



## SETUP OF AUTOMATIC DRY MEASUREMENT PARTICA LA-960 WITH POWDERJET

Glass bead standards are commonly used to verify accuracy and proper operation of laser diffraction particle size analyzers. For verifying systems with dry powder sampling systems, proper conditions and procedures are necessary to ensure correct results. For the Partica LA-960, the PS-315 standard (10-100  $\mu$  m, 1g per bottle) is recommended.

**NOTE: Whitehouse Scientific discontinued standard PS-215 and replaced it with PS-315 in 2014. HORIBA ATM103 for PS-215 has been superseded by ATM110 for PS-315.**

### Analytical test method

Applicable instruments: Partica LA-960 with PowderJet Dry Feeder

Set the following conditions:

- Basic Measurement Conditions
  - Sample Information:
    - Sample Name: PS-315
    - Material: Glass beads
    - Source: Whitehouse Scientific
    - Lot Number: XXXXX
    - Refractive Index : STD-GLASSBEADS (1.51-0.0i)
    - Form of Distribution: Manual
    - Iteration Number: 15
    - Distribution base: Volume
- Advanced Measurement Conditions
  - Sample Information tab
    - Input size of nozzle used (***MEDIUM*** nozzle)
  - Measurement tab
    - Data acquisition times (Sample) : 50000
    - Data acquisition times (Blank) : 5000
  - System : Preparation tab
    - Configuration to Stop : Check all items
    - Configuration of Blank : Check Vacuum and Air
    - T% for Sampling : Yes, Max T%: 99, Min T% 95
    - Start Trigger : No
    - Stop Trigger : Yes, 99.8%, Stop After Waiting
    - Feeder Speed : Auto, 60-90, Init. Coefficient 1.0,
    - Air Pressure : 0.3 MPa (= 3 bar, ~ 45 psi)



# Analytical Test Method

Particle Size Distribution Analyzer

Partica LA-960 PowderJet

ATM110

Dry Standard Measurement

## Procedure:

1. Save Measurement Condition file. (.cdd extension)
2. Insert **MEDIUM** dispersion nozzle into dry cell.
3. Activate Vacuum and press Alignment. Inspect detector/channel baseline to determine cleanliness of dry cell glass.
4. Put the whole bottle of standard inside the rear of the chute. Crush all large agglomerates.
5. Click Auto-Measurement.
6. Save data (or use AutoSave function).
7. Manually start Vacuum and Feeder to remove any remaining material from chute.

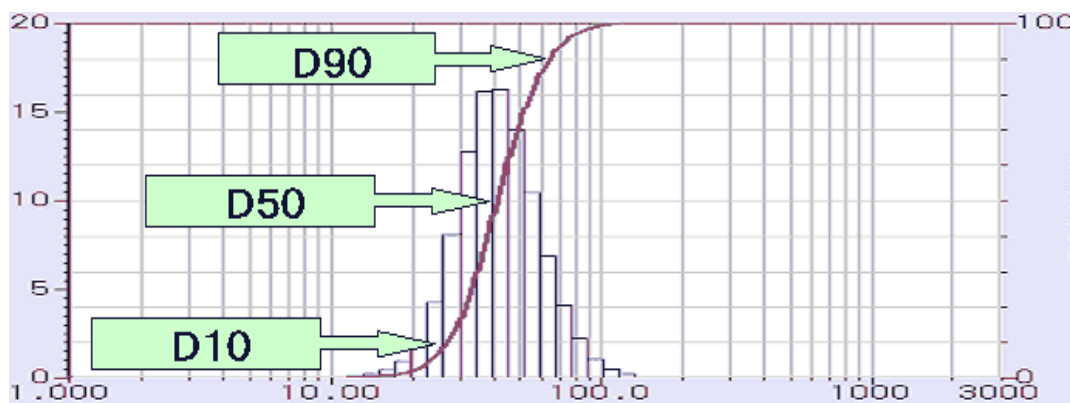
## Results

Verify that the results are within the following specification:

D10: 24.85 – 36.75 microns

D50: 45.93 – 60.07 microns

D90: 67.98 – 101.02 microns



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# Analytical Test Method

Particle Size Distribution Analyzer

Partica LA-960 PowderJet

ATM110

Dry Standard Measurement

Measurement Dialog

Load

Save

Sample information

Sample Name  
PS315

Material  
Glassbeads

Source  
Whitehouse

Lot Number  
XXXXX

Test or Assay. Number  
KP

Refractive Index

File Name: STD-GLASSBEADS

Comment: STD-GLASSBEADS

Form of Distribution

Manual  Auto

Iteration Number 15

Distribution base

Volume  Area  
 Length  Numbers

OK



# Analytical Test Method






Particle Size Distribution Analyzer

Partica LA-960 PowderJet

ATM110

Dry Standard Measurement

Advanced ✕

Sample Information 	Calculation 	Measurement 	System 	System : Preparation 
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Other Information

Remarks 1 MEDIUM NOZZLE	Remarks 6
Remarks 2 YES for T% FOR SAMPLING	Remarks 7
Remarks 3 NO START TRIGGER	Remarks 8
Remarks 4 YES STOP TRIGGER 99.8% STOP AFTER WAITING	Remarks 9
Remarks 5 FEEDER SPEED AT 60	Remarks 10



# Analytical Test Method






Particle Size Distribution Analyzer

Partica LA-960 PowderJet

ATM110

Dry Standard Measurement

Advanced ✕

Sample Information 	Calculation 	Measurement 	System 	System : Preparation 
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Transmittance(R) Upper:  % Lower:  %

Data acquisition times(Sample)

LD

Data acquisition times(Blank)

LD



# Analytical Test Method

Particle Size Distribution Analyzer

Partica LA-960 PowderJet

ATM110

Dry Standard Measurement

Advanced

Sample Information    Calculation    Measurement    System    System : Preparation

Configuration to Stop after Measurement

Vacuum     Air     Feeder

Auto Measurement Button

Configuration of Blank Measurement

Current     Vacuum     Air

Sampling Condition

T% for sampling

Yes     No

Max T%     Min T%

Start trigger

Yes     No

Intensity level     Sensor No

Deley times to Start

Stop trigger

Yes     No

Setting T%      Stop immediately     Stop after waiting

Feeder speed

Speed:     Initial coefficient:

automatic     Fixed

Response time :     Target T%:

Air

Presser:  MPa

OK    Cancel