



SETUP OF AUTOMATIC DRY MEASUREMENT PARTICA LA-950 WITH POWDERJET

The measurement procedure for dry analysis can be automated to improve operation speed, repeatability, and improve data quality. Some manual testing will usually be necessary to identify optimum measurement conditions for a particular sample. From that point forward, automated analysis will make further testing much easier. The following procedure lists the conditions necessary to automate this analysis sequence.

Analytical test method

Applicable instruments: Partica LA-950 with PowderJet Dry Feeder

Set the following conditions:

- Sample Information tab: enter sample name, material, etc.
- Calculation tab: select refractive index, fixed value, and graph settings that are appropriate for the material being tested
- Measurement tab
 - Data acquisition times (Sample)
 - LD: 1000 (this may be extended if you wish to measure a larger amount of sample)
 - Data acquisition times (Blank)
 - LD: 5000
 - Alignment before measurement: No
- System tab
 - Sample Preparation
 - Feeder: Auto
 - Auto Setting: 2
 - Manual Setting: set feeder speed to a reasonable value for material. Default 120
 - Air: High
 - Automatic Measurement Conditions
 - Stop condition: Check all items
 - Operating condition: Check Vacuum and Air
 - Measurement condition (for normal/large amount of sample)
 - Preset Acquisition T%: Yes
 - Max T%: Set for the concentration range that is appropriate for the sample. A default setting for Max T% would be 95-98%
 - Min T%: Set for the concentration range that is appropriate for the sample. A default setting for Min T% would be at least 3% less than Max T%; 92-95%
 - Triggered measurement: No
 - Self Finishing Measurement when sample is empty: Yes
 - Setting T%: 99.5%



Analytical Test Method

Particle Size Distribution Analyzer

Partica LA-950 PowderJet

ATM105

Auto dry measurement

- Measurement condition (triggered for small amount of sample)
 - Preset Acquisition T%: No
 - Triggered Measurement: Yes
 - Intensity Level: Current blank intensity plus 10-20 (Check the current blank level value and add 10-20 points. If the value is too high, measurement won't start. If value is too low, measurement will start even without sufficient sample flow, giving poor repeatability).
 - Sensor No.: Depending on the approximate size of the sample, make the following selections:
 - Larger than 400 μ m: 5
 - 80-400 μ m: 24
 - 10-80 μ m: 41
 - Less than 10 μ m: 64
 - Waiting sampling times: 0

Save the conditions above as a condition file.

Navigator Settings: Set up the following Navigator sequence program

Go to Navigator>Edit sequence and enter a name for the sequence.

From drop down list choose "LA Dry Command", then make the following selections:

1. Condition setting> (select the name of your condition file)
2. Vacuum > on
3. Alignment
4. Blank
5. Air > Current Setting > on
6. Feeder > Current Setting > on
7. Measurement
8. Stop

Save the sequence and click OK

Go to Navigator>Edit Navigator list – select the sequence you just created

Procedure:

1. Add an appropriate amount of sample inside the feeder chute.
2. Press "Auto Measurement" button to execute automatic measurement
3. Save data (or use AutoSave function)
4. Manually start vacuum and brush any material left on the chute into the cell.

Copyright 2005, Horiba Instruments, Inc.

For further information on this document or our products, please contact:

Horiba Instruments, Inc.

17671 Armstrong Ave.

Irvine, CA 92614 USA

(949) 250-4811

www.horiba.com