

# TURBISCAN TOWER



## ACCELERATED AGING

Temperature control from 4 to 80°C to accelerate destabilization or apply real storage conditions



## STABILITY QUANTIFIED AT A GLANCE

Turbiscan Stability Index to rapidly quantify destabilization kinetics. Fast ranking for simplified decision making.



## SHELF LIFE CONDITIONS ON UP TO 6 SAMPLES

Real stability determination without mechanical stress or dilution (concentration up to 95% v/v).



## PARTICLE SIZE

Determination of mean particle size and its variation by Static Multiple Light Scattering (SMLS).

## MULTISAMPLE ANALYSIS OF STABILITY & PARTICLE SIZE

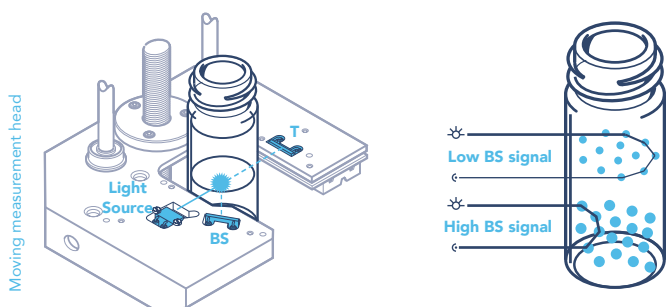
*The reference technology for direct stability analysis*

## MULTISAMPLE ACCELERATED STABILITY ANALYZER

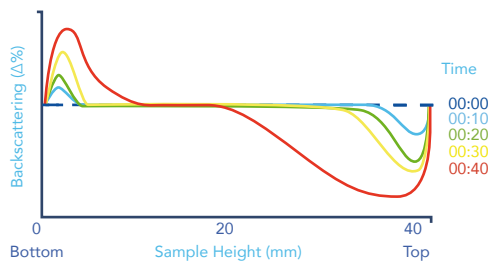
Turbiscan® has been used worldwide for over **25 years** to detect at an early stage all kinds of **destabilizations** such as coalescence, flocculation, creaming, sedimentation... Emulsions, suspensions, or foams can be studied at **full concentration range** (up to 95%v/v) without dilution or sample preparation. Combining the SMLS technology with the knowledge in formulation science, Turbiscan® has become the solution of choice for a complete dispersion characterization (dispersibility, particle size, physical stability and redispersing).



## MEASUREMENT PRINCIPLE



Turbiscan® uses Static Multiple Light Scattering (SMLS) to detect particle migration and size variation in liquid dispersions. A measurement head moves over the cell height and works with 2 synchronous detectors - Transmission (T) and Backscattering (BS) - this offers a highly sensitive and reliable analysis of transparent to opaque samples even at high concentrations. T & BS signals are related to particle size and concentration and their variation is a sign of destabilization that is occurring. The Turbiscan TOWER acquires both destabilization kinetics and mean particle size data at any given time.



## KEY BENEFITS

### FAST AND SENSITIVE STABILITY DETERMINATION

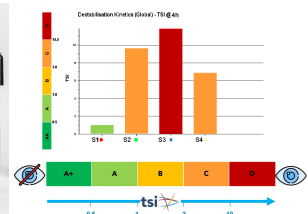
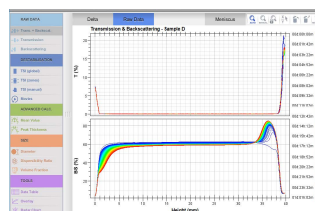
- **200 times** faster than visual control
- Real storage conditions (**no centrifugation or dilution**)
- Accelerated stability analysis with **6 sample positions** at a controlled temperature to rapidly compare formulations.

### A COMPLETE INSIGHT TO FORMULATION PROPERTIES

Dispersion stability analysis (migration velocity, phase thickness, diameter kinetics), particle size (mean diameter, hydrodynamic diameter), dispersibility (dispersibility ratio) and redispersion testing (mean signal value comparison).

### QUANTIFIED STABILITY - Turbiscan Stability Index **tsi**

- Global formulation stability quantified with one number to make decisions faster. Instant reading on the LCD screen.
- Adapted TSI Scale for smart guidance to quality evaluation.



## APPLICATIONS



Cosmetics



Food



Paint &amp; Ink



Oil &amp; Petroleum



Electronics



Pharmaceutical

## TECHNICAL SPECIFICATIONS

Technology	Static Multiple Light Scattering (SMLS)
Light Source	LED emitting NIR radiation at wavelength 880nm
Detection	Synchronous Backscattering and Transmission
Displacement interval max. resolution	5 µm
Maximum displacement velocity	15 mm/s
Sample volume	1.5 - 30 mL
Temperature range	4 - 80°C
Number of Samples	1 - 6
Sample concentration	0.0001 - 95% v/v
Measured size range	10 nm - 1mm
Reproducibility / Repeatability on latex standards	+/- 0.05% / 0.05%
Automatic sample recognition (bar-code)	Yes
ISO Compliant	TR 13097 / TR 18811 / TR 13014
Dimensions	380 x 450 x 900 mm <sup>3</sup>