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ECO CDOM Fluorometer Characterization Sheet

Date: 8/24/2016

S/N: FLBBCDSL-4474

CDOM concentration expressed in ppb can be derived using the equation:

$$\text{CDOM (ppb)} = \text{Scale Factor} * (\text{Output} - \text{Dark Counts})$$

Dark Counts
Scale Factor (SF)
Maximum Output
Resolution

Digital
47 counts
0.0905 ppb/count
4130 counts
1.0 counts

Ambient temperature during characterization

21.6 °C

Dark Counts: Signal output of the meter in clean water with black tape over detector.

SF: Determined using the following equation: $SF = x + (\text{output} - \text{dark counts})$, where x is the concentration of the solution used during instrument characterization. SF is used to derive instrument output concentration from the raw signal output of the fluorometer.

Maximum Output: Maximum signal output the fluorometer is capable of.

Resolution: Standard deviation of 1 minute of collected data.



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Scattering Meter Calibration Sheet

8/24/2016

Wavelength: 700

S/N FLBBCDSL-4474

Use the following equation to obtain either digital or analog "scaled" output values:

$$\beta(\theta_c) \text{ m}^{-1} \text{ sr}^{-1} = \text{Scale Factor} \times (\text{Output} - \text{Dark Counts})$$

• Scale Factor for 700 nm	=	1.611E-06 (m ⁻¹ sr ⁻¹)/counts
• Output	=	meter output counts
• Dark Counts	=	46 counts
Instrument Resolution	=	1.2 counts

Definitions:

- **Scale Factor:** Calibration scale factor, $\beta(\theta_c)/\text{counts}$. Refer to User's Guide for derivation.
 - **Output:** Measured signal output of the scattering meter.
 - **Dark Counts:** Signal obtained by covering detector with black tape and submersing sensor in water.
- Instrument Resolution: Standard deviation of 1 minute of collected data.

- **Scale Factor:** Calibration scale factor, $\beta(\theta_c)$ /counts. Refer to User's Guide for derivation.
- **Output:** Measured signal output of the scattering meter.
- **Dark Counts:** Signal obtained by covering detector with black tape and submersing sensor in water.
- **Instrument Resolution:** Standard deviation of 1 minute of collected data.

Definitions:

Instrument Resolution	=	1.2 counts
Dark Counts	=	46 counts
Output	=	meter output counts
Scale Factor for 700 nm	=	$1.611E-06 \text{ (m}^{-1}\text{sr}^{-1})/\text{counts}$

$\beta(\theta_c) \text{ m}^{-1} \text{sr}^{-1} = \text{Scale Factor X (Output - Dark Counts)}$

Use the following equation to obtain either digital or analog "scaled" output values:

Scattering Meter Calibration Sheet

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Wavelength: 700

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