

The logo for IKO SIZER features the letters 'IKO' in a large, bold, 3D metallic font. A red laser line originates from a small red square on the left and passes through the 'I' and 'K' of 'IKO'. To the right of 'IKO', the word 'SIZER' is written in a smaller, italicized, 3D metallic font. A registered trademark symbol (®) is positioned to the right of 'SIZER'.

IKO SIZER®

I N S T R U M E N T S



SIZE CONTROL TECHNOLOGY

WHY SIZE CONTROL IS IMPORTANT?

Are you sure it is nano? Have you calculated the price of a mistake? Nanoparticles (nanostructured materials) are very unstable and for various reasons they try to bond together. As a direct result of this, there are losses in their properties. This process begins immediately after the manufacture of the particles. What happens during a short storage is shown in the figures 1 and 2.

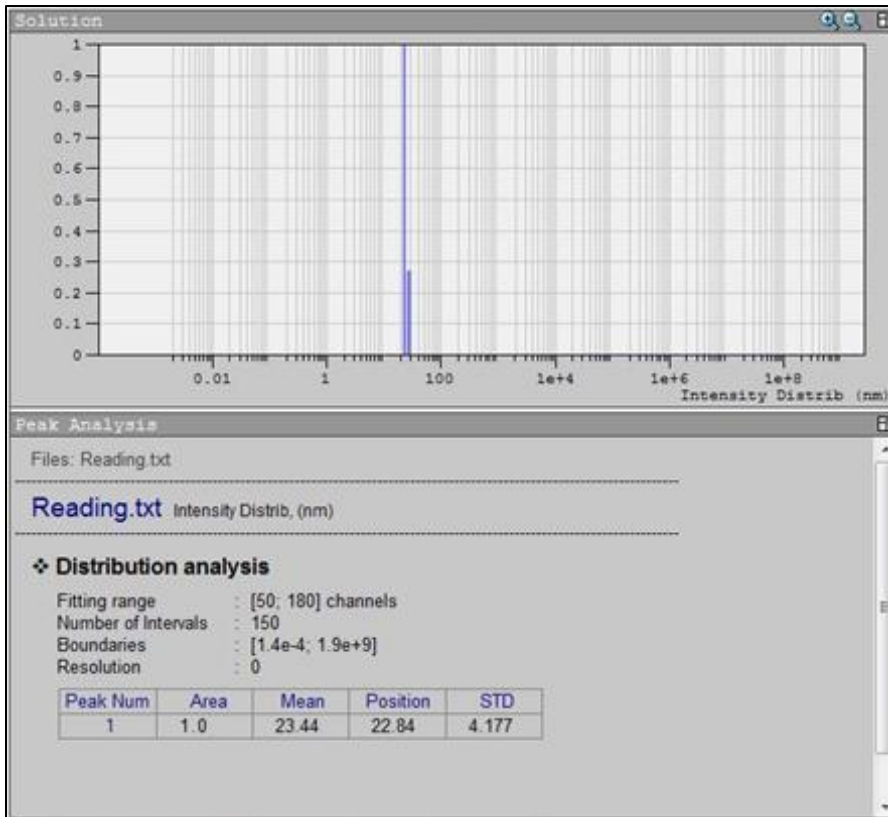


Figure1: Particles immediately after production, size 23 nm

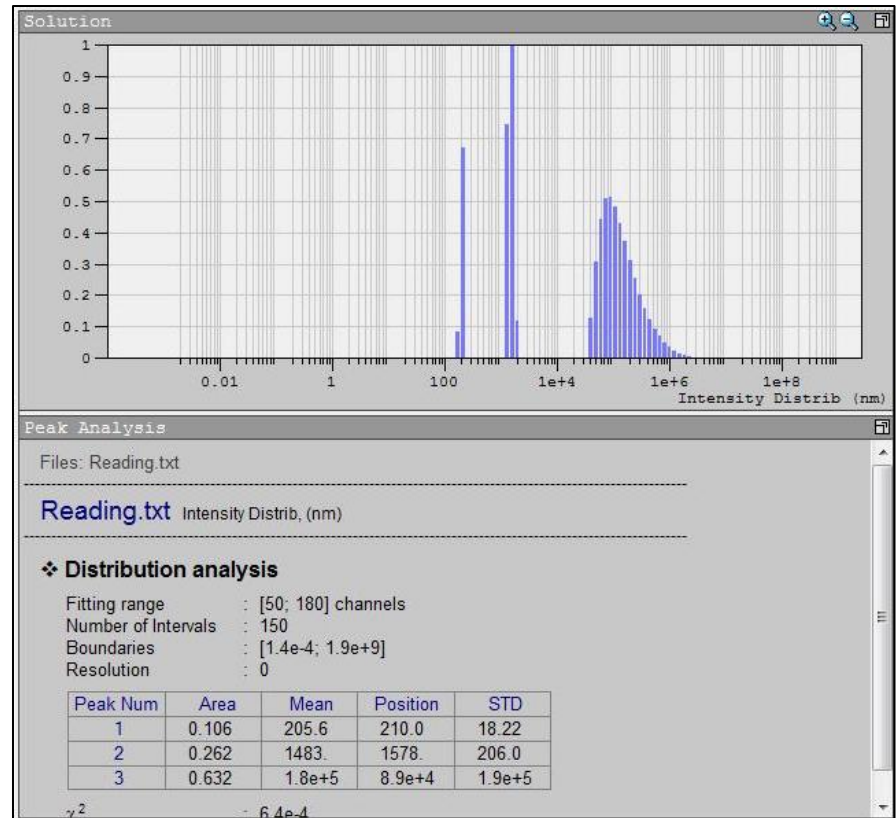


Figure2: The same particles a few weeks later. All particles are bonded into agglomerates with average sizes 205nm, 1483nm and 180 μ m

WHAT HAPPENS IF THE PARTICLES ARE AGGLOMERATED?

In any case your product will not have desired properties even if the size of the agglomerates is only a few times larger than the size of the particles. Distribution of particles in the nanocomposite material will not be uniform; surface covered by nanocomposite protective film will be of non-uniform thickness and with non-uniform distribution of properties and many other problems including economic. To obtain the desired properties of the product it is required much more of agglomerated particles than of the monodisperse, what increases the cost of the product.

WHAT IS IMPORTANT DURING HOMOGENIZATION?

