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FLNTU Characterization Sheet

Date: June 29, 2005 Customer: Pacific Marine Environmental Lab

Job #: 506008 S/N#: FLNTUS-350

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	0.064	V	56	counts
CHL Equivalent Concentration (CEC)	2.5	V	2094	counts
Scale Factor (SF)	10	µg/l/V	0.0123	µg/l/count
Maximum Output	4.98	V	4119	counts
Resolution	0.7	mV	0.9	counts

Ambient temperature during calibration 21.5 ℃

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	0.071	V	54	counts
NTU Solution Value	2.78	V	2304	counts
Scale Factor (SF)	5	NTU/V	0.0059	NTU/count
Maximum Output	4.98	V	4121	counts
Resolution	0.7	mV	0.9	counts

Ambient temperature during calibration 21.5 ℃

See reverse side for definition of terms.

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

CEC: Signal output of the fluorometer when using a fluorescent proxy that has been determined to be approximately equivalent to 25 µg/l of a *Thalassiosira weissflogii* phytoplankton culture.

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

SF (CHL): Chlorophyll concentration from the signal output of the fluorometer. The scale factor is determined using the following equation: SF = 25 ÷ (CEC - dark counts). For example: 25 ÷ (2865 - 43.5) = 0.00886.

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.