



PSL Spheres 1 micron to 160 microns, NIST Traceable, Particle Size Standards

PSL Spheres, [20-900nm](#) | [Silica Nanoparticles](#) | [PSL Spheres, SurfCal](#) | [PSL Spheres, NIST SRM](#) | [PSL Spheres, HEPA Test](#) | [OptiBind PSL Spheres](#) | [PSL Spheres, HEPA Check](#)

PSL Spheres, 20-900nm, Polystyrene Latex particles - [Buy Now](#)

PSL Spheres, 1um-160um, Polystyrene Latex particles - [Buy Now](#)

PSL Spheres, Surfcal 47nm to 3um, Polystyrene Latex particles - [Buy Now](#)

Silica Nano-particles, 40nm to 2um, Spherical Silica Particles - [Buy Now](#)

PSL Spheres are excellent for use with any application that requires calibration of a size response curve using NIST traceable, size standards with narrow standard deviation of the size peak. The mean size diameter of these PSL spheres are calibrated with NIST traceable microscopy methods. The size distribution and uniformity are measured by electrical resistance analysis or optical microscopy. Polystyrene latex spheres range from 1 µm to 160 µm and are made from polystyrene (PSL). PSL Spheres are used instead of irregularly shaped particles to minimize the laser response of analytical instruments that are sensitive to particle shape. Products from 1 to 160 µm are packaged as aqueous suspensions in 15 mL dropper-tipped bottles. Concentration is maintained at 1.05 grams per cm cubed. Each bottle of PSL spheres contains a Certificate of Calibration and Traceability to NIST which includes a description of the calibration method and its uncertainty, and a table of chemical and physical properties. A Material Safety Data Sheet (MSDS) with handling and disposal instructions is also available. Packages are lot-numbered for convenient technical service and support after the sale.

PSL Spheres	1 µm to 160 µm
Particle Composition	Polystyrene Latex, PSL Spheres
Particle Density	1.05 g/cm ³
Index of Refraction	1.59 @ 589nm (25°C)
Bottle Size	15 mL
Expiration Date	≤ 24 months
Additives	Contains trace amounts of surfactant
Suggested Storage Temp.	2-8°C
Bottle Size and Volume	15ml (A) Bottle

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PSL Spheres, 1um to 160um, Polystyrene Latex Spheres				
Product Part #	Nominal Diameter	Certified Mean Peak	Std. Dev & CV	Solids Concentration
AP4009A	0.994 µm	0.994 µm ± 0.021 µm	0.010 µm (1.0%)	1.0%
AP4010A	1.0 µm	1.019 µm ± 0.015 µm	0.010 µm (1.0%)	1.0%
AP4011A	1.1 µm	1.101 µm ± 0.017 µm	0.012 µm (1.1%)	1.0%
AP4013A	1.3 µm	1.361 µm ± 0.015 µm	0.021 µm (1.5%)	1.0%
AP4016A	1.6 µm	1.587 µm ± 0.018 µm	0.021 µm (1.3%)	1.00%
AP4018A	1.8 µm	1.745 µm ± 0.022 µm	0.019 µm (1.1%)	1.0%
AP4202A	2.0 µm	1.999 µm ± 0.020 µm	0.021 µm (1.0%)	1.0%
AP4025A	2.5 µm	2.504 µm ± 0.027 µm	0.025 µm (1.0%)	0.50%
AP4203A	3.0 µm	3.002 µm ± 0.019 µm	0.03 µm (1.1%)	0.50%
AP4204A	4.0 µm	4.000 µm ± 0.043 µm	0.04 µm (1.0%)	0.40%
AP4205A	5.0 µm	4.993 µm ± 0.040 µm	0.05 µm (1.0%)	0.30%
AP4206A	6.0 µm	6.007 µm ± 0.040 µm	0.07 µm (1.2%)	0.30%
AP4207A	7.0 µm	6.982 µm ± 0.045 µm	0.07 µm (1.0%)	0.30%
AP4208A	8.0 µm	7.979 µm ± 0.075 µm	0.09 µm (1.1%)	0.30%
AP4209A	9.0 µm	8.956 µm ± 0.082 µm	0.09 µm (1.0%)	0.30%
AP4210A	10 µm	10.00 µm ± 0.08 µm	0.09 µm (0.9%)	0.20%

AP4212A	12 µm	12.01 µm ± 0.11 µm	0.12 µm (1.0%)	0.20%
AP4215A	15 µm	14.97 µm ± 0.10 µm	0.15 µm (1.0%)	0.30%
AP4220A	20 µm	19.99 µm ± 0.25 µm	0.28 µm (1.4%)	0.30%
AP4225A	25 µm	24.61 µm ± 0.22 µm	0.27 µm (1.1%)	0.50%
AP4230A	30 µm	29.75 µm ± 0.56 µm	0.45 µm (1.5%)	0.60%
AP4240A	40 µm	39.94 µm ± 0.35 µm	0.44 µm (1.1%)	0.70%
AP4250A	50 µm	50.2 µm ± 0.30 µm	0.5 µm (1.0%)	0.40%
AP4260A	60 µm	59.2 µm ± 0.6 µm	0.9 µm (1.5%)	0.20%
AP4270A	70 µm	69.1 µm ± 0.9 µm	0.9 µm (1.2%)	0.20%
AP4280A	80 µm	79.4 µm ± 0.5 µm	0.9 µm (1.1%)	0.70%
AP4310A	100 µm	100 µm ± 1.5 µm	1.5 µm (1.5%)	0.10%
AP4311A	115 µm	113 µm ± 1.0 µm	1.6 µm (1.4%)	0.60%
AP4314A	140 µm	138 µm ± 2.0 µm	.5 µm (1.8%)	0.00%
AP4316A	160 µm	161 µm ± 3.1 µm	.5 µm (2.2%)	0.80%