How to Collect and Upload Cary Eclipse Spectral Correction Factors

Requirements:

- Triangular cuvette containing Rhodamine B solution
- Text file containing standard emission correction factors "Emcorr_220 to 600_standard.csv".
- Copy the files "ADLEclipseSelector.zzz" and "CorrectedSpectra.zzz" to the desktop of the PC attached to the Eclipse.
- For both files, change the file extension from ZZZ to EXE.
- Double click on the file "ADLEclipseSelector.exe" first to install it. A shortcut icon will appear on the desktop called "Eclipse ADL Program Selector". This is the shortcut used to start the Corrected Spectra ADL program.
- Double click on the file "CorrectedSpectra.exe" to install it. A shortcut icon will appear called "ADL Program Selector". Delete this shortcut – it is not required.

Method:

Collection and Uploading of Spectral Correction Factors:

1. Ensure that Firmware version 1.11 has been installed (available on Patches CD version 10.0.4 or later).

To check version of Firmware:

a) Turn on the instrument
b) Open any application
c) Under the Help tool bar menu select About
d) Note the firmware version should read 1.11
e) Click OK
f) Exit the application

2. Open Windows Explorer and browse to C:\Varian\Cary Eclipse WinFLR\Correction Curves subdirectory. Create a new folder called "Old Correction Curves" within the Correction Curves subdirectory.

3. Rename the existing files as listed below:

   Excorr.csv to Excorr_*number*.csv (e.g. Excorr_1.csv)
   Emcorr_220 to 600.csv to Emcorr_220 to 600_*number*.csv
   (e.g. Emcorr_220 to 600_1.csv)

   Move both renamed files into the "Old Correction Curves" folder.

4. Copy the Emcorr_220 to 600_standard.csv file into the Correction curves subdirectory.

At this point the C:\Varian\Cary Eclipse WinFLR\Correction Curves will only contain the "Old Correction Curves" folder and the Emcorr_220 to 600_standard.csv file.

5. Double click on the Eclipse ADL Program Selector (desktop).

6. When the Eclipse ADL Program Selector opens, double Click on the "Corrected Spectra_220 to 600nm" ADL. At this point a dialog box may appear saying *"This application has been launched via automation, and one or more client(s) currently have reference to this application. This application should be closed from a client, and manually closing this application will likely cause you clients application to fail. Are you sure you want to close this application?"*
   Click Yes.

7. If required, press Connect on the Scan application user interface otherwise proceed to step 8.

8. Under the Commands tool bar menu select Correction Curve and then "Excitation (220 to 600 nm)".

9. A "Select Filter" dialog box appears telling user to select position of excitation filter. Default should be set to AUTO.
   Click OK.

10. A "Excitation correction curve" dialog box appears prompting the user to place a highly absorbing Rhodamine B (RhB) solution in the sample compartment. Insert the RhB solution into the sample compartment so that the excitation beam hits the angled face of the triangular cuvette and the excitation is scattered away from the emission window.
    Click OK.

11. When collection is complete, a dialog box appears saying sequence was completed.
    Click OK.

12. Exit from the "Corrected Spectra_220 to 600nm" ADL by closing from the Scan application.

13. Open the C:\Varian\Cary Eclipse WinFLR\Correction Curves subdirectory and copy and rename:

    Emcorr_220 to 600_standard.csv to Emcorr_220 to 600.csv

14. Double click on the Cary Eclipse icon on the desktop, and open the Scan application. Select Setup > Options and check the "Corrected spectra" checkbox in the bottom left hand corner of the Options tab.

Click OK to exit Setup.

15. The “Warning File Mismatch between Instrument and PC” dialog box will appear.

    Check “Copy from PC to instrument (EEPROM)” in the Emission corrected spectrum (220…..600 nm) field.
    Click OK.

16. When the dialog box disappears exit Scan application.

Checking Correct Files Have Been Uploaded:

17. In the C:\Varian\Cary Eclipse WinFLR\Correction Curves subdirectory rename:

    Excorr.csv to Excorr_uploaded.csv
    Emcorr_220 to 600.csv to Emcorr_220 to 600_uploaded.csv

18. Open the Scan application to download files from the instrument EEPROM.

    A message stating “Reading EEPROM- performing correction curve check” should appear in the status line.

19. Exit Scan application

20. Examine the C:\Varian\Cary Eclipse WinFLR\Correction Curves subdirectory. The files Excorr.csv (10 kB) and Emcorr_220 to 600.csv (8 kB) should be present.

    If either of these two *.csv files are not downloaded delete any files entitled Excorr.csv and Emcorr_220 to 600.csv and repeat steps 18-19.