

PSL Spheres 1um – 160um, NIST Traceable Size Accuracy

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	\leq 24 months
Additives	Contains trace amounts of surfactant
Suggested Storage Temp.	2-8°C
Bottle Size and Volume	15ml (A) Bottle

PSL Spheres, 1um to 160um, Polystyrene Latex Spheres				
Product Part #	Nominal Diameter	Certified Mean Peak	Std. Dev & CV	Solids Content
AP4009A	1.0 μm	0.994 $\mu\text{m} \pm 0.021 \mu\text{m}$	0.010 μm (1.0%)	1.00%
AP4010A	1.0 μm	1.019 $\mu\text{m} \pm 0.015 \mu\text{m}$	0.010 μm (1.0%)	1.00%
AP4011A	1.1 μm	1.101 $\mu\text{m} \pm 0.017 \mu\text{m}$	0.012 μm (1.1%)	1.00%
AP4013A	1.3 μm	1.361 $\mu\text{m} \pm 0.015 \mu\text{m}$	0.021 μm (1.5%)	1.00%
AP4016A	1.6 μm	1.587 $\mu\text{m} \pm 0.018 \mu\text{m}$	0.021 μm (1.3%)	1.00%
AP4018A	1.8 μm	1.745 $\mu\text{m} \pm 0.022 \mu\text{m}$	0.019 μm (1.1%)	1.00%
AP4202A	2.0 μm	1.999 $\mu\text{m} \pm 0.020 \mu\text{m}$	0.020 μm (1.0%)	0.40%
AP4025A	2.5 μm	2.504 $\mu\text{m} \pm 0.027 \mu\text{m}$	0.025 μm (1.0%)	0.50%
AP4203A	3.0 μm	3.002 $\mu\text{m} \pm 0.019 \mu\text{m}$	0.03 μm (1.1%)	0.50%
AP4204A	4.0 μm	4.000 $\mu\text{m} \pm 0.043 \mu\text{m}$	0.04 μm (1.0%)	0.40%
AP4205A	5.0 μm	5.027 $\mu\text{m} \pm 0.040 \mu\text{m}$	0.05 μm (1.0%)	0.30%
AP4206A	6.0 μm	6.007 $\mu\text{m} \pm 0.040 \mu\text{m}$	0.07 μm (1.2%)	0.30%
AP4207A	7.0 μm	6.982 $\mu\text{m} \pm 0.045 \mu\text{m}$	0.07 μm (1.0%)	0.30%
AP4208A	8.0 μm	7.979 $\mu\text{m} \pm 0.075 \mu\text{m}$	0.09 μm (1.1%)	0.30%
AP4209A	9.0 μm	8.956 $\mu\text{m} \pm 0.082 \mu\text{m}$	0.09 μm (1.0%)	0.30%
AP4210A	10 μm	10.00 $\mu\text{m} \pm 0.08 \mu\text{m}$	0.09 μm (0.9%)	0.20%
AP4212A	12 μm	12.01 $\mu\text{m} \pm 0.11 \mu\text{m}$	0.12 μm (1.0%)	0.20%
AP4215A	15 μm	14.97 $\mu\text{m} \pm 0.10 \mu\text{m}$	0.15 μm (1.0%)	0.30%
AP4220A	20 μm	19.99 $\mu\text{m} \pm 0.25 \mu\text{m}$	0.28 μm (1.4%)	0.30%
AP4225A	25 μm	24.61 $\mu\text{m} \pm 0.22 \mu\text{m}$	0.27 μm (1.1%)	0.50%
AP4230A	30 μm	29.75 $\mu\text{m} \pm 0.56 \mu\text{m}$	0.45 μm (1.5%)	0.60%
AP4240A	40 μm	39.94 $\mu\text{m} \pm 0.35 \mu\text{m}$	0.44 μm (1.1%)	0.70%
AP4250A	50 μm	50.2 $\mu\text{m} \pm 0.30 \mu\text{m}$	0.5 μm (1.0%)	0.40%
AP4260A	60 μm	59.2 $\mu\text{m} \pm 0.6 \mu\text{m}$	0.9 μm (1.5%)	0.20%
AP4270A	70 μm	69.1 $\mu\text{m} \pm 0.9 \mu\text{m}$	0.9 μm (1.2%)	0.20%
AP4280A	80 μm	79.4 $\mu\text{m} \pm 0.5 \mu\text{m}$	0.9 μm (1.1%)	0.70%
AP4310A	100 μm	100 $\mu\text{m} \pm 1.5 \mu\text{m}$	1.5 μm (1.5%)	0.10%
AP4311A	115 μm	113 $\mu\text{m} \pm 1.0 \mu\text{m}$	1.6 μm (1.4%)	0.60%
AP4314A	140 μm	138 $\mu\text{m} \pm 2.0 \mu\text{m}$.5 μm (1.8%)	0.00%
AP4316A	160 μm	161 $\mu\text{m} \pm 3.1 \mu\text{m}$.5 μm (2.2%)	0.80%