

ElectroPrep™ 053

Particle Size Analysis Electrolyte Preparation System

Electrical sensing zone particle sizing instruments employ electrolyte as a dispersion medium. Preparation of this electrolyte for analysis is a crucial step in obtaining valid data. Following the same preparation protocol with every sample analysis is a necessity for ensuring repeatability and reproducibility. For highly accurate particle size analysis, electrolytes must be virtually free of particles. This is defined as a contamination concentration that is below 0.5% of the total number of particles analyzed.

The Elzone II, and similar instruments use software routines to subtract or nullify the effects of unwanted particles. The use of these routines requires additional time to measure background levels and assumes that contaminant concentration is the same during background and sample analysis, which may have taken place on different days. The ElectroPrep 053 removes these particles.



The new ElectroPrep™ produces a constant supply of filtered electrolyte for the Elzone II 5390 and other instruments. In typical usage, one preparation of electrolyte may last up to several months.

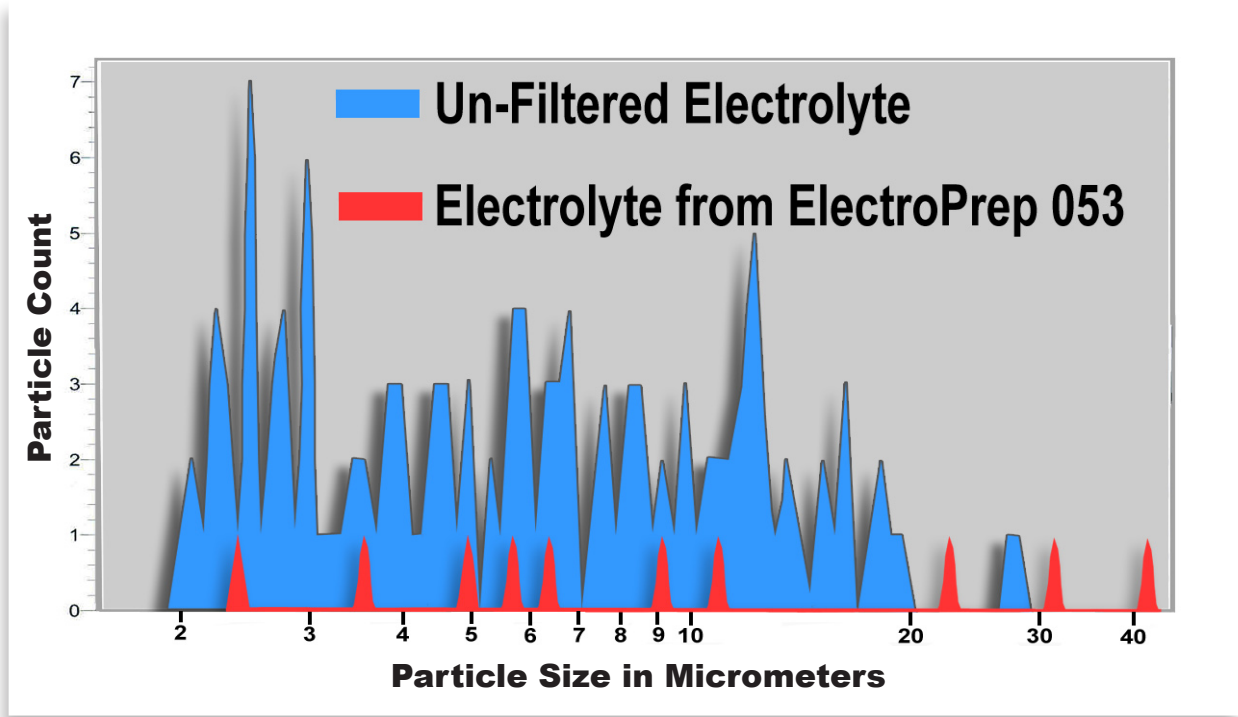
Usually the dispersion electrolyte contains undesirable levels of particles. During analysis, these particles degrade accuracy. The more sensitive the analyzer, the more pronounced these effects

could be. When using highly sensitive instruments such as the Micromeritics Elzone II 5390, the removal of unwanted particles is extremely desirable for obtaining the most accurate particle size data possible.

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The Science and Technology of Small Particles™

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The Micromeritics ElectroPrep is a highly effective system for the preparation of contaminant-free electrolyte for use with the Elzone II and other instruments.

For electrolytes in which sample particles readily disperse (e.g. alumina in saline water) without having to employ an additional dispersing agent, the waste liquid can simply be poured back into the container and used again and again. In typical usage under this circumstance, one preparation of electrolyte may last several months before the filter cartridge must be replaced. This is also true of saturated electrolytes. Waste liquid cannot be recycled when the sample material requires a special dispersing agent because adding it back into the electrolyte reservoir would change the electrolyte

composition. The ElectroPrep is still useful in these situations by providing a ready source of clean electrolyte to fill instrument sample beakers and supply containers. The ElectroPrep can be used with either aqueous or organic electrolytes by selecting the appropriate cartridge.

The ElectroPrep recirculates electrolyte through a filter cartridge that retains particles greater than 0.1 (aqueous) – 0.2 (non-aqueous) micrometers in diameter. The electrolyte is contained in a 9-liter (2 gallon) container; and circulates at a rate up to 0.5 L/min. It produces a supply of clean electrolyte that ensures a low background when conducting particle analyses using Micromeritics' Elzone II 5390 analyzer.

If you are looking for an easy-to-use electrolyte filtering device to ensure high-quality particle size data, then Micromeritics' new ElectroPrep 053 is a necessary addition to your laboratory. Visit us at www.micromeritics.com for more information on Micromeritics' complete line of particle characterization instrumentation.

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