

Date: Feb 27, 2017

Time: 16:14:16

Certificate of Calibration and NIST Traceability

Sample ID **Thermofisher 3100A, 100nm +/-3nm from bottle**

Operator ID **LS**

Notes Polystyrene Latex, NIST Traceable, 100nm, 7.8 nm SD, 7.8% CV from bottle

Certified Batch: 3100-006

Measurement Parameters:			
Temperature	= 22.0 deg. C	Runs Completed	= 6
Liquid	= Water	Run Duration	= 00:00:45
Viscosity	= 0.955 cP	Total Elapsed Time	= 00:04:30
Ref.Index Fluid	= 1.331	Average Count Rate	= 150.3 kcps
Angle	= 90.00	Ref.Index Real	= 1.590
Wavelength	= 657.0 nm	Ref.Index Imag	= 0.000
Baseline	= Auto (Slope Analysis)	Dust Filter Setting	= 30.00

Thermofisher 3100A, 100nm +/-3nm from bottle

Effective Diameter: 106.2 nm

Polydispersity: 0.005

Baseline Index: 8.5/ 99.53%

Elapsed Time: 00:04:30

Lognormal Distribution

Run	Eff. Diam. (nm)	Half Width (nm)	Polydispersity	Baseline Index
1	106.0	7.5	0.005	7.9 / 100.00%
2	105.9	7.5	0.005	7.3 / 100.00%
3	103.7	17.0	0.027	10.0 / 100.00%
4	107.1	7.6	0.005	4.3 / 97.18%
5	104.5	25.1	0.058	6.1 / 100.00%
6	108.9	7.7	0.005	9.3 / 100.00%
Mean	106.0	12.1	0.017	7.5 / 99.53%
Std. Error	0.8	3.0	0.009	0.9 / 0.47
Combined	106.2	7.5	0.005	8.5 / 99.53%

Effective Diameter: This value is defined as the hydrodynamic diameter of the particles in solution.

Mean: The arithmetic average of the values of each run.

Polydispersity Index: A dimensionless measure of the broadness of the size distribution calculated from the cumulants analysis. This polydispersity index measures the deviation from the uniformity of dispersion. Values greater than 1 indicate that the distribution is so polydisperse the sample may not be suitable for measurement by DLS.