

PARTICLE COUNTING & SIZE DISTRIBUTION OF MICRO & NANO PARTICLES

Real-time Stability Analysis

REDISPERSIBILITY & HSP

Accelerated Sedimentation for the
Prediction of long-term
Storage Stability

FAST SCREENING FOR (RE-) FORMULATION

ASTM STP1527: Assessment of Oil
Dispersion Pesticide
Formulations

REAL-TIME & ACCELERATED STABILITY TESTING

Comprehensive analytical characterization of:

Emulsifiable Concentrates
Oil Dispersions | Suspension
Concentrates &
Water dispersible Granule

Animal Husbandry | Chemicals
Fertilizers | Fungicides
Insecticides | Liming &
Acidifying Agents | Pesticides | Soil
Conditioners & more...

Multi-wavelength Dispersion Analyser

- Get direct & accelerated stability measurements in original concentration
- Particle size distribution (PSD) with high resolution
- Run up to 12 samples at a time
- See and understand your complete sample from top to bottom
- Measure samples under a broad temperature range (4 °C to 60 °C)
- Measure particle size distribution even at higher concentrations
- Analyse concentrated samples (up to 90%)
- Acquire particle densities
- Comparative and predictive shelf life analysis

Norms: ISO 13318, ISO/TR 13097, ISO/TR 18811, ISO 18747, ASTM STP1527 (Oil Dispersion)

Multi-wavelength Separation Analyser

- Measure real-time stability directly
- Speed up separation analysis time (up to 10-fold)
- Volume and number-based PSD (ISO 13317)
- Obtain volume PSD w/o having to know refractive indices
- Multi-wavelength approach
- Velocity distribution even for fast-settling particles
- Temperature stabilization from 4 °C up to 80 °C
- Handle any dispersing media: water, oils, organic solvents

Norms: ISO/TR 18811, ISO 13317, ASTM D7827, ISO 18747, ISO/TR 13097

X-Ray Separation Analyser

- In-situ analysis of transparent up to very opaque particulate systems
- No dilution of emulsions or suspensions
- Nanoparticle detection
- See/understand complex dispersion behaviour
- Study the various instability mechanisms
- High resolution phase separation
- Detect concentration gradients within phases and sediment
- Determine packing densities in the sediment
- Endless monitoring of sample behavior for long-time storage information
- Real time, non-invasive and non destructive

Norms: ISO/TR 13097, ISO/TR 18811, ISO 18747

LUMiSizer®



More info on LUMiSizer.com

LUMiReader® PSA



More info on LUMiReader.com

LUMiReader® X-Ray



More info on LUMiReader-xr.com

LUMiSpoc® Single Particle Optical Counter

- Particle counting & size distribution
- Number concentration determination
- Direct determination of the number-based particle size distribution of nano- & microparticles
- Classification of nanomaterials

Norms: ISO 21501-2

More info on LUMiSpoc.com



LUMiFrac® Adhesion Analyser

- Multisample centrifugal adhesion testing of cosmetic packaging (e.g. gold plated plastic perfume bottle caps)
- Tensile and shear tests
- No sample clamping
- large variety of sample materials & geometries

Norms: ISO 4624, DIN EN 13144, JIS K 5600-5-7, DIN EN 15870, DIN EN 14869-2, ASTM D4541, ISO 9211-4

More info on LUMiFrac.com



Recent Applications include:

Oxiteno Crop Solutions: <https://bit.ly/3YtKpuj>

Da síntese ao campo: <http://bit.ly/3X71Lff>

Additives for Pesticide Formulations: <http://bit.ly/40vhZC1>

Aditivos para Formulações Agroquímicas: <http://bit.ly/3RGU0jN>

Aditivos para Formulacións con Plaguicidas: <http://bit.ly/3x5njOO>

Interaction and stability in spray mixtures of fungicide and adjuvants with insecticides: <https://bit.ly/3wR4rD1>

Stability Analysis of Fertilizer dispersions: <https://bit.ly/3wPWVbE>

Encapsulation of anti-viral active material for plant protection based on inverse Pickering emulsions: <https://bit.ly/3YhoE1f>

Accelerated Sedimentation for the Prediction of long-term Storage Stability, Anwenderseminar 2D/3D Rheologie und Stabilität von dispersen Systemen, 2010

Ultra-Sensitive Quantification of Pesticide Contamination and Drift using Silica Particles with Encapsulated DNA: <https://bit.ly/3wSnI7f>

Assessment of Oil Dispersion Pesticide Formulations Using Rheology and Near Infrared Centrifugation Techniques (STP1527): <http://bit.ly/3HI5nid>

LUM social



bit.ly/3GM5p8i



bit.ly/3yIkwx9

LUM community

Visit our platform 'Dispersion Letters' dedicated to professionals working in various fields of R&D, QC:



bit.ly/3HglILZ

LUM knowledge

For further information, search the LUM Literature Database:



bit.ly/3J1mUUS

Demo & samples

Contact us for sample testing, instrument demonstrations or application support:



T +49 30 6780 60 30



M support@lum-gmbh.de