



Aqua TROLL 500/600 BGA-PC Sensor Overview

The In-Situ blue-green algae/phycoerythrin sensor measures BGA-PC levels in natural water, surface water, groundwater, produced water and aquaculture applications.

Getting Started

1 Install sensor.



Rinse sensor with clean water before use.



Remove restrictor from the instrument.



Remove sensor port plug if installed. Do not twist.



Lubricate o-ring at bottom of sensor.



Install sensor. Do not twist.



Place restrictor in calibration mode.

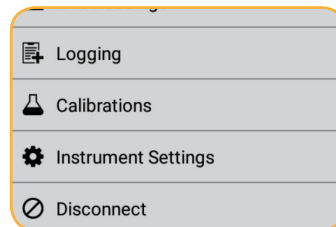
2 Calibrate and deploy.



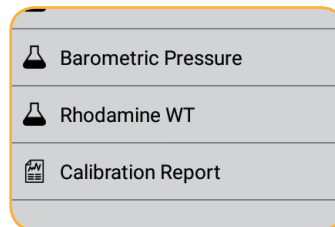
For detailed calibration instructions, see the instruction manual or quick start guide for your In-Situ instrument.



Connect to the instrument with VuSitu or Win-Situ software.



Select Calibrations from the menu.



Choose the BGA-PC option and follow the instructions.



Flip the restrictor into deployment mode after calibration

Calibrating the Sensor

Calibrate the BGA-PC sensor using one of three methods:

- 1. Deionized Water:** Reset the zero point by performing a calibration in deionized water.
- 2. Rhodamine Standard:** Calibrate with a Rhodamine WT standard to adjust readings of higher concentrations based on known equivalence. Follow the instructions below to prepare a Rhodamine WT standard.
- 3. Custom Standard or Reference:** Use a reference or a custom calibration standard.

Preparing Rhodamine WT Calibration Standard



1. Start with a 2.5% Rhodamine WT solution. Pipette 1.0 mg/L of the solution into a 250 mL Class A volumetric flask.



2. Bring the flask to volume with deionized water. The resulting solution is 100 mg/L Rhodamine WT.



3. To obtain a 200 µg/L concentration, pipette 2.0 mL of the 100 mg/L solution into a 1000 mL flask.



4. Bring the flask to volume with deionized water.



Use an opaque container to store the 100 mg/L solution in a cool, dark place for up to six months.



Prepare the 200 µg/L solution immediately before use and discard after calibration. If desired, use the procedure described above to make a different concentration of Rhodamine WT, such as 400 µg/L. Alter the volume in Step 3 according to the table below to achieve the target concentration.



Use caution when deploying in direct sunlight or environments with highly-reflective surfaces. Ambient light can interfere with sensor readings.

Concentration Guide & Expected Calibration Values (for reference only)

Target Concentration	100 mg/L Rhodamine WT	Expected Calibration Value at 25° C	Expected RFU Value at 25° C
0 µg/L (deionized water)	none	0	0
100 µg/L	1.0 mL	80 µg/L (ppb)	8
200 µg/L	2.0 mL	159 µg/L (ppb)	16
400 µg/L	4.0 mL	309 µg/L (ppb)	31