

Dylos DC1700 Sampling Protocol

Pre-Sampling and Maintenance

1. If there are no electrical outlets in the sampling location, the Dylos DC1700 battery must be charged.
 - a. Plug the AC adaptor into an electrical outlet, and then connect the AC adaptor to the DC1700 (the power cord inlet is located on the left side of the instrument). Make sure the electrical cord is tucked out of the way so no one will trip on it. Don't turn the unit on.
 - b. Note: It may take 12 or more hours to charge a fully discharged battery.

Sampling

1. Plug the AC adaptor into an electrical outlet, and then connect the AC adaptor to the DC1700 (the power cord inlet is located on the left side of the instrument). Make sure the electrical cord is tucked out of the way so no one will trip on it.
 - a. If there are no electrical outlets in the sampling location, the battery in the Dylos DC1700 can provide **up to** six hours of operation.
2. Turn the DC1700 on by pressing the power button (furthest button to the left).
3. Set the date and time
 - a. Press the "Mode" button until "date time mode" is displayed.
 - b. Press "Select" to change the time
 - c. Arrows will point to the element being change, press "Select" until the desired number is displayed (Note: the Dylos DC1700 uses a 24-hour time format). Press "Mode" to set each number and repeat.
4. Clear history if this is a new test.
 - a. Press the "Mode" button (middle button) until "clear history?" is displayed.
 - b. Press "Select" (furthest right button) to clear the memory.
 - c. NOTE: After the history has been reset, the Dylos will begin recording data in continuous mode (see below).
5. The Dylos DC1700 has two operation modes, continuous and monitor mode. To cycle between modes, press the "Mode" button.
 - a. Continuous mode runs constantly, logging every minute (the default mode when the Dylos is first powered on).
 - b. Monitor mode will sample for one minute every hour.
6. Once monitoring, the Dylos DC1700 will display particle counts, with small particles on the left and large particles on the right.
 - a. To review data, press the "Mode" button to cycle through minute, hour, and day history modes. Press "Select" to view data.

Post-Sampling

1. If you have not already done so, download and install the DylosLogger software from <http://dylosproducts.com/downloads.html>
2. Once installed, connect the Dylos with the COM-USB cable to the computer and turn the Dylos on.
3. A driver allowing your computer to download data should automatically install into your computer at this point. This will only need to happen the first time you connect the Dylos. If it does not automatically download, you will need to do it manually by visiting:
http://www.trendnet.com/support/supportdetail.asp?prod=265_TU-S9
or by using the TRENDnet CD found in the Dylos case.
4. Start the DylosLogger software.
5. Select the available COM Port with the “Port” selection
6. Use the folder symbol next to the drop down box below the “Stop After” box to select a file in which to store the data (desktop, my documents, etc.)
7. Below this, be sure to select “cubic foot/100”, or your data will not graph correctly later.
8. Download the history from the Dylos by clicking the “Download History” button immediately to the left of the “Port” selection
9. Click “Download”
10. Once the data has been downloaded, click “Create Log” and then “Close”
11. The data is now saved in the selected text file and can now be imported into excel.

Importing Data to Excel

1. To import your data into Excel, open a new Excel document.
2. From the “File” drop down menu, select “Open”, then find and choose your data log.
3. The “Text Import Wizard” box will appear, choose “Delimited”, then next.
4. In step 2 of the wizard, choose “comma” and “space” as your delimiters, press next.
5. In step three, double check that “Column data format” is set to “general” and press “Finish”.
6. Highlight all the data in the column that represents small particle count (this should be the 3rd column). Copy that data.
7. Open the Excel spreadsheet, provided to you by your teacher and paste your data into the column labeled “Dylos PM2.5 Particle Count #”.
8. Next, input the humidity (this information can be found easily on the internet through your local weather station).
9. Next enter the “Correction” using the Humidity Correction table. Use “Dry Correction” if it *was not* precipitating the day you sampled, use “Rain Correction” if it *was* precipitating.
10. A graph of your data should automatically be generated.

Troubleshooting

- If the DylosLogger software cannot find the Dylos, try selecting a different COM Port.
- If particle counts seem excessively high in a particular location, but in a nearby location in the same room the counts are much less, there could be an interference problem. Certain kinds of fluorescent lighting can cause high counts if located within 1-2 feet of the Dylos DC1700. If you are noticing this, move the DC1700 several feet away from any device you suspect might be causing interference.