How To Load Standard EEMs

This procedure explains how to format EEMs produced from any fluorometer in order to be loaded with EEMlab.

Introduction

Nowadays, there exist a lot of different kind of fluorometers. Each one of them generates EEMs with different formats. Consequently the EEMlab GUI can not deal with so many formats and then, specific plugins have to be developed for each one of the datasets. With the proposed standard loading procedure we solve the problem stated above.

Standard Loading Procedure

The standard EEMs loading procedure skips the processing stage from the developer to the user. The advantage is that any EEM produced from any kind of device can be loaded into the EEMlab GUI. And the user's processing stage is very easy to understand and develop. The user's processing consists of giving an specific CSV standard format to the EEMs BEFORE their load in EEMlab.

Note that a CSV (Comma Separated Values) file is a text file in which the values are separated by commas. Although being a text file, the extension of a CSV file is .CSV.

Standard EEM Format

The standard EEM is CSV formatted and presents the following parts:

1. The excitation wavelengths. Comma separated and located in the first line of the file. All the EEM values located under a concrete excitation wavelength are produced with this wavelength. So, an excitation wavelength is related to a columna of EEM values. IMPORTANT: the excitation wavelengths always starts with a comma just to skip one value the entire line to avoid matching the first excitation wavelength with the emision columna (first column)
2. The emision wavelengths. Comma separated and located in the first collumn of the file. All the EEM values located in the same row of the emission wavelength are produced with this wavelength. So, an emission wavelength is related to a row (line in the CSV file) of EEM values
3. The EEM values. Each one of the values shoud match with the row corresponding to its emision wavelength amb with the column corresponding to its excitation wavelength

excitation wavelengths
emission wavelengths
EE values

Loading EEM files into the EEMlab GUI

Once all the EEM files have been formatted into the standard we use the EEMlab GUI as usual (see the EEMlab tutorial, publicly available in the the EEMlab download centre). Just to point the new STANDARD value that is shown in the drop-down when the EEMs checkbox is selected. WQhen selecting the STANDARD procedure the EEMlab GUI loads the EEM files in the standard CSV format explained above.