

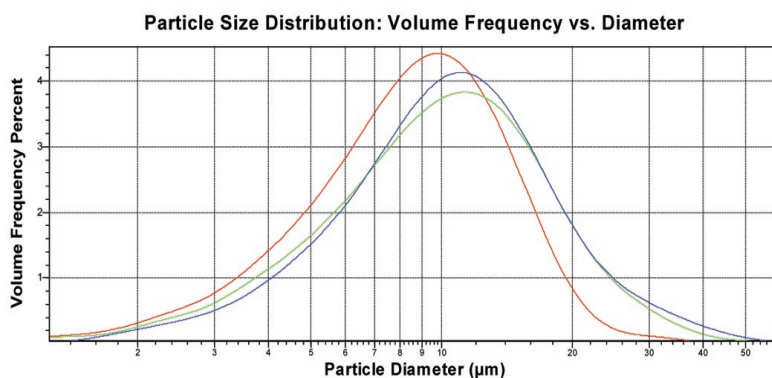
Consulting Service

Problems often arise when multiple labs are trying to agree on a single result. Multiple operators, multiple instruments, and multiple preparation techniques affect the repeatability of the final results. Having so many variables to manage makes obtaining reliable analysis results very difficult. What's worse is trying to diagnose and identify a cause for the unreliable results. Micromeritics Analytical Services can assist with the diagnosis and elimination of these problems first by analyzing your samples, then interpreting the results, and finally consulting with you to solve the problem.

Micromeritics is ideally suited to help you solve these types of problems. We have been manufacturing physical characterization equipment for over 40 years and have a wealth of information and experience within our facility. This knowledge is now available to assist you with your most difficult problems. We do not profess to be experts in all industries and in all fields, but we are experts in performing physical characterization

measurements and can help you solve your material characterization problems.

A Case in Point: The segregation of particles by size during shipping has been well documented, but remains a problem in many industries. The graph below illustrates how much the particle size changed for one customer simply by taking samples from the Top, Middle, or Bottom of the vessel. This customer was able to convince his supplier to change the sampling technique from these data.



Method Development

Consider this Scenario: A new project has been started which requires particle size and surface area analysis. You have never run this type of sample before and you are not sure how to disperse this material. You may not know which Refractive Index models to use with your laser particle size analyzer. You may not know what temperature to use when preparing your samples before performing a BET surface area test. The proper steps necessary to answer these questions are sometimes very difficult and time-consuming. Micromeritics Analytical Services can perform those experiments for you and provide you with the proper procedures to use when confronted with those new types of samples.

The table to the left demonstrates the improvement one customer experienced after we defined a new method for measuring particle size of zirconium flour by laser light scattering. Notice the Standard Deviation decreased by half with the new particle size method.

PREVIOUS METHOD			
	D90	D50	D10
Avg Particle Size	35.58	15.74	2.27
Std Dev	0.61	0.16	0.08
Min Value	33.7	15.2	2.01
Max Value	38.9	17.2	2.6

NEW METHOD			
	D90	D50	D10
Avg Particle Size	36.95	14.4	1.23
Std Dev	0.31	0.097	0.03
Min Value	36.4	14.1	1.14
Max Value	38	14.7	1.31