



METHOD FOR TESTING PSL STANDARDS ON LA-300

Mono-disperse polystyrene latex (PSL) standards are commonly used to verify accuracy and proper operation of laser diffraction particle size analyzers. As these materials are somewhat different from normal materials, proper conditions and procedures are necessary to ensure correct results. The following NIST-traceable polystyrene latex standards are recommended to verify acceptable performance of the LA-300 particle size analyzer.

Analytical test method

Applicable instruments: LA-300 with aqueous pump or solvent-resistant pump

Dispersant fluid: deionized water

Set the following conditions:

- Measure Conditions
 - Circulation speed: 3
 - Number of Data Samplings: 10
- Display Conditions
 - Form of Distribution: Sharp
 - R.R. Index: PSL
 - Distribution Base: Volume
- Sample Information:
 - Sample Name: (nominal size of standard and tolerance)
 - Material: PSL standard
 - Source: (name of vendor)
 - Lot Number: (lot number of standard being tested)

Procedure:

1. Fill circulation system with deionized water.
2. Start circulation and agitation.
3. Wait 10 seconds.
4. Blank
5. Add polystyrene sample drop wise directly to the sample mixing chamber of the flow system until the laser transmittance is below 95%
6. Measure
7. Save data
8. Repeat measurement three times on each standard to verify reproducibility.
9. Rinse twice with deionized water between samples.

Results

Verify that the Median Diameter is within 10% of the published value (nominal value plus tolerance) for each standard.

The following polystyrene latex, NIST-traceable standards are recommended for testing the LA-300: 0.3, 1.0, 10, and 100 μm .