

Colored dissolved organic matter (CDOM)

On the field

- Collect your sample using a Niskin or a container of at least 2 liters.
- Filter the sample through a syringe into a 40mL amber vial. Use a 0.22 μm PES filter.

Filtration:

1. Remove the plunger from the 50/60mL syringe.
 2. Rinse the syringe with sample water or ultrapure water.
 3. Screw the 0.22 μm PES filter to the syringe. **Handle the filter by the edges.**
 4. Fill the syringe with 60mL of your sample (or use the GF/F filtrate if this has been done before), and place the plunger.
 5. Bleed the air from the syringe: hold the syringe vertically with the filter facing upwards. Unscrew in the filter and push the plunger to evacuate the air, then aim the filter again.
 6. Rinse the filter, discarding the first 10-20mL to avoid contamination.
 7. Collect the water in a 40mL amber bottle up to the neck.
 8. Close the bottle and store in a cool place.
- Store your samples in the fridge/cold room and analyze within 2 weeks.

In the laboratory

Safety/protective equipment

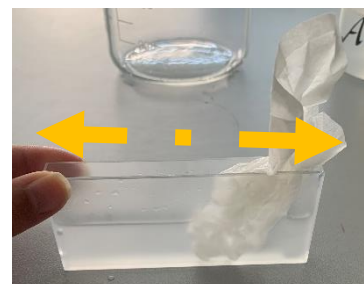


Materials/Reagents

- Ultrapure water
- PerkinElmer UV/VIS Lambda 365
- QS 10cm cuvette
- Ethanol 70%
- Kimtech

Analyses

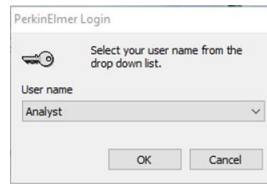
- 1) Take the samples out of the fridge, and let them return to room temperature.
- 2) Switch on the Perkin UV-VIS (switch at the back of the machine), let the lamp warm up for 30 min.
- 3) Switch on the computer: ID: Administrator PW: administrator
- 4) Carefully clean the cuvettes:
 - a) Rinse the cuvette with ultrapure water.
 - b) Fill the cuvette with 70% ethanol.
 - c) Using Kimtech paper, clean the inside of the cuvette and the edges (do not do this dry)
 - d) Rinse the cuvette again with water and allow it to dry.



- 5) Open the program : *PerkinElmer UV WinLab*

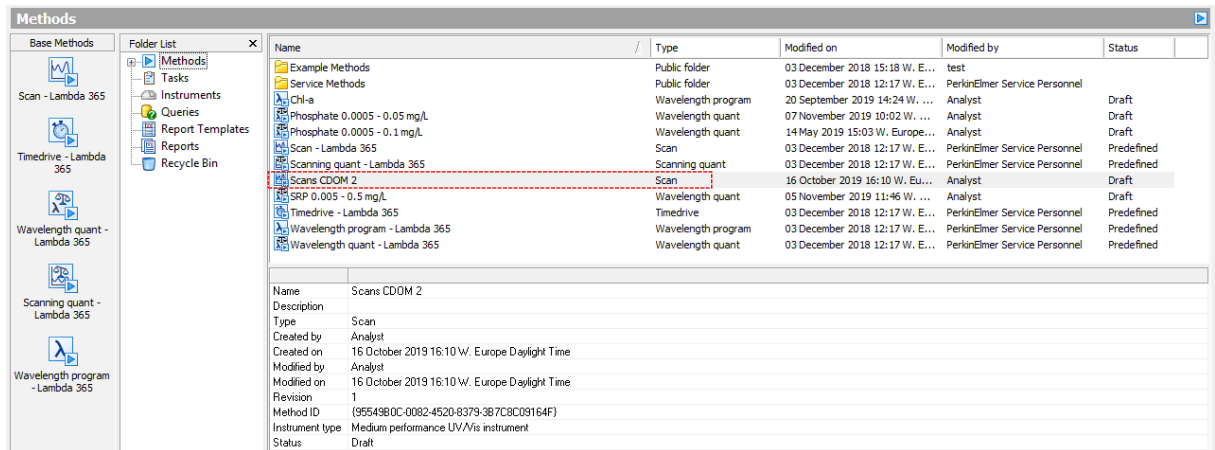


6) Click « OK » when the PekinElmer Login opens

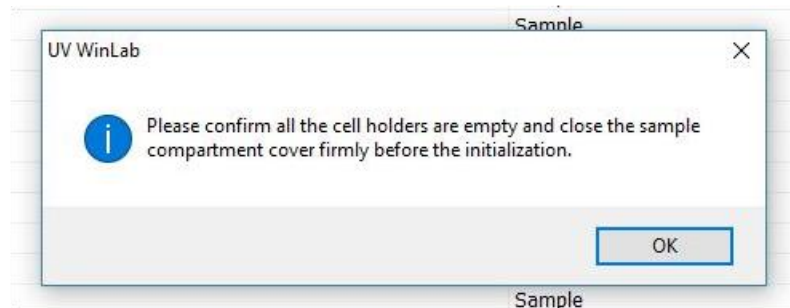


7) Make sure that there are no cuvettes in the instrument.

