

Excel Add-in for miniDiSC

Instruction Manual Rev 1.00, December 3, 2009



Overview

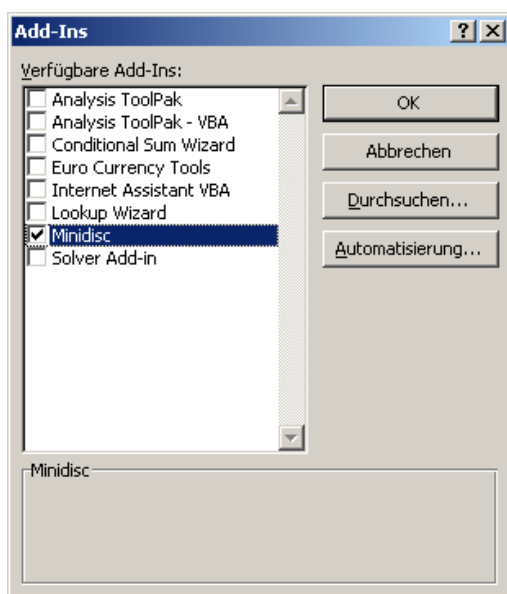
The miniDiSC for Microsoft Excel add-in helps you to analyze miniDiSC data files. The add-in installs a toolbar in Microsoft Excel, from which you can import, analyze and graph a miniDiSC measurement with a single mouse click.

During measurements, the miniDiSC turns off its internal pump for one minute every hour, to measure zero offsets of the electrometers. The Excel add-in recognizes these zero offset measurements, and interpolates zero offsets for the entire measurement period. It also corrects for the time delay between the two stages of the miniDiSC. Overall, using the Excel add-in to import data is easier for the user than importing and plotting data manually, and additionally, the data analysis is more accurate.

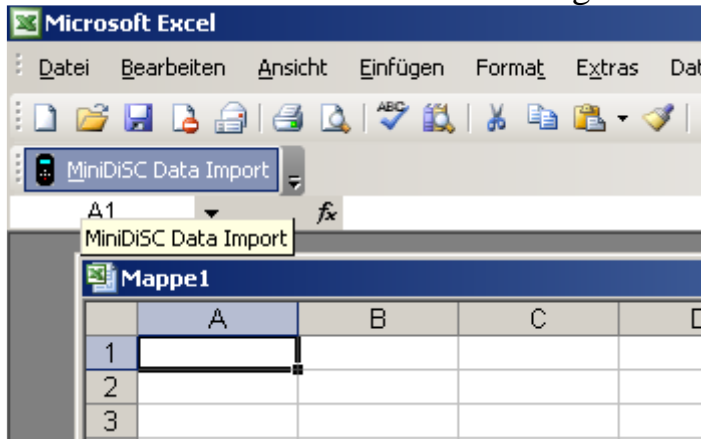
Installation

To install the add-in, proceed as follows:

- 1) Locate the add-in on the miniDiSC software CD in the Excel folder - it is called `minidisc.xla`. Right-click on the file and select "copy" from the context menu
- 2) Navigate to the Microsoft add-in folder, located at `C:\Documents and Settings\\Application Data\Microsoft\AddIns` <username> is your windows login name. If you are using a non-English version of Microsoft Windows, the name of the add-in folder may be different.
- 3) Right-click and select "paste" from the context menu.
- 4) Open Microsoft Excel
- 5) In the menu "Tools" choose "Add-ins.."
- 6) In the dialog, select the miniDiSC add-in



