TURBISCAN®LAB

PHYSICAL STABILITY & SIZE ANALYSIS
OF LIQUID DISPERSIONS

The Reference Stability Analyzer

ANALYSIS IN NATIVE STATE WITHOUT DILUTION

Sedimentation, aggregation, creaming... characterization on native formulation.

THE REFERENCE TECHNOLOGY TO FASTER STABILITY TESTING

TURBISCAN® is the most used technology for stability and shelf life studies.

STABILITY SCALE AND RANKING

A single value (TSI) calculated for each sample tto assess and compare different formulations.

PARTICLE SIZE

Determination of mean particle size and detection of size variation in concentrated media.
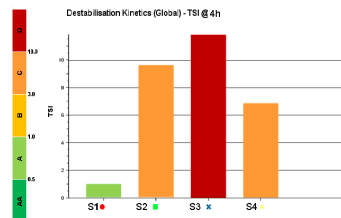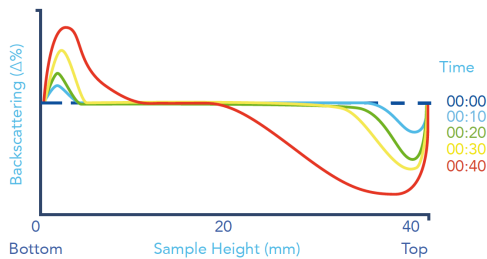
TURBISCAN - THE REFERENCE STABILITY ANALYZER

TURBISCAN is used wordwide to detect and quantify early stage destabilization , such as aggregation & flocculation, coalescence, sedimentation, and particle migration. This provides formulators a fast and reliable answer on stability measurement. Emulsions, suspensions and foams can be studied at full concentration (up to 95% v/v), without dilution or sample prepration for a real & fast stability measurement.

MEASUREMENT PRINCIPLE

Moving measurement head

Light Source

T

BS

Low BS signal

High BS signal
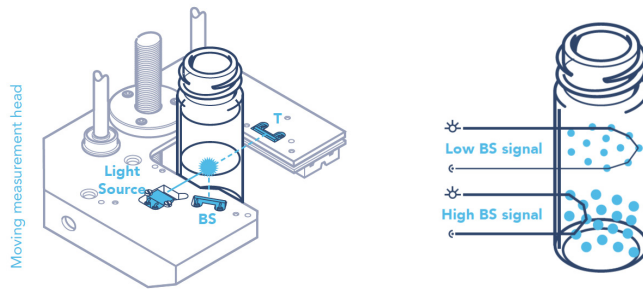
Turbiscan LAB uses Static Multiple Light Scattering (SMLS) to detect particle migration and size variation in liquid dispersions. A measurement head moves over the cell height and works with 2 detectors - Transmission (T) and Backscattering (BS) – this offers highly sensitive and reliable analysis of 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 occuring. Turbiscan LAB acquires T & BS intensity every 40µm and at time periods adapted to destabilization phenomenon kinetics (short or long-term stability).

Backscattering (Δ%)

Time
00:00
00:10
00:20
00:30
00:40

Bottom   Sample Height (mm)   Top
0   20   40

Destabilisation Kinetics (Global) - TSI @ 4h

S1   S2   S3   S4

A+   A   B   C   D

tsi   0.5   1   3   10

KEY BENEFITS

FAST AND SENSITIVE STABILITY DETERMINATION
· 1,000 times faster than visual control
· Real storage conditions (no centrifugation or dilution)

A COMPLETE INSIGHT TO FORMULATION PROPERTIES
Long term stability analysis, mean diameter and size variation, phase thickness, dispersibility ratio, volume fraction, migration speed...

SIMPLE AND INTUITIVE INTERFACE
Evaluate, compare and rank sample stability with one click and one parameters thanks to the Turbiscan Stability Index. Make fast decisions based on fact. Intuitive software and automatic reporting.

APPLICATIONS

Home & Personal Care

Food

Paint & Ink

Pharmaceutical

Oil & Petroleum

Electronics

TECHNICAL SPECIFICATIONS

Technology	Static Multiple Light Scattering (SMLS)
Sample volume	4 or 20 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	0.1% / 0.05%
Acquisition scan step	40 µm
Automatic sample recognition (bar-code)	Yes
ISO Compliant	TR 13097, TR 18811, TS 22107, TS 21357
Dimensions	38 x 42 x 32 cm
Weight	13 kg