Simple spectrophotometer

A comprehensive guide on how to use the spectrophotometer

The spectrophotometer doesn't require any computer to display data. It is fully autonomous and connected to a battery, a LED indicates the battery level and turns green when fully charged.
The device can be connected to a computer through an USB port. You can both display the data on device and on a computer.
Three LEDs are used for the absorption (RGB), as well as 2 perpendicular blue LEDs used for fluorescence.

Here are the options of the spectrophotometer :

1) Acquire : This option allows you to measure the absorbance of a sample compared to a reference blank. A blank measure is initially done, and after a delay, put the sample into the hole. The screen will display the relative absorbance (compared to the blank) of the solution.

2) Kinetics : The 1st option is the best tool to measure the absorbance of a sample, but if you want to study a change in the colour of a solution over time, this option allows you to proceed multiples measures with a defined time laps between each.

3) Results : Displays the results of the kinetics experiment. The format goes like this

#Measure	Time(s)	Absorbance

4) Settings : Allows you to define the parameters of the experiment.
   Before delay : delay before the blank measure
   First delay : delay between blank and sample measures
   Inter exp. delay : delay between kinematics measures (note that the measure duration is around 10s, so if you pick 10s in this option, the actual time laps will be around 20s).
   Number exp : the number of measures you want to do for the kinetics
   Result colour : the screen can only display the kinetics results for one colour, chose between 1,2 and 3 as R,G and B.

5) Status : displays the latest data recorded from the "Acquire" menu.
6) Utilities : different options such as LED test, switch on/off the backlight, reset the data…