Destruction of the agglomerates by ultrasonic dispersing is a good solution, because even high-speed mixing will not be able to help. But how to determine the correct mode and duration of ultrasonic dispersing? It is necessary because:

- Low power cannot destroy agglomerates
- High power or too long processing time will destroy the surface of the particles, what also changes their properties

OUR SOLUTION

All these problems are solved by measuring the particle size in the key stages of production technology. We have developed specialized particle analyzers for manufacturers of nanostructured or nanocomposite materials and for those who use these materials.

Basic properties of IKOsizer analyzers for manufacturers:

- Optimal measuring functions
- Optimal parameters
- Low price as a result of optimization
- Compact design, mobility and ease of operation
- The capability to embed equipment for automation of production process

WE RECOMMEND

More suitable models for factory use:



Very simple and quick measurement you can provide by CC series instruments.

IKOsize CC-1

Precise measurement of transparent and low concentrated materials

Measured size 0,3 – 10000nm

Sample concentration 0,0001 – 5%

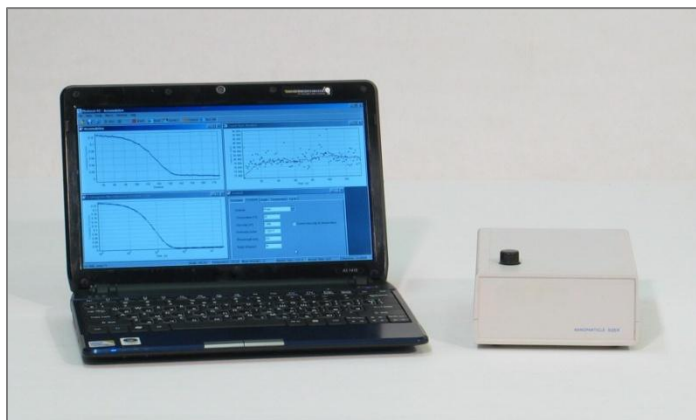
IKOsize CC-3

Precise measurement of any materials including opaque and/or high concentrated.

Excellent measurement result in totally opaque material such as black ink!

Measured size 0,3 – 10000nm

Sample concentration 0,0001 – 40%



You will get mobility for express analysis wherever it is necessary!

IKOsize MINI-1

Ultra compact, **handheld, USB powered** fully functional particles size analyzer for any transparent and low concentrated materials. Very simple and quick measurement.

Measured size 0,8 – 10000nm.

Sample concentration 0,001 – 5%.

Small size – great capabilities!

MEASURE AND BE SURE IN YOUR PRODUCTS!