

### 1 Calibration Check

The CyanoFluor is factory calibrated. Users can check calibration stability using the Cal Check Standard P/N 8700-951.

**NOTE: CyanoFluor should be on a flat surface when calibrating or reading standards and samples.**

1. Carefully remove the Cal Check Standard from its packaging and inspect the standard. If the glass surfaces are not clean, use a Kim Wipe to wipe the sides of the cuvette before inserting it into the sample compartment; wipe away any moisture and/or fingerprints.
2. Insert the standard into the CyanoFluor's sample compartment and leave the CyanoFluor lid open.
3. Press the ON/OFF button to turn the instrument on and wait for the 5-second countdown.
4. Press the CHK STD button; results will be displayed as "Passed" or "Failed".
5. If results displayed "Passed", the instrument's calibration has not changed, remove the Cal Check Standard and return it to its original packaging to avoid damaging or breaking the cuvette.
6. If results displayed "Failed", please contact [Technical Support](#) at Turner Designs.
7. Remove the Cal Check Standard from the sample compartment and return it to its original packaging to avoid damaging or breaking the cuvette.

### 2 Filtrate Blank

The Filtrate Blank (FTR Blank) is used to correct for interference from Dissolved Organic Materials (DOM) in systems that have a high DOM concentration. It is recommended that users have FTR Blank activated at all times to correct for background fluorescence, even in low DOM environments. To activate the FTR Blank correction:

1. Press the ON/OFF button to turn the instrument ON and wait for the 5 second countdown.
2. Press the FTR Blank button, then select <ON> using the left arrow key.
3. Press ENTER and you'll return to the HOME screen.
4. With the FTR Blank ON, you will be prompted to run a filtrate after every measurement to correct for interference from DOM.

To deactivate the FTR Blank simply run through steps 1 – 3, but select <OFF> and press ENTER. When FTR Blank is OFF, you will not be prompted to run a filtrate blank after each measurement and the PC and CHL Filtrate Blank will be logged as "NA".

### 3 Filtering Samples for DOM Correction

**Note: See Sampling Procedure section 2.5 before proceeding with Filtering Samples for DOM Correction**

If FTR Blank is ON, follow the procedure below to correct for background fluorescence from interference materials such as DOM.

1. Discard the sample in the cuvette.
2. Locate the filter capsules.
3. Attach one of the capsule filters to the end of the 60cc syringe with the sample.
4. Rinse the glass cuvette at least three times with the filtrate.
5. Fill the rinsed cuvette  $\frac{3}{4}$  full with filtrate.
6. Use a Kim Wipe to wipe the sides of the cuvette to wipe away any moisture and/or fingerprints.
7. Making sure not to spill any filtrate, insert the cuvette into the sample compartment.
8. Press READ; the screen will display Measuring Please Wait.

**NOTE: See Sample Analysis Procedure section 2.5 step 9 for result displays.**

### 4 Sampling Procedure

To make a measurement:

1. Take up a minimum of 40ccs of sample using a 60cc syringe.
2. Rinse the glass cuvettes at least three times with the sample in the syringe.
3. Fill the rinsed cuvette ¾ full with sample from the syringe.
4. Use a Kim Wipe to wipe the sides of the cuvette to wipe away any moisture and/or fingerprints.
5. Press the ON/OFF button to turn the instrument on and wait for the 5 second countdown.
6. Press the READ button; you will be prompted to insert your sample and press read again.
7. Making sure not to spill any sample, insert the cuvette into the sample compartment.
8. Press READ; the screen will display Measuring Please Wait.

**NOTE: If FTR BLANK is ON, you will be prompted to insert a filtrate blank.  
See section 2.6 “Filtering Samples for DOM Correction”, step 1.**

9. Results will be displayed as:

Time (24 hour clock; HH:MM)	PC:CHL	1.5211	← PC to Chl Ratio
	20:39	#0001	← Sample Number (0000 – 1000)

10. Press the down arrow key to display Raw Fluorescence Values (RFU) for both PC & CHL channels:

PC(RFU)	125.00	← PC Channel Raw Sample RFU
CHL(RFU)	82.18	← CHL Channel Raw Sample RFU

11. Press the down arrow key again to display FTR Blank values for both PC & CHL channels if FTR Blank was ON and a filtrate blank was measured.

PBLK FILT:	25.00	← PC Channel Filtrate Blank RFU
CBLK FILT:	12.00	← CHL Channel Filtrate Blank RFU

### 5 Data Download

To download data from the CyanoFluor:

1. Install the Download Utilities Software on the USB thumb drive.
2. Plug the download data cable's stereo jack in the CyanoFluor data port.
3. Plug the download data cable's USB plug into your computer.
4. Wait for the download data cable's driver to automatically install.
5. Begin the Download Utilities Software.
6. Manually enter the COM port assigned to the download data cable. The COM port setting can be viewed and/or changed in the computer's Device Manager window.
7. Click the Browse button and select or create a folder in a desired directory and enter a filename.
8. Click Save and click the start button on the software's screen.
9. Press the ON/OFF button to turn the instrument on and wait for the 5 second countdown.
10. Press the CyanoFluor keypad's DATA button; use the ↑↓ arrow keys to select SEND/CLEAR DATA.
11. Press ENTER and use the ↑↓ arrow keys to select SEND DATA.
12. Press ENTER and wait for data to be sent.
13. The Download Utilities Software will indicate when download has completed, then click Stop.

It is recommended that you confirm data are saved to your computer by navigating to the saved file and opening the file to view data before clearing data from the CyanoFluor.