

ECO CDOM Fluorometer Characterization Sheet

Date: 2/25/2020

S/N: FLCDS-677

CDOM (Quinine Dihydrate Equivalent) concentration expressed in ppb can be derived using the equation:

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

| | Analog Range 1 | Analog Range 2 | Analog Range 4 (default) | Digital |
|-------------------|-------------------|-------------------|--------------------------------|------------------|
| Dark Counts | 0.122 | 0.062 | 0.033 V | 95 counts |
| Scale Factor (SF) | 28 | 56 | 111 ppb/V | 0.0339 ppb/count |
| Maximum Output | 4.98 | 4.98 | 4.98 V | 16338 counts |
| Resolution | 2.2 | 2.2 | 2.2 mV | 2.8 counts |

Ambient temperature during characterization 21.0 °C

Analog Range: 1 (most sensitive, 0–4,000 counts), 2 (midrange, 0–8,000 counts), 4 (entire range, 0–16,000 counts).

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

SF: Determined using the following equation: $SF = x \div (\text{output} - \text{dark counts})$, 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.