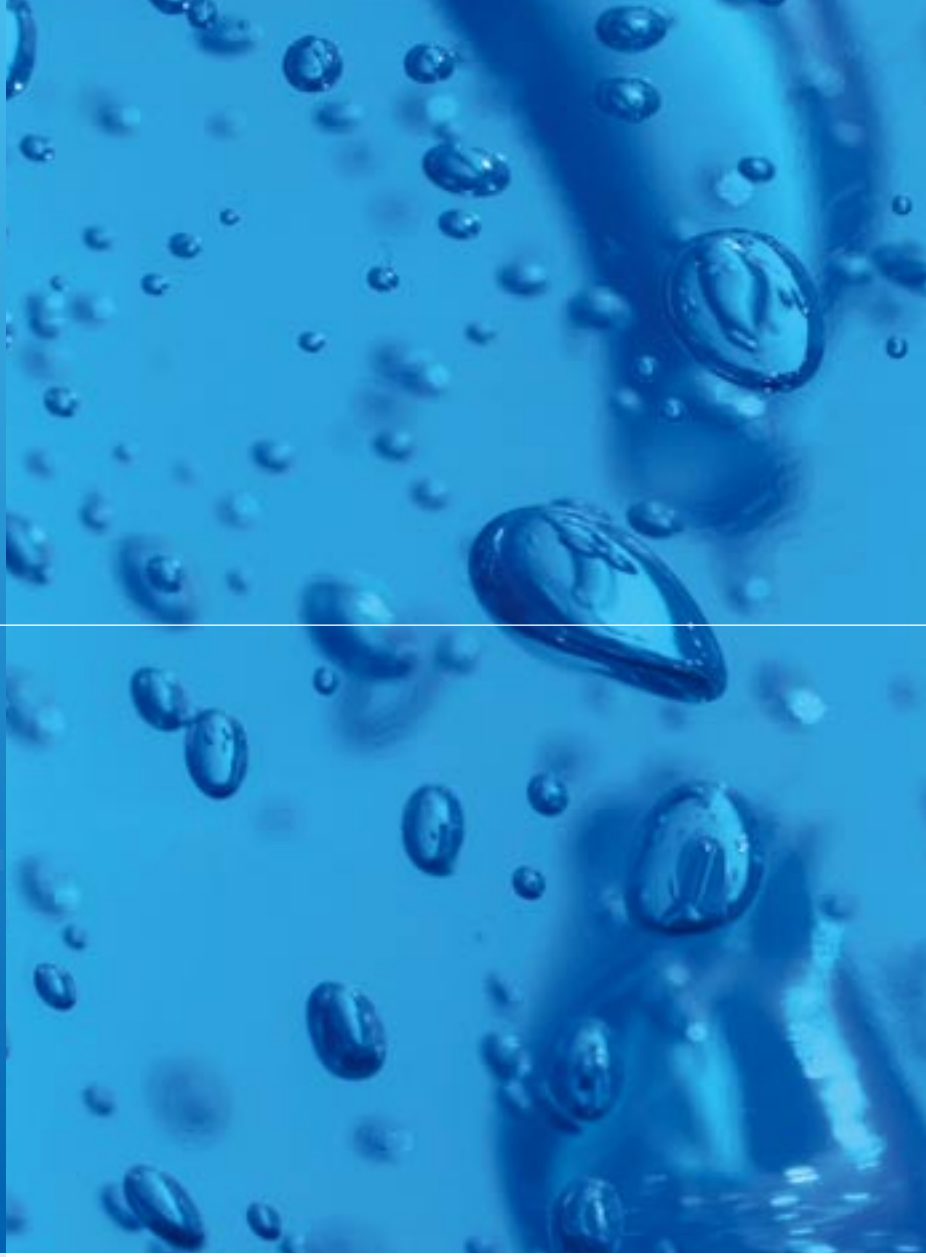


TURBISCAN

THE REFERENCE FOR STABILITY ANALYSIS

Formulaction
Smart scientific analysis

TURBISCAN

THE REFERENCE FOR STABILITY ANALYSIS

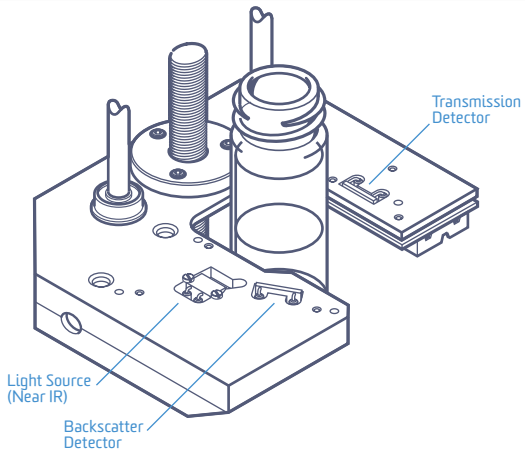
The Turbiscan range is world widely used in order to characterize the **dispersion state** of emulsions, suspensions, foams...

Changes in terms of size and concentration (such as creaming, sedimentation, flocculation or coalescence...) are directly monitored, in realistic conditions enabling **faster and more relevant** characterization compared to common methods such as visual observation or centrifugation, which are time-consuming or non-realistic.

Users have now the easiest way ever to check the stability of their formulations with a one-click access to the **Turbiscan Stability Index** (tsi).

