Elemental Scientific

prep*FAST* S NANO

Automated Nanoparticle & Total Metals Detection

The **Fully Automated Solution** for Laboratory Nanoparticle Analysis

Unmatched Nanoparticle Detection in Ultrapure Chemicals

▶ Long-Term Stability

Eliminate nanoparticle instability and ensure sample homogeneity

Extend stability of nanoparticle calibration and reference material

▶ User-Friendly Automation

Simplify nanoparticle preparation with autodilution and autocalibration

Reduce dangerous chemical handling by eliminating manual dilutions and calibrations

Improve total metals and nanoparticle analysis with easy-to-use software

▶ Better Results

Improve accuracy with fully-automated sample preparation process

Eliminate external contamination from sample environment

Discover what prep*FAST* S NANO can do for you

- **Visit our website:**
  www.icpms.com
- **Contact Us:**
  info@icpms.com
  (402) 991-7800

Automated Sample Agitation

- Homogenizes sample to improve accuracy and reproducibility of nanoparticle analysis
- Mobilizes nanoparticles back into solution

Vorso Mixing Racks ▶

Independently mix sample prior to nanoparticle analysis

Automated Reference Material Stabilization

- Chilled environment for optimal suspension of nanoparticles
- Automatically homogenizes reference material solution before each analysis

Agitating Bottle Chiller ▶

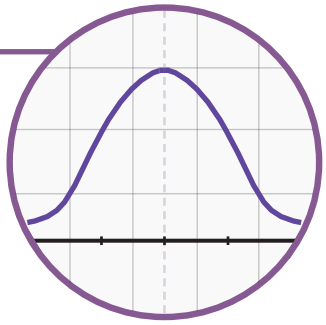
Stabilizes and homogenizes reference material

Automatic Reference Material Spiking

- Automatically adds reference material at time of analysis
- Eliminates nanoparticle deterioration in chemicals
- Simplifies reference material analysis processses

RM Spiking Apparatus ▶

Adds reference material to determine size and concentration of unknowns



Why Automated Nanoparticle Agitation?

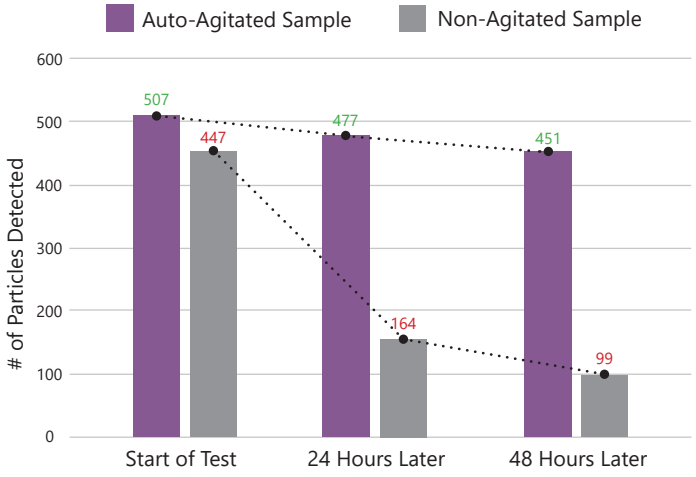


Figure 1. Detection of 197 Au in 200 ppt standard solution. Agitation performed every 30 min over a 48 hour period by prepFAST S NANO. Both bottles manually agitated at start of test.

- Automated agitation **mobilizes the nanoparticles** prior to analysis, providing a more homogenous sample
- Without agitation, **nanoparticles will settle in the container**, causing poor results
- Agitated samples **show better particle recovery and overall concentration** compared to non-agitated solution
- Automatic agitation **does not result in loss or breakdown** of particles

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Key Features

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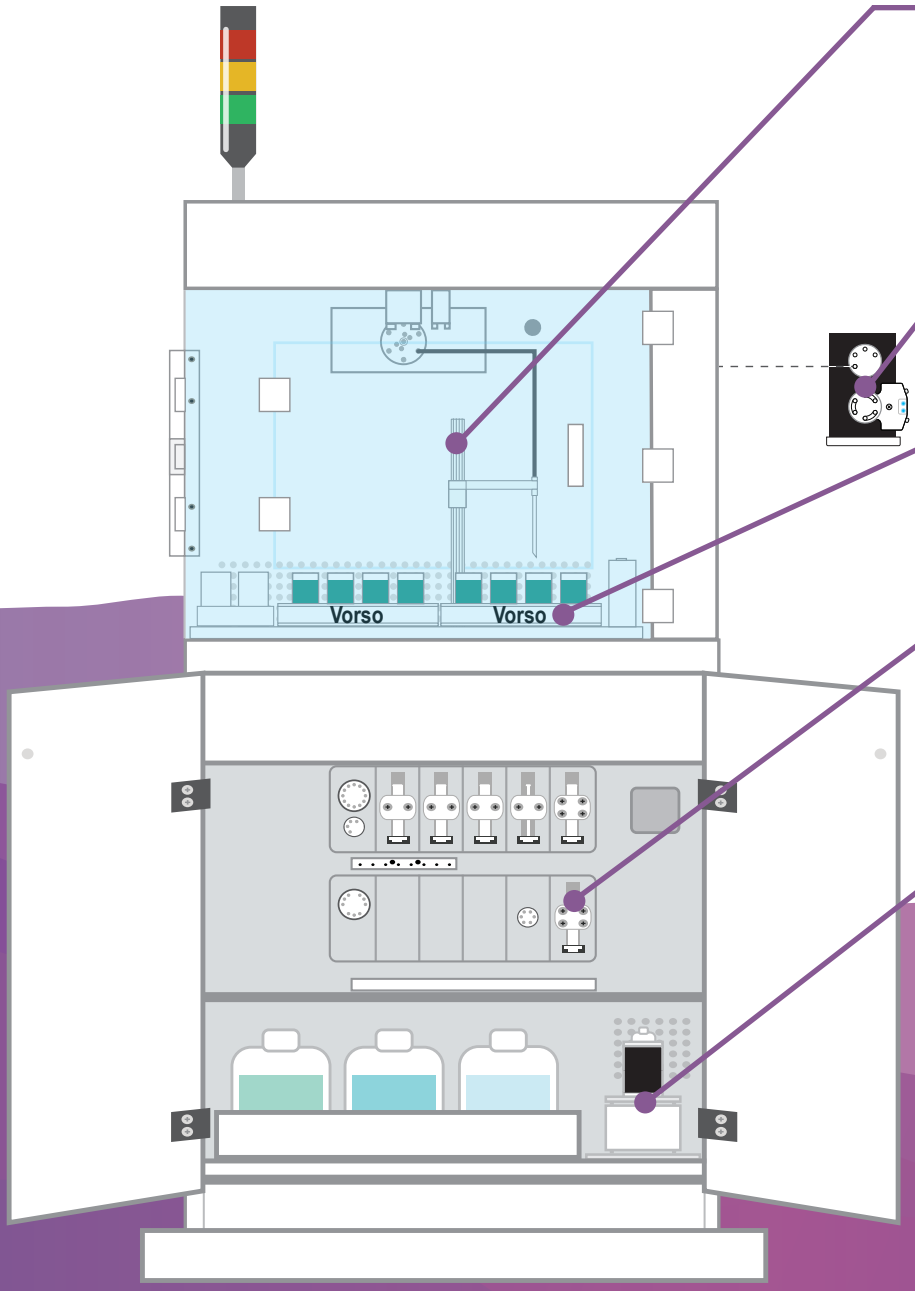

Fluoronetic Autosampler

High chemical resistance and low sample contamination risk

RM Spiking Valve

Automatically loads nanoparticle standard solution

Vorso Mixing Rack

Independently mixes samples prior to nanoparticle analysis

Nanoparticle Spiking Syringe

Injects nanoparticle standard at desired concentration

Shaking Bottle Chiller

Stabilizes and homogenizes reference material

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