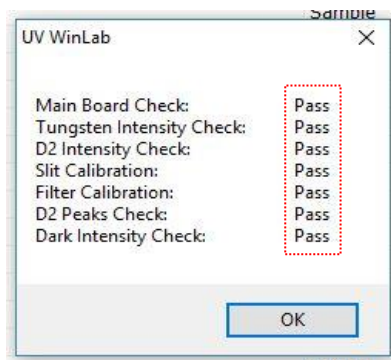
8) Double-click on the method: « Scans CDOM 2 »



9) The instrument starts by making a check, then a dialog box opens automatically. To start the initialization, click on « OK ».



10) When initialization is completed, a report is displayed. All test should display « PASS ». Click « OK ». Otherwise close the program, let the lamp heat up for 30 min and start again at §4.



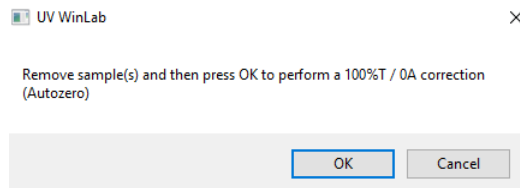
11) Fill the 2 cuvettes to 2/3 with ultra-pure water.



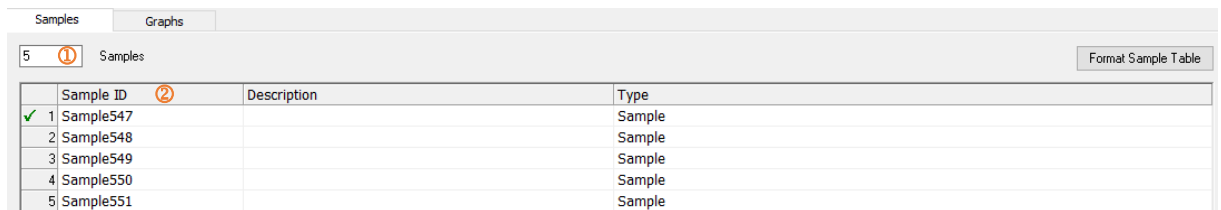
12) Place a cuvette in each position.

13) Click on « Autozero »

14) The dialog box opens, click « OK » to begin.



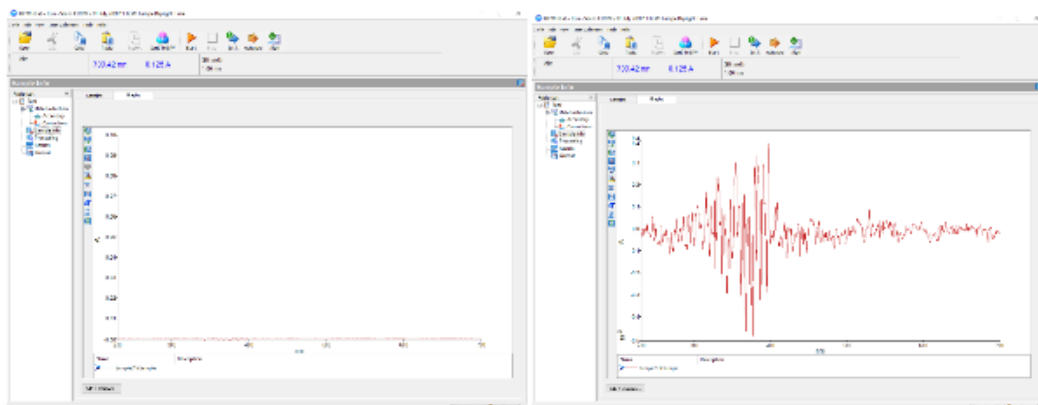
15) Indicate the number of sample (①) to analyze, taking into account the blanks in the Sample info. Enter the name of each sample (②) in the table starting with a blank. (!! the samples will be analyzed according to the order in the list !!)



16) Click on « START » and start the analysis with a blank (cuvette filled with ultrapure water). Then click on « OK » when the dialog box opens.

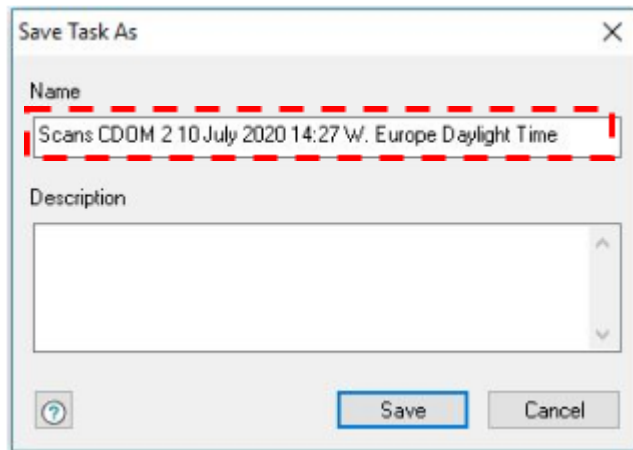


You must obtain the following spectrum :



17) Once the blank has been analyzed, remove the analysis cuvette located at the front of the instrument. Empty the cuvette and rinse with ultrapure water. Fill it with your sample, then put it back in place. Click on « OK » to analyze the next sample. Rinse the cuvette with ultrapure water at each sample change.

18) At the end of the analysis, save all the results in a folder: File > Save > New task. In the box, write the name of the project and the date of analysis.



19) The results will be saved under Documents>Data>CDOM_scans.

20) Once the analyzes are complete, close the program, turn off the instrument and the computer.

Processing the results.

- 1) Open the scans with « Note ».
- 2) Save the values of each scan in the same Excel file.