



TEST METHOD FOR PS-202 POLY-DISPERSE GLASS BEAD STANDARDS ON PARTICA LA-950

Poly-disperse glass bead standards were developed as a better test of complete system performance for laser diffraction analyzers, compared to mono-disperse polystyrene latex dispersions that are not representative of the vast majority of materials tested on these instruments. The PS-202 glass bead standard has been tested and incorporated as a performance specification for the Partica LA-950 analyzer.

Analytical test method

Applicable instruments: LA-950 AquaFlow, SolvoFlow

Dispersant fluid: De-ionized water

Sonication: Yes

Set the following conditions:

- Basic Measurement Conditions
 - Sample Information:
 - Sample Name: PS-202
 - Material: Glass beads
 - Source: Whitehouse Scientific
 - Lot Number: XX-XXXX
 - Refractive Index : STD-GLASSBEADS (1.51-0.0i)
 - Form of Distribution: Manual
 - Iteration Number: 15
 - Distribution base: Volume
- Advanced Measurement Conditions
 - Measurement tab
 - Data acquisition times (Sample) : 5000
 - Data acquisition times (Blank) : 5000
 - Alignment before measurement: Yes
 - System : Preparation tab
 - Circulation Speed : 5
 - Ultrasonic Setting
 - Power : 7
 - Time : 5 minutes
 - Ultrasonic works during measurement : Yes
 - Agitation Speed : 2



Analytical Test Method

Particle Size Distribution Analyzer

Partica LA-950

ATM102

PS-202 Glass bead standard

Procedure:

1. Fill circulation system with de-ionized water.
2. Start Circulation and Agitation.
3. De-bubble.
4. Wait 10 seconds.
5. Align the laser and verify that the cell is clean by visually inspecting the Channel baseline.
6. Take the system Blank.
7. Transfer all of the powder in the bottle to the sample cup.
 - Note: static interaction between the glass beads and bottle may necessitate rinsing the bottle remnants into the sample cup with water and/or the use of surfactant
8. Activate the internal Ultrasonic probe. Wait for the five minute ultrasonic treatment to elapse before proceeding.
9. Record the Measurement.
10. Save data (or use AutoSave function).
11. Collect three measurements on separate samplings for each standard to verify reproducibility.

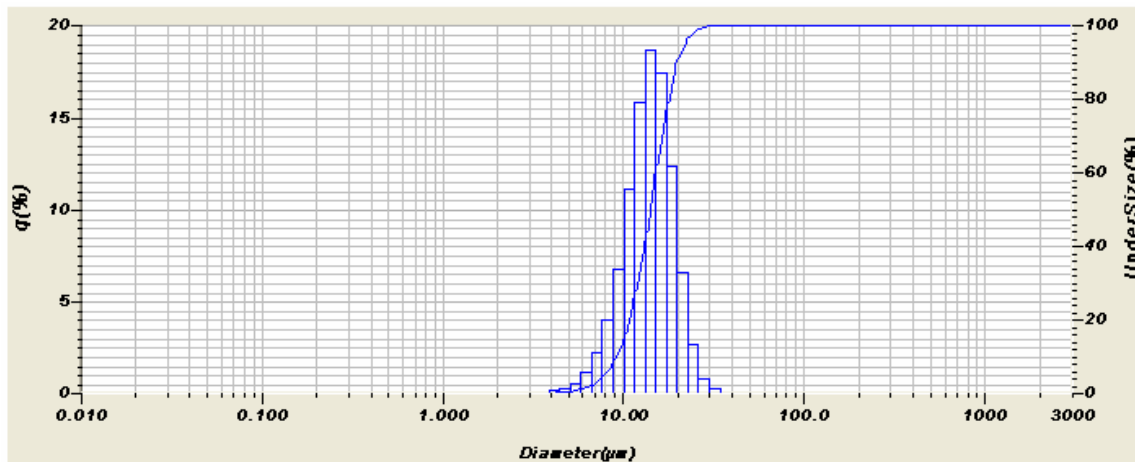
Results

Verify that the median (D50) is within 3% of the nominal value and the D10 and D90 are within 5% of the nominal values for the standard.

D10: 7.87 to 10.50 μ m

D50:12.20 to 14.71 μ m

D90:17.96 to 22.86 μ m



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