different particle populations, including ultra-low concentrations, oversized particles and anomalies.

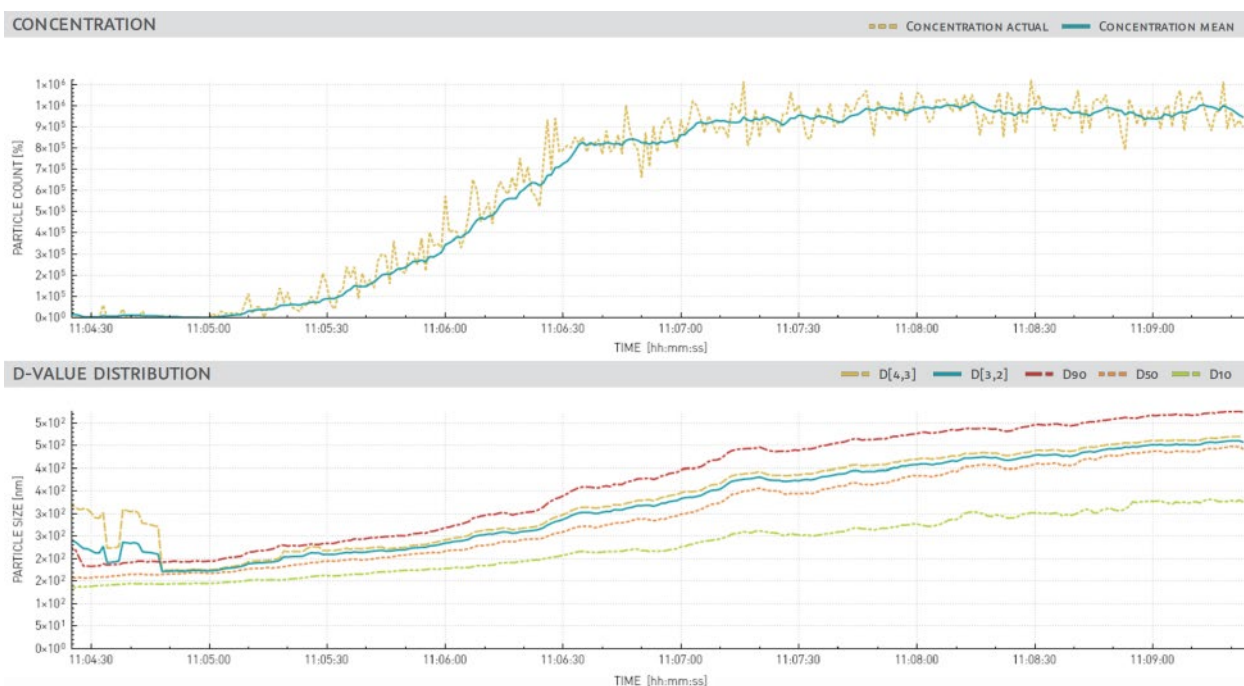


Figure 1: Example of D-value statistics and concentration over time

The BRAVE B1 particle characterization monitor is for:

- precise detection of rarely occurring low-concentrated aggregates and oversized particles,
- early detection of production anomalies during high-pressure homogenization and bottom-up production processes,
- monitoring the performance of filtration and dilution systems in downstream processing,
- detecting contamination in production lines for predictive maintenance,
- monitoring and control of particle size during the production of biomass nanoparticles for use in cosmetics, material science and medicine



- Characterization data at down to 5 seconds time resolution
- Detects ultra-low (nano)particle concentrations, aggregates and oversized particles
- Live visualization of sample behavior, results as D-values, number-weighted hydrodynamic size distribution, particle size, concentration
- Statistically valid results with single-particle accuracy, representative of the overall particle population
- Detected particle size range from 20 nm to 50 micrometers*
- Flexible data transfer to your LIMS or SPC software
- Scans and categorizes up to 4K particles per minute*
- Seamless integration into production processes

*sample-dependent

Specifications

Particle sizing range	20 nm to 50 µm*
Concentration range	min. 10 ⁶ particles/ml (optimal: ≤10 ¹⁰ particles/ml)
Minimum required bypass flow	5 µl/min (optimal: 0.7 ml/min)

For nanosuspensions, nanoemulsions and colloidal formulations (liquid continuous phase; solid or liquid dispersed phase)

Sizing data continuously updated every 5 seconds (delay due to bypass: 4 to 20 seconds)*



BRAVE Analytics GmbH
Neue Stiftingtalstraße 2
Entrance B
A-8010 Graz
Austria
info@braveanalytics.eu
www.braveanalytics.eu