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FLNTU Characterization Sheet

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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	0.088	V	57	counts
Scale Factor (SF)	10	µg/l/V	0.0118	µg/l/count
Maximum Output	5.00	V	4118	counts
Resolution	1.5	mV	1.6	counts
Ambient temperature during calibration	22.0	°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	0.053	V	51	counts
NTU Solution Value	3.74	V	3076	counts
Scale Factor (SF)	5	NTU/V	0.0062	NTU/count
Maximum Output	4.98	V	4118	counts
Resolution	1.0	mV	1.1	counts
Ambient temperature during calibration	22.0	°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.