



**Sasol North America Inc - Ceralox Division**  
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Valued customer.

Ceralox has for the last 10 years used a Malvern® Laser Scattering Instrument to report the particle size distribution for all alumina products. Within the last month Ceralox has upgraded to a new Horiba Laser Scattering Instrument due to a problem that was deemed un-repairable with the Malvern instrument. The old instrument and the new instrument are both based on the Fraunhofer model and the Mie optical model. The new Horiba instrument is technically superior to the older Malvern instrument; Ceralox is very satisfied with the performance of the new instrument. Sasol has standardized particle size measurement within all Company locations using Horiba instruments due to the reliable performance of the instruments.

All Laser Scattering Instruments provide relative measurements of the particle size distribution. The relative data from these instruments are used for process control and for representation of the particle size distribution in the Lot Analysis report provided with all Ceralox shipments. However, while the results from Laser Scattering Instruments are quick and precise, they are not necessarily accurate or absolute. Ceralox has defined limits under its quality assurance program to defined acceptable fluctuations in size and size distributions for each alumina product.

The new Horiba Laser Scattering instrument and the old Malvern instrument are several years apart in age and technology and do not yield values (D-90, D-50, and D-10) that are exactly the same for a given sample. Therefore, as product QC'd with the new Horiba ships the reported particle size values will be slightly different from historically reported Malvern data. Ceralox requests that all customers note that the change in the reported particle size distribution is a consequence of the change in instrument, not the product particle size distribution. Ceralox has modified its internal specifications as dictated by an analysis of the different instruments reported particle size distribution.

Again, the product your process relies on has not changed, only the instrument used to measure particle size distribution and consequently the reported particle size distribution values may vary from historical values. If additional information on the change to our specifications due to the conversion to Horiba particle size measurement is required I am happy provide this information.



Thank you for your continued support of Sasol's Ceralox Division alumina products.

Sincerely,

Mark Chamberlin  
Manager, Sales and Marketing