



MULTI-SAMPLE STABILITY ANALYZER

TURBISCAN TRILAB

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TURBISCAN TRILAB

MULTI-SAMPLE STABILITY ANALYZER

The TURBISCAN TRILAB is a macroscopic and colloidal stability analyzer based on SMLS technology and designed to measure multiple samples. It enables fast and reliable stability analysis of formulations (emulsions, suspensions, foams) and offers several advantages for analyzing the stability of dispersed systems.

The TURBISCAN TRILAB allows the simultaneous and independent analysis of up to 3 samples, saving time and resources. It also offers a comprehensive and quantitative characterization of the physical phenomena involved in destabilization such as sedimentation, creaming, flocculation or coalescence.

The extreme sensibility of SMLS technology not only saves time, but also offers accelerated stability tests by varying the temperature (20 to 60°C) and follows ISO recommendations (ISO/TR 13097:2013, ISO/TR 18811:2018). The stability measurement is carried out by a non-invasive, non-destructive measurement, whereby the integrity and originality of the samples is preserved. The TURBISCAN technology guarantees the direct measurement of macroscopic and colloidal stability without dilution or mechanical stress.



* Image shows new product design – available starting April 2024

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THE WORLD LEADER IN STABILITY ANALYSIS

- | Accelerated destabilization detection – up to 1,000 x faster than visual observation thanks to SMLS
- | 3 independent measurement positions
- | Real stability: sample stability analysis without the need for dilution or mechanical stress, in concentrations up to 95%
- | One-click stability ranking with the Turbiscan Stability Index
- | Quantitative measurements of dispersion stability and shelf-life, migration velocity, particle size diameter, and other parameters
- | One-click stability ranking with the Turbiscan Stability Index
- | Laboratory space is precious: minimized instrument footprint
- | Front LCD screen with measurement status and stability results

TURBISCAN TRILAB

PRODUCT VIEWS

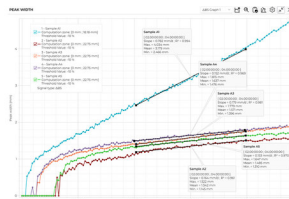
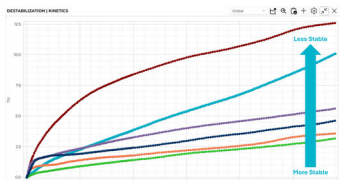


ROBUSZTUS SZOFTVER, ROBUSZTUS EREDMÉNYEK

DIMENSIONS TS A TURBISCAN TRILAB

Az adatok felvétele, elemzése és exportálása tökéletesen menedzselhető a DIMENSIONS TS segítségével, amely a TURBISCAN sorozat számára készült dedikált és intuitív szoftver. Hatékonyság érdekében tervezve, a DIMENSIONS TS folyamatosan optimalizálásra kerül, hogy gyorsabb, tisztább és gyakorlatiabb bekezdéseket nyújtson – segítve a felhasználóknak megbízható eredményeket mindössze néhány kattintással elérni.

- Intuitív és felhasználóbarát navigáció egy zökkenőmentes élmény érdekében a beállításoktól az elemzésig
- Gyors és megbízható stabilitás összehasonlítása, amelyet a bevált TSI algoritmus működtet
- Haladó adatfeldolgozó eszközök mélyreható elemzéshez: migrációs sebesség, részecskeméret fejlődése, fázisválasztás és még sok más
- Mindig friss: ingyenes licenc folyamatos szoftverfrissítésekkel
- Fleksibilis több felhasználós képesség tökéletes használathoz több munkaállomásán is
- Könnyed adatexportálás, olyan egyszerű, mint másolás és beillesztés
- Teljesen irányított kalibrációs ellenőrzési eljárás javított bizalom érdekében
- Multilingvális támogatás
- 21 CFR Part 11-nek megfelelő, adatintegritás és szabályozási megfeleléség biztosítása
- Egy szoftver, több eszköz: több eszközt egyszerre vezérl egyetlen számítógépről



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TARTOZÉKOK ÉS KIEGÉSZÍTŐK

Several options are available to sample and test the stability of your products. From standard, disposable 20 ml vials glass vials to small volumes (down to 2 ml) and to match your specific needs (syringe type, very high viscosity sample ...). We got this covered!

**STANDARD VIALS (20 ML)**

Cylindric glass vials have a recommended volume of approximately 20 ml. They are disposable to avoid chemical or bacterial contamination and decrease labor costs for washing and drying. The vials are closed thanks to a cap and a disposable PTFE seal to prevent evaporation in case of elevated temperature. These vials are meant to reproduce your visual stability test.

**SMALL VOLUME (4 ML)**

Small sample volume? No problem. Small-volume vials and the specific adapter are available. The measurement can be done with as few as 2 ml. Another good news: the sample can be fully recovered, and TURBISCAN measurement is non-contact / non-destructive.

**ON-DEMAND ADAPTORS (FOR SYRINGES, PRESSURIZED VIALS)**

You have special needs, and we understand this! Our development team loves challenges: on-demand adaptors can be offered (pre-filled syringes, pressurized vials, ...). Perfect to study the stability in specific conditions (pressure) or for Quality Control.

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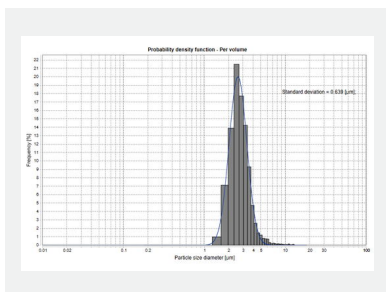
TARTOZÉKOK ÉS KIEGÉSZÍTŐK

**OPEN-BOTTOM CELLS - FOR VISCOUS AND FRAGILE SAMPLES**

There are samples that are either difficult to transfer or too fragile to be poured – the coring vials set helps to bypass this problem. The open base (which is manually closed with a stopper) allows a sticky sample or foam to be easily removed with the coring vials.

**KALIBRÁCIÓS SZABVÁNYOK**

Minden TURBISCAN-hoz egy szabványok készlete tartozik az eszköz kalibrációjának ellenőrzéséhez. A TURBISCAN szoftver, DIMENSIONS TS, lépésről lépésre guidál, és miután a eljárás befejeződött, a szoftver egy „OK” jelzést ad. A teszt és az eredmények mentésre kerülnek, és az eszköz ellenőrzési eljárást nyomon követhetően rögzíthető.

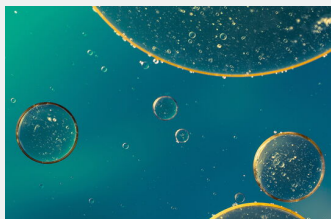
**PARTICLE SIZE DISTRIBUTION**

The TURBISIZE software can measure the distribution of particle size (ISO13317) and the distribution of migration speed for any data obtained with a TURBISCAN, without any need to dilute, prepare, or modify the sample.

TURBISCAN TRILAB

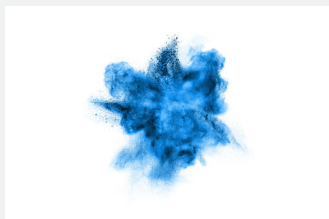
TIPIKUS ALKALMAZÁSOK

Whenever you are working with suspensions, emulsions, colloids, or foam, the TURBISCAN is your ideal characterization companion. The TURBISCAN series is used in various industries such as pharmaceuticals, cosmetics, food and beverage, paints and coatings, oil and gas, batteries, agrochemicals, chemistry, and much more.



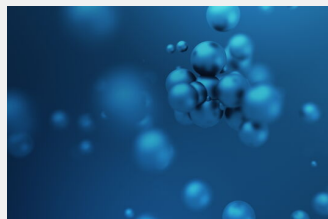
EMULZIÓK

- | Cosmetic creams and lotions
- | Dairy products and beverages, flavor emulsions
- | Pharmaceutical parenteral and topical forms
- | Metalworking fluids
- | Agrochemical: fertilizers, pesticides, ...
- | Petroleum emulsion



SZUSZPENZIÓK

- | Paints, inks, and coatings
- | Drug & vaccine suspension
- | Make-up and sunscreen
- | Chemical & polymer industry
- | Ceramics and catalysts
- | Battery slurries
- | Electronic slurries



KOLLOIDOK & NANORÉSZECSKÉK

- | Drug delivery system: LNP, Liposomes, ...
 - | Research on nanoparticles and nanoparticle suspension
 - | Polymer and biopolymer dispersion
- ... és még sok minden más!

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LEGFONTOSABB ALKALMAZÁSI MEGJEGYZÉSEK

Fedezze fel gyakorlati példákat arra, hogyan használják fel a SMLS széles körű alkalmazásokban és iparágakban.

HOW TO PREDICT SHELF-LIFE WITH THE TURBISCAN →

microtrac.com/files/410693/how-to-predict-shelf-life-with-the-turbiscan.pdf

DETECT STABILITY 1,000X FASTER WITH TURBISCAN →

microtrac.com/files/461367/detect-stability-1-000x-faster-with-turbiscan.pdf

SEDIMENTATION STUDIES WITH THE TURBISCAN →

microtrac.com/files/322964/sedimentation-studies-with-the-turbiscan.pdf

CREAMING STUDIES WITH THE TURBISCAN →

microtrac.com/files/325715/creaming-studies-with-the-turbiscan.pdf

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ALKALMAZÁSI PÉLDÁK



FAST DETECTION OF SETTLING PARTICLES

SEDIMENTATION

The TURBISCAN technology offers a significantly faster (up to 1,000 times) and more reliable detection of sedimentation compared to visual observation.

Furthermore, naked-eye observation makes it difficult to calculate the migration rate and is prone to error and misinterpretation. In contrast, the TURBISCAN technology provides a fast and non-destructive way to detect and quantify sedimentation and particle size over time and can detect even small changes in highly concentrated samples without any dilution or mechanical stress. This makes it ideal for analyzing complex suspensions and formulations, and getting a quicker, reliable, and more accurate answer on sedimentation monitoring.



FAST DETECTION OF DROPLET MIGRATION

CREAMING OF EMULSIONS

When it comes to measuring droplet migration and creaming behavior in emulsion systems, the TURBISCAN technology has several advantages for formulators. On one hand, it provides a fast measurement (up to 1,000 times faster than visual observation) of native samples and a non-destructive way to detect and measure droplet migration. On the other hand, the migration rate can easily be determined and helps the formulator to compare formulas, making it ideal for analyzing complex emulsions with a wide range of droplet sizes and concentrations. Additionally, the TURBISCAN technology provides insights into the mechanisms driving droplet migration, which can be used to improve formulation and processing conditions. Overall, the use of TURBISCAN technology in emulsion analysis leads to faster, more accurate, and more reliable results compared to traditional methods.



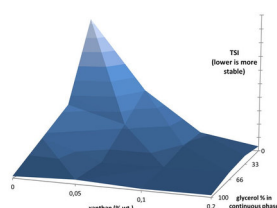
SAVE TIME TO MEASURE PHYSICAL STABILITY

FORMULATION: STABILITY MEASUREMENT AND SHELF-LIFE ESTIMATION

The TURBISCAN has been extensively used to measure the physical stability of formulations and colloidal systems. This technology helps the formulator to save time and precisely rank and quantify the samples' stability in different trials or batches. It applies to native samples, even on very highly concentrated formulations. Not only saving time, the TURBISCAN also provides destabilization speed and metrics as well as robust analytics to make shelf-life predictions. The TURBISCAN technology follows ISO/TR 13097:2013's

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ALKALMAZÁSI PÉLDÁK



WHAT CAN BE MEASURED CAN ALSO BE IMPROVED

STABILITY MAPPING: EMULSIONS AND SUSPENSIONS

Measuring the stability of emulsions and formulations is traditionally done by visual observations. In addition to being long and tedious, the visual inspection of emulsion destabilization usually ends up with a pass / fail answer. This is suboptimal for fine-tuning the ideal concentration of surfactants or stabilizers to be added to reach the desired shelf-life. The TURBISCAN is a great help in this regard; not only does it save a huge amount of time to detect the destabilization, but it also provides a value based on the instability and ranks different formulas as a function of their shelf-life. It hence produces objective and repeatable data to make a better, greener, and safer product.



STABLE PRODUCTS FOR SAFER AND MORE EFFICIENT PHARMACEUTICAL SUSPENSIONS

VACCINE AND PARENTERAL DISPERSIONS

Stability and shelf-life testing are essential for pharmaceutical products and drugs. Destabilization or instabilities in vaccines, parenteral dispersions, or pharmaceutical products can have a major impact on product efficacy, and in some cases, on patient safety. While many techniques are available, the TURBISCAN offers in-situ, non-dilution, and non-destructive measurements to detect destabilization and save time therein. It provides a clear, precise, and objective stability measurement, essential to making fast and right decisions in R&D or quality control. The TURBISCAN has been intensively used to study the stability and redispersion capability of vaccines, as well as of parenteral and injectable dispersions and providing scientists with a deep insight into the dispersion state and its evolution.



HOMOGENOUS SLURRIES FOR HIGHER BATTERY PERFORMANCE

IMPROVING BATTERY EFFICIENCY

There is an exponential demand for energy storage and batteries, either to cover our need for mobility and communication or to match environmental challenges. Lithium-ion batteries are the most widely used technology, and one of the key steps in developing and manufacturing them is the slurry formulation (used on the electrodes), ensuring the final battery quality. This slurry is usually highly concentrated and dark (due to a high concentration of carbon black) and using conventional light scattering techniques for evaluation is challenging or requires an

MŰSZAKI ADATOK

STABILITY ANALYZER / TURBISCAN TRILAB

Automatic sample recognition (bar-code)	igen
CE jelzés	igen
Dimensions	38 x 48 x 58 cm
Displacement interval max. resolution	5 µm
Szabványok	ISO/TR 13097:2013, ISO/TR 18811:2018, ISO/TS 22107:2021, ISO/TS 21357:2022
Measured size range	10 nm - 1 mm
Wavelength	880 nm
Mérési elv	Static Multiple Light Scattering (SMLS)
Particle size distribution	igen (kiegészítő szoftver szükséges)
Number of Samples	1 - 3
Reproducibility / Repeatability on latex standards	+/- 0.05% / 0.05%
Mintakoncentráció	0.0001 - 95% v/v
Minta mennyisége	2 - 20 mL
Scan step resolution	20 µm
Software	DIMENSIONS TS
Temperature range	20 - 60°C
Weight	35 kg
Adat integritás és mérőeszköz minősítés	21 CFR rész 11-nek megfelelő és IQ / OQ elérhető

TURBISCAN TRILAB

KAPCSOLATFELVÉTEL →

microtrac.com/hu/contact-services/general-request/?prefilltext=contact_form.request&product=240

AJÁNLATKÉRÉS →

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