

New White Paper Explores Next-Generation FBRM

METTLER TOLEDO is pleased to present a new white paper that reviews a series of experiments using next-generation Focused Beam Reflectance Measurement (FBRM®) technology. These experiments illustrate how recent advancements in the technology's ability to identify chord length and correct for "stuck" particles, along with an enhanced dynamic range, creates an improved understanding of critical process parameters for faster, more accurate optimization.



FBRM has been used to track changes in size, count and shape of particles in-process since 1986. However, under certain conditions, results can be hard to interpret. Chord length measurements can be sensitive to surface roughness, "splitting" chord lengths to indicate particles are smaller than they actually are. Likewise, particles stuck to the optical window can cause unexpected distribution peaks. Finally, at high concentrations, particle proximity can reduce precision. These issues can impede a user's ability to correct for critical process parameters such as particle size or degree of nucleation.

The FBRM® G Series, which includes G400 and G600, alleviates these issues as shown in three distinct, real-world experiments. First, "Higher Resolution and Greater Accuracy to Fine Particles, Coarse Particles, and Bimodal Distributions," explores how accurate chord length distribution information enables more intuitive data analysis. "Detect and Correct for Particles Stuck to the Probe Window " illustrates how correcting for particles that do not move or change enhances statistical consistency. Optics and signal processing advancements that create narrower, more accurate measuring zones at high concentrations are reviewed in "Higher Sensitivity in Concentrated Particle Systems."

Each of these experiments illuminate how next-generation FBRM® technology enhances resolution, accuracy and sensitivity, providing a more precise understanding of inline particle systems and speeding up process optimization. To review the experiments, or for additional detail on how FBRM® G Series is creating a paradigm shift in inline particle measurement, download a copy of the white paper free at www.mt.com/fbrmgseries.