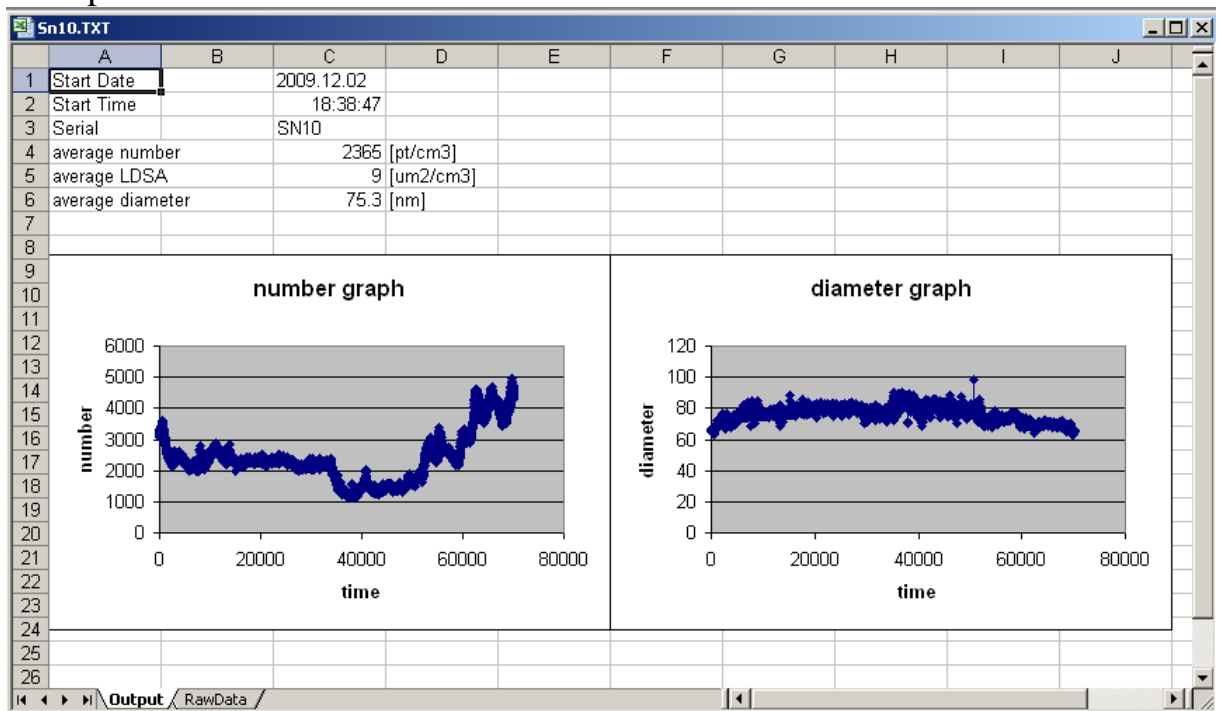
7) A toolbar for the miniDiSC with a single button should now appear



8) Click the miniDiSC Data Import Button. A dialog opens asking you to select the data file to open

9) The analysis of the data will take some time, depending on the file size. While the add-in is working, it writes its operations in the status bar so that you can see that it is making progress

10) When the add-in is finished, it produces two data sheets in a workbook, one with raw data (electrometer signals etc), the other with a summary of the measurement and two graphs for particle number and diameter. An example is shown below.



Attention! When you leave Excel, it will ask you whether you want to save the file. If you do, you will overwrite your original data file! Use the save as menu to give your Excel file a different name!

Limitations

Excel is limited to 65536 rows of data (Excel 2003 and earlier), or a bit more than one million rows of data (Excel 2007). Data files written by the miniDiSC contain one row per second, or per ten seconds, depending on the averaging time used. Therefore, miniDiSC data files can quickly exceed the limits of Excel - for example, a 24-hour data file with 1-second acquisition contains 86400 data rows, which is too much for older versions of Excel. If you have to use Excel, and if you want to acquire data over longer periods of time, you have to either use 10-second averaging on the miniDiSC, Excel 2007, or both.

Alternatively, you can use the LabView miniDiSC offline software which includes more options than the Excel add-in, such as averaging the original data file over an arbitrary number of data points to greatly reduce data amounts. See the separate manual for the LabView offline software for more information.

Uninstallation

To uninstall the miniDiSC add-in, remove the add-in in the menu "Tools -> add-ins", and remove the miniDiSC toolbar by right-clicking on the toolbar area and deselecting miniDiSC from the context menu.