

Enhanced Sample Preparation

Accelerating your research, improving your data, reducing your costs

NANOTRAP[®] ESP PARTICLES

Enrichment, Concentration, Fractionation

Sample Preparation Solutions for Downstream Protein Analysis:

- ✓ 1D- or 2D- Electrophoresis
- ✓ Coomassie[™] Staining
- ✓ Silver Staining
- ✓ Western Blotting
- ✓ PAGE prep for Mass Spectrometry

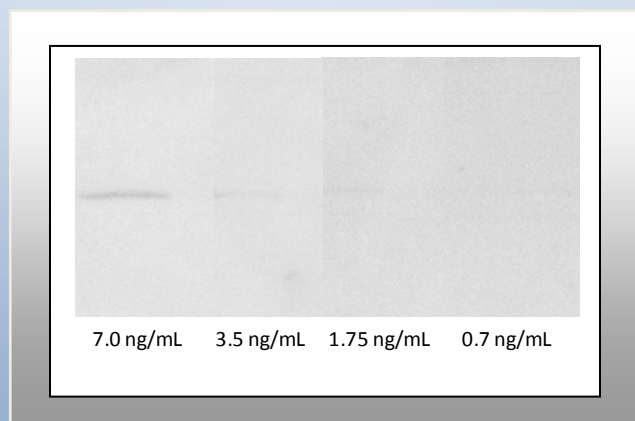
Nanotrap[®] ESP Key Benefits

- Enriches and concentrates low abundance proteins in complex biofluid samples.
- Does not utilize antibodies for immunodepletion or immunoprecipitation.
- Simultaneously harvests multiple low-abundance proteins from a single sample.
- Decreases amount of high-abundance proteins present in samples.
- Compatible with protein analysis techniques (Coomassie[™], silver staining, western blotting, mass spectrometry analysis).
- Prevents protein degradation during sample processing.
- **Simple format and quick sample processing technique with best in market results.**

**PURIFICATION
CONCENTRATION**

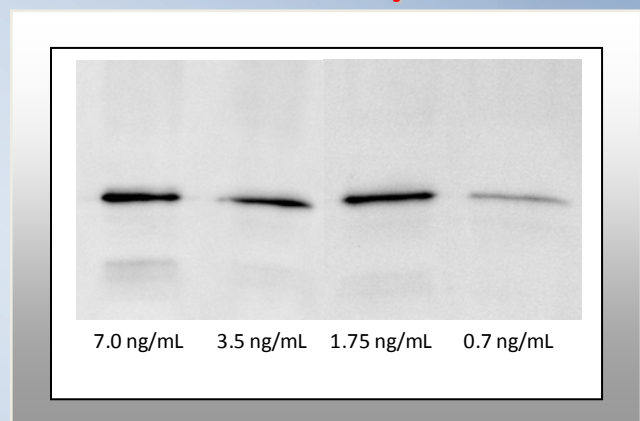
**SIZE EXCLUSION
PRESERVATION**

This is your Gel...



This is your Gel on ...

Nanotrap[®]!



Detect low-abundance Infectious Disease Bacterial Antigens

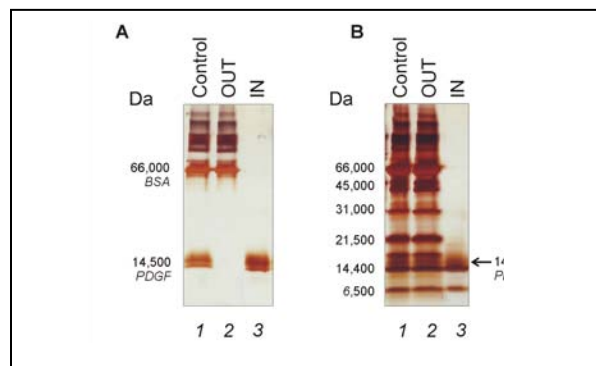
Visit WWW.CERESNANO.COM for more information and to order a Nanotrap[®] kit

What are Nanotrap® ESP Particles? How do they fit into my process?

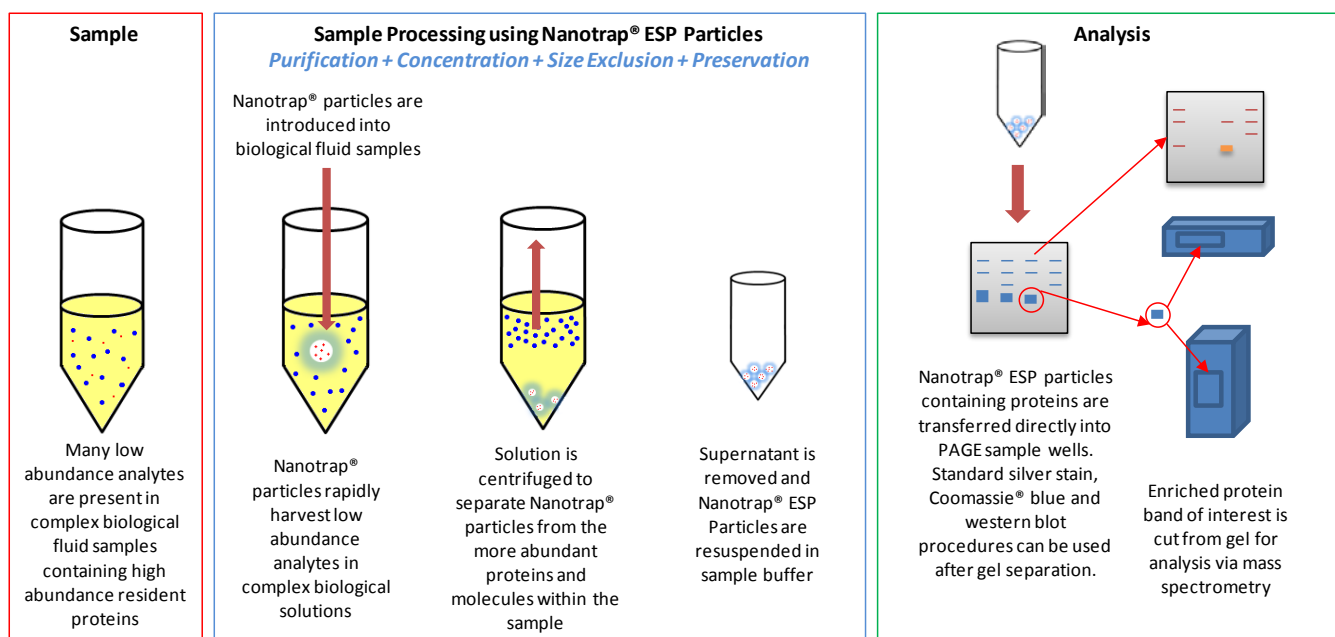
Nanotrap® ESP Particles are a protein enrichment toolset that can be integrated seamlessly into any existing downstream measurement and analysis process. Nanotrap® ESP Particles, developed from the Ceres proprietary Nanotrap® Platform technology, present a **powerful and flexible toolset for research targeting the discovery and quantification of known and unknown low abundance peptides and proteins present in a range of complex biofluid matrices including cell culture supernatant, cell lysates, serum, plasma, urine, saliva, and cerebrospinal fluid.**

The patented Nanotrap® ESP Particles are designed for optimal protein size sieving and harvesting of proteins from complex biofluid systems. Each class of particles contains affinity baits incorporated within the core and an outer shell with a customizable pore structure that allows for the simultaneous uptake, molecular sieving, enrichment and concentration of multiple proteins from a single sample. The ability to harvest multiple proteins and peptides from a single sample makes Nanotrap® ESP particles an ideal tool for researchers interested in **rapid sample processing of low abundance proteins** or for the **discovery of unknown proteins and peptides present in samples containing high-abundance interfering proteins.**

Nanotrap® ESP Particles contain unique affinity monomers and reactive dyes within their core structure. The ability of several specific reactive dyes to reversibly bind proteins are well documented and have been used with low-yield chromatography applications. **Affinity dyes contained within the Nanotrap® Particles have been selected to harvest nearly 100% of proteins in solution.** Depending on the protein of interest, there may already be a Nanotrap® particle class optimized for your needs. For other proteins, or for discovery applications, the most effective method for determining a specific binding and harvesting affinity is to use our Nanotrap® ESP Optimizer kit. This kit contains multiple unique affinity dyes to screen for the optimal solution for your protein fractionation and enrichment application.



White Nanotrap® ESP Particles harvest and enrich PDGF while excluding higher molecular weight proteins.



>>>>> Quick, simple, standard processes fit seamlessly into existing workflows >>>>>

See publications at www.ceresnano.com/biomarker.htm

Core-Shell Hydrogel Particles Harvest, Concentrate and Preserve Labile Low Abundance Biomarkers. PLoS ONE, 2009, Vol 4, Issue 3.

Smart Hydrogel Particles: Biomarker Harvesting: One-Step Affinity Purification, Size Exclusion, and Protection against Degradation. NanoLetters, 2008, Vol. 8, No. 1.

Concentration and Preservation of Very Low abundance Biomarkers in Urine, such as Human Growth Hormone (hGH), by Cibacron Blue F3G-A Loaded Hydrogel Particles. Nano Research, 2008, Vol. 1, No. 6.