TURBISCAN®DNS

THE UNIQUE PLATFORM FOR DISPERSIBILITY AND STABILITY

The must-have tool to
reformulate the future

DISPERSIBILITY AT A GLANCE

The first ready-to use instrument for dispersibility studies.

NO-DILUTION PARTICLE SIZE KINETICS

SMLS technology determines particle size in native state, up to 95% v/v.

HIGH FREQUENCY ONLINE MEASUREMENT

Measure while mixing directly in the measurement vial or while working in an external reactor.

2 IN 1 TURBISCAN

Determination of dispersibility and stability with the same instrument and/or in the same experiment.

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FORMULACTION
Scientific instruments

DISPERSIBILITY AND STABILITY IN A SINGLE INSTRUMENT

Turbiscan, the leading technology in direct stability measurement, now opens new possibilities towards particle dispersibility studies.

Dispersibility, the foundation stone of the formulation, is the key to better-quality dispersions.

The Turbiscan DNS is built with two features (Dispersibility & Stability), for a dispersion characterization from the first stage of formulation through the entire shelf life of the product.

DISPERSIBILITY & STABILITY

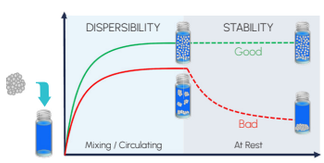
Dispersions must be characterized over the entire life cycle, from the dispersing stage through its entire shelf life.

Dispersibility refers to the ease of dispersing a article into a liquid regarding the spatial distribution and the particle size (as close as the primary size of the solid). Studying dispersibility is essential for optimization of key parameters like colour, therapeutic efficacy, film homogeneity, sensorial properties... Monitoring and quantyfying dispersibility is of great use for suspension ability, solubility, emulsification, foaming, solvent optimization (Hansen parameters), digestion studies...

Stability ensures that the initial structure and the end-use properties remain acceptable within the desired time and in the storage/shipping conditions. Ensuring dispersion stability guarantees long shelf life and customer satisfaction.

MEASUREMENT PRINCIPLE

Turbiscan DNS uses Static Multiple Light Scattering (SMLS) to detect particle migration and size variation in liquid dispersions thanks to the association of 2 highly sensitive photo detectors placed in Transmission (T) and Backscattering (BS) modes and a moving reading head. The scanning of the sample can be performed when the sample is at rest, for stability measurement, or under agitation/on-line for dispersibily studies via the T-MIX (mixing function) and T-LOOP (circulation function).
Thanks to its ability to work at rest and under agitation, the **Turbiscan DNS** is the must have platform to fully characterize formulations.



KEY BENEFITS

ON-LINE PARTICLE SIZING
· **Two On-line options:** analysis under agitation or under circulation connected with external reactor.
· **No-dilution** particle size from 10-4 up to 95% v/v, from 10nm to 1 mm
· **Direct and instant monitoring** of processes, from seconds to months.

FAST AND QUANTIFIED SHELF LIFE TESTING
· Stability measured **1,000 times faster** than visual control
· Detection and Quantification of the entire **destabilization process** (TSI).
· Real Stability testing: studies under **actual storage conditions**, no centrifugation or dilution.

2 IN 1 INSTRUMENT
In one instrument, during the same experiment set-up, measure both dispersibility & stability to rapidly optimize formulations.

APPLICATIONS

TECHNICAL SPECIFICATIONS

Technology	Static Multiple Light Scattering (SMLS)
Acquisition mode	Vertically Resolved Scanning - High Frequency Acquisition
Light Source	LED emitting NIR radiation at wavelenght 880nm
Displacement interval max. resolution	5 µm
Maximum displacement velocity	15 mm/s
Sample volume	1.5 - 30 mL
Temperature range	RT - 60°C
Number of Samples	1
Sample concentration	0.0001 - 95% v/v
Measured size range	10 nm - 1 mm
Reproducibility / Repeatability on latex standards	+/- 0.05% / 0.05%
Automatic sample recognition (bar-code)	Yes
ISO Compliant	TR 13097, TR 18811, TR 13014, TS 21357
Dimensions	70 x 63 x 52 cm

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