



NanoParticle Standards

Kanomax offers **nanoparticle size and concentration standards** (developed with a patented* method) to its customers in semiconductor and related industries.

These concentrated standards (4×10^7 particles per mL and higher) require precision dilution. Kanomax recommends using the Precision Dilution System Model 9210 (shown bottom right).

The Polystyrene Latex (PSL) Spheres are National Institute of Standards and Technology (NIST) Traceable and the Colloidal Silica are European Reference Materials (ERM) Traceable. Size and Concentration Standards are available from Kanomax for purposes including the following:

- Validating Optical Particle counter and Laser Particle Counter sizing and count performance
- Testing filter efficiency
- Performing particle wafer deposition experiments

Specifications for Kanomax's nanoparticle calibration standards include:

Higher concentrations (less susceptible to contamination than ready-to-use standards).

Concentration accuracy: $\pm 10\%$

Lot to lot variation: $\pm 5\%$

Shelf life: Up to a 6-months.

Polystyrene Latex (PSL) Spheres

NIST traceable PSL standards are currently available in three combined sizes.

All sizes are supplied in 125 mL bottles.

PSL combined size standard is designed with a concentration size slope (log-log) of -3.

Combination: 16 combined PSL sizes in the range of 20 – 300 nm

Combination: 13 combined PSL sizes in the range of 20 – 220 nm

Combination: 10 combined PSL sizes in the range of 20 – 125 nm

Colloidal Silica

ERM traceable Colloidal Silica standards are currently available in 10, 20, 30, 50 and 90 nm sizes.

ScanningTPC number standards are available in 10, 20 and 30 nm sizes.

A specific LNS Volume Standard is also available.

Colloidal Silica standards are supplied in 125 mL bottles and 8 mL bottles.



Precision Dilution System Model 9210

* Patented method covered by patent numbers 8,272,253, 8,573,034 and 9,086,350.



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