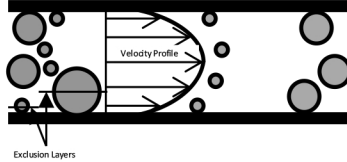


## Matec Applied Sciences Product Overview

Matec Applied Sciences offers the following unique and powerful particle size and zeta potential instruments. Please visit our web page for updated information on new products.

- CHDF3000**, High-Resolution particle size distributions in the particle size range of 5 nm to 3 microns. By fractionating the particles according to size, the CHDF3000 produces True particle size distribution data, including the presence of multiple particle size populations. Perfect for applications where broad and/or multi-mode size populations must be measured accurately. *Measurement is independent of particle density, perfect for heterogeneous-composition particles.* Auto-sampler allows unattended operation of multiple samples. Small sample volume of less than 1 ml required.
- CHDF3000-PDA**, The CHDF3000-PDA provides the same powerful capabilities for High-Resolution particle size distribution (PSD) analysis of the CHDF3000 model, *plus* the ability to measure particle composition. The CHDF3000-PDA separates particles by size using the Capillary Hydrodynamic Fractionation (CHDF) technique. Light-Scattering based instruments provide mainly *mean* particle size data –any mean particle size can be produced by an infinite number of PSD's. Instead, the CHDF3000-PDA provides **complete, true, detailed** PSD data in the 5 nm to 3  $\mu\text{m}$  range. In addition, the CHDF3000-PDA detects particles at four simultaneous wavelengths for particle chemical composition and surface coating analysis. See our [Application Note](#) for details.
- APS-100**, Acoustic Particle Sizer. The APS can measure particle size distributions without the need for sample dilution in the particle size range 5 nm to 100 microns. Versatile rugged instrument can analyze samples such as the following: aqueous/non-aqueous, opaque, highly viscous, corrosive, emulsions, neutrally buoyant, sterically stabilized, low Zeta potential, etc. Simultaneous measurement of percent solids, pH, conductivity, temperature, and sound speed and attenuation spectra. Automated titration capability allows measurement of reagent effects on particle size.





- ZetaFinder**, A low cost Zeta potential analyzer that performs undiluted Zeta potential measurements using the Electrokinetic Sonic Amplitude (ESA) technique patented by Matec Applied Sciences.
- ZA500**, ZetaAcoustic, simultaneously measures -without the need for sample dilution- Zeta potential, pH, conductivity, and temperature. The ZA500's powerful automatic titration capability allows easy determination of the Iso-Electric Point (IEP). The ZA500 combines the Electro-Acoustic (ESA) and Acoustic techniques in order to perform automatic particle size corrections to the Zeta potential data.
- Zeta-APS**, Zeta Acoustic Particle Sizer, simultaneously measures particle size and Zeta potential without sample dilution. The Zeta-APS combines the APS-100 and ZetaAcoustic proven technologies into a single powerful instrument that can also simultaneously analyze percent solids, pH, conductivity, temperature, and sound speed and attenuation spectra. Automated titration capability allows measurement of reagent effect on particle size, as well as, IEP determination, surfactant/dispersant effects, and many other measurements.
- Online Sizer**, Matec Applied Sciences (MAS) has recently been granted a patent for a new Acoustic Particle Sizing sensor for monitoring and control of Industrial Production of slurry/colloidal products including Chemical Mechanical Polishing (CMP), inks, paints, pigments, ceramic slips, catalysts, emulsions (including Petroleum related), pharmaceuticals, and Food- and Bio-colloids. This AREPA (Advanced-Reflection Particle Analysis) Acoustic sensor does not use moving parts and measures slurries in their process state, i.e. without requiring dilution, a major need for these large industrial markets. Please refer to the Applications Section for more information; or call Matec Applied Sciences to speak to a technical expert, 508-393-0155 ext 0.