SCREENING
STABILITY TESTS:
TURBISCAN™ CLASSIC

AGEING &
CHARACTERISATION :
TURBISCAN™ LAB



MULTIPLE LIGHT SCATTERING

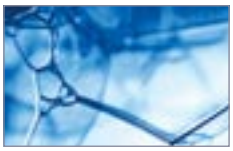
All Turbiscans work on the same principle. This technique consists in sending photons (light) into the sample. These photons, after being scattered many times by objects in suspension (droplets, solid particles, gas bubbles, ...) emerge from the sample and are detected by the measurement device of the Turbiscan.

MEASUREMENT PRINCIPLE

A mobile reading head, composed of a NIR diode and two detectors (transmission (T) and backscattering (BS)), scans a glass cell containing the sample. The Turbiscan software then enables to interpret the obtained data easily.
The measurement enables the quantification of several parameters, as BS and T values are linked to particles average diameter (d) and volume fraction (φ).

$$BS = f(d/\varphi)$$

BENEFITS



VERSATILE TECHNOLOGY
User can study all kinds of liquid dispersions (emulsions, suspensions, foams, ...), with concentration up to **95% v/v**, over a wide range of size (**10 nm to 1 mm**).

OPTICAL AND THERMAL ACCELERATION
Thanks to the high optical resolution and the possibility of important storage temperatures, detection of the samples ageing is accelerated up to **200 times**.

NON CONTACT MEASUREMENT
Measurement is done without any mechanical or external stress, and without any dilution, thus allowing to monitor the ageing of the product in realistic conditions.

EASY SAMPLE HANDLING
Measurement is performed in a disposable glass cell, preventing evaporation or drying, requiring absolutely no sample preparation (such as dilution).

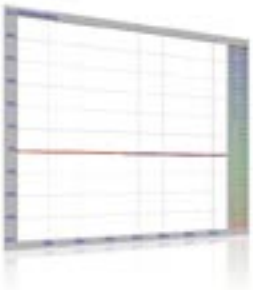
→ DATA ANALYSIS

The Turbisoft software provides multi-level data treatment for both experts and non experts, enabling the use of the instrument in various domains such as R&D, pre-formulation, upscaling, quality control, ...

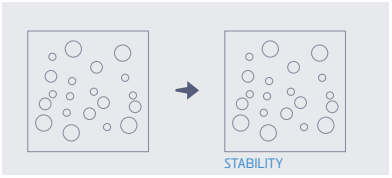
The Turbiscan Stability Index tsi is a one-click feature providing a key number depending on the global stability of the sample. It is a quick and easy way to characterize the sample, and enables the user to sort various formulations.

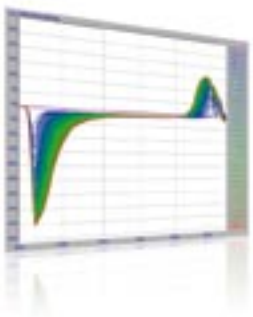
Kinetics computation based on the raw signal allows to identify and quantify in details the phenomena taking place in the samples, depending on size and concentration variations.

An additional feature allows to compute the evolution of the average particles diameter or concentration during the ageing of the product in any part of the sample.

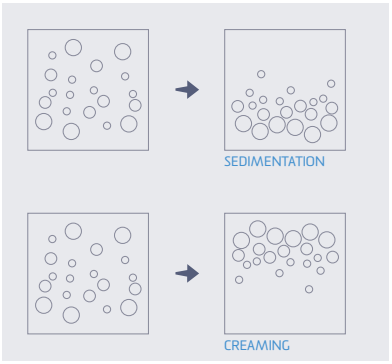


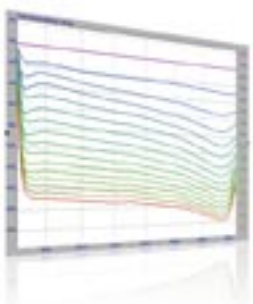
STABILITY
No variation of BS and T



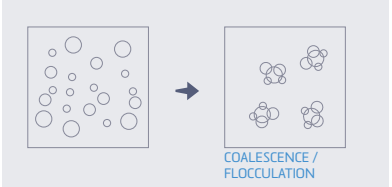


PARTICLES MIGRATION
Local peaks of variation of BS or T





PARTICLES SIZE VARIATION
Global variation of BS or T on the whole height



SPECIFICATIONS

	TURBISCAN CLASSIC	TURBISCAN LAB	TURBISCAN AGS
Quantitative monitoring of dispersion	●	●	●
Migration velocity & hydrodynamic diameter	●	●	●
Turbiscan Stability Index (TSI) computation		●	●
Long-term analysis		●	●
Disposable glass cells		●	●
Automatic samples recognition (bar-code)		●	●
Temperature control		T,E*	●
Average diameter and volume fraction computation		E*	●
Automatic handling of 54 samples			●
Storage at 3 different temperatures			●
Automatic reporting			●
Repeatability (manual measurement)	0.5%	0.1%	N/A
Repeatability (automatic measurement)	0.1%	0.05%	0.05%
Dimensions (cm)	27,5*13*23,5	38*42*32	145*75*85
Weight (kg)	5	13	50

* Turbiscan LAB is available in 3 distinct versions : Standard, Thermo (T), or Expert (E)

APPLICATIONS

Cosmetics

Food

Paint & Ink

Oil & Petroleum

Polymers

Pharmaceutical

Distributor details:

Particular Sciences Ltd.
2 Birch House, Ballycoolin Road
Rosemount Business Park
Dublin, D11 T327, Ireland

phone: +353 (1) 8205395
e-mail: info@particular.ie
www.particularsciences.ie

Formulaction
Smart scientific analysis

10, impasse Borde Basse
31240 L'Union - France
+33 (0)5 62 89 29 29