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FLNTU Characterization Sheet

Date: March 4, 2021 S/N: FLNTUSB-4397

Chlorophyll Scale Factor

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

CHL (µg/l) = Scale Factor x (Output - Dark Counts)

	Analog		Digital	
Dark Counts	0.061	V	50	counts
Scale Factor (SF)	48	µg/l/V	0.0591	µg/l/count
Maximum Output	4.97	V	4130	counts
Resolution	0.6	mV	1.0	counts
Ambient temperature during calibration	22.3	°C		

Nephelometric Turbidity Unit (NTU) Scale Factor

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

NTU = Scale Factor x (Output - Dark Counts)

	Analog		Digital	
Dark Counts	0.082	V	50	counts
NTU Solution Value	1.46	V	1174	counts
Scale Factor (SF)	213	NTU/V	0.2607	NTU/count
Maximum Output	4.97	V	4130	counts
Resolution	0.5	mV	1.0	counts
Ambient temperature during calibration	22.3	°C		

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 ÷ (output - 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 ÷ (Output - 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.