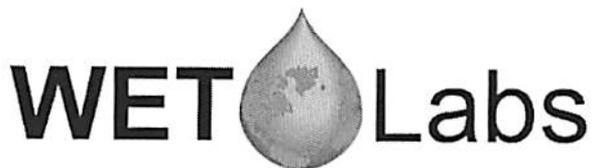


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Date: 11/15/2010 Customer: Sea-Bird

S/N# FLNTURT-1359 Technician: dcm

Repairs and Modifications: Completed standard service. Factory tested and characterized the instrument.

Comments: New char sheet and device file included.

FLNTU Characterization Sheet

Date: November 15, 2010

S/N: FLNTURT-1359

Chlorophyll Scale Factor

Chlorophyll concentration expressed in µg/l can be derived using the equation:

$$\text{CHL } (\mu\text{g/l}) = \text{Scale Factor} \times (\text{Output} - \text{Dark Counts})$$

	Analog		Digital	
Dark Counts	0.063	V	48	counts
Scale Factor (SF)	24	µg/l/V	0.0295	µg/l/count
Maximum Output	4.92	V	4133	counts
Resolution	0.4	mV	1.0	counts
Ambient temperature during calibration	21.5	°C		

Nephelometric Turbidity Unit (NTU) Scale Factor

Turbidity units expressed in NTU can be derived using the equation:

$$\text{NTU} = \text{Scale Factor} \times (\text{Output} - \text{Dark Counts})$$

	Analog		Digital	
Dark Counts	0.080	V	50	counts
NTU Solution Value	1.75	V	1422	counts
Scale Factor (SF)	193	NTU/V	0.2340	NTU/count
Maximum Output	4.92	V	4133	counts
Resolution	0.3	mV	1.0	counts
Ambient temperature during calibration	21.5	°C		

See reverse side for definition of terms.

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

NTU Solution Value: Signal output of the turbidity sensor when measuring a sample of interest.

SF (CHL): 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.

SF (NTU): Scale factor is determined using the following equation: $SF = xx + (\text{Output} - \text{Dark counts})$, where xx is the value of a Formazin concentration. For example: $12.2 + (2011 - 50) = 0.0062$.

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

Resolution: standard deviation of 1 minute of collected data.