

ECO CDOM Fluorometer Characterization Sheet

Date: 1/20/2023

S/N: FLCDRT-7845

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	0.078	0.044	0.027 V	52 counts
Scale Factor (SF)	25	51	101 ppb/V	0.0306 ppb/count
Maximum Output	4.99	4.99	4.99 V	16380 counts
Resolution	2.6	2.6	2.6 mV	2.0 counts

Ambient temperature during characterization 20.8 °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.