PO Box 518
620 Applegate St.
Philomath, OR 97370

WET Labs

WETStar Calibration and Repairs

Date December 12, 2013 **Customer** University of Alaska

S/N# WS3S-1098P **Repair Order** 21520

Standard Service

- Performed noise test: 1 sample/sec for 60 sec
- Performed stability test: 1 sample/min for 12 hrs
- Performed temperature test: 25–2 °C
- Performed saturation test
- Shake-tested unit
- Pressure-tested unit
- Updated unit's calibration sheet

Diagnosis

Red Filter was delaminated.

Repairs

Replaced the Red Filter and O-Rings.

Comments

WETStar was re-calibrated with 23.6ppb Uranine.

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Chlorophyll WETