MICROTRAC
PARTICLE CHARACTERIZATION

TURBISCAN APPLICATIONS

METAL WORKING FLUIDS & LUBRICANTS

DISPERSIBILITY | SHELF LIFE | RESUSPENSION

FORMULATION OPTIMIZATION

Measuring the influence of additive and concentration for greener formulations, hard water resistance..

STABILITY & SHELF LIFE PREDICTION

Fast and precise analysis
Formulation ranking thanks to the TSI

BATCH LIFESPAN DETERMINATION

Stability indications of batch lifespan

RECYCLING

Quantitative studies of demulsification, oil separation and recovery processes..

METALWORKING FLUIDS & LUBRICANTS CHARACTERIZATION AT EVERY LIFE-STAGE

Metal Working Fluids (MWF) and Lubricants are specialized liquids engineered to enhance processes like rolling, drawing, grinding, and cutting. These complex formulations often contain numerous ingredients and optimizing them has become a scientific discipline. Stability and particle size are critical factors to assess throughout the product lifecycle..

HOW CAN WE HELP YOU?

To reach the optimum formulation regarding performance, stability, cost and process, scientists need to get the full understanding of the product behavior within its entire life cycle.

FORMULATION | RECYCLING | FOAM | END-USE

FORMULATION OPTIMIZATION

Adapt formulation choosing the correct additive mix, assess the impact on the formulation quality for better resistance to hard water, greener formulations, lower risks of foaming, improved performance...

WHEN TO REPLACE MWF

Simple indications of the wearoff of the MWF in use over time

Faster decision making on batch replacement necessity.

MWF RECYCLING

Quantify demulsification to optimize separation time, quality and process.

NEAT OIL STABILITY

Detect and quantify cloudiness appearance

MONITORING AND PREDICTING STABILITY

Replace tedious and long visual stability measurement with accurate and fast technology: up to 1000 times faster than visual control.

REAL SHELF LIFE MEASUREMENT

No dilution, no centrifugation, no sample preparation or perturbation. Measure as it is!

FOAM STABILITY

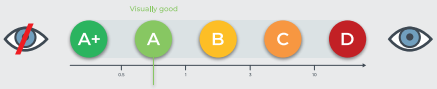
Study foam breaking process and defoaming efficiency

TURBISCAN TECHNOLOGY

TURBISCAN, based on the Static Multiple Light Scattering (SMLS) technology is the most suitable method to characterize any kind of coatings directly in their native state in perfect agreement with ISO TS 21357.

TURBISCAN STABILITY INDEX (TSI)

The TSI is a Turbiscan-specific parameter designed for formulators to compare and characterize the physical stability of various formulations with a single click and a single, comparable, and reproducible number. The higher the value, the more unstable the sample.



BENEFITS AT A GLANCE

- Sensitive to the slightest variations
- Non-dilution, native samples
- High Space resolution: 20 µm scanning
- From: 10 nm to 1 mm
- From 10^{-4} up to 95% v/v
- Measurement temperature from 4 °C up to 80 °C
- One-click stability ranking with the Turbiscan Stability Index (TSI)

A SINGLE TECHNOLOGY FOR ANY MWF AND LUBRICANTS CHARACTERIZATION

Analyze any type of dispersion: concentrated, diluted, with nano or large particles, opaque, transparent... from emulsions to oils.

www.microtrac.com/applications

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