



## TURBISCAN APPLICATIONS

### METALWORKING FLUIDS PHYSICAL STABILITY & SIZE ANALYSIS



#### MWF FORMULATION OPTIMIZATION

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



#### EMULSION STABILITY & SHELF LIFE PREDICTION

- Fast and precise analysis
- Formulation ranking thanks to the TSI



#### MWF BATCH LIFESPAN DETERMINATION

Stability indications of batch lifespan



#### MWF RECYCLING

Quantitative studies of demulsification, oil separation and recovery processes.

## METALWORKING FLUIDS ANALYSIS

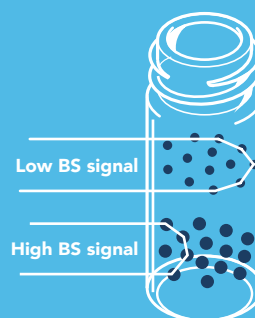
Productivity, reliability, and lifespan are the core concerns of metal processing industries and metalworking fluids (MWF) are the key element to ensure the efficiency of these operations.

Current technologies used for MWF analysis (visual observation, DLS...) do not provide direct aging information, as such, these methods may be limited and not representative (sample preparation/dilution, based only on particle size...). Obtaining a trustworthy information on emulsion stability requires an analytical solution that offers a direct measure of occurring phenomena and does not rely on external stress.

## TURBISCAN TECHNOLOGY

Turbiscan® uses Static Multiple Light Scattering (SMLS) to detect particle migration and size variation in liquid dispersions. Transmission (T) and Backscattering (BS) signals measured are related to particle size and concentration and their variation over time is a sign of occurring destabilization.

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.



## APPLICATIONS



### 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 200 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



## MORE INFORMATION

Detailed information on the Turbiscan® and its benefits for Metalworking Fluid characterization are available on a dedicated application note **HERE (ajouter lien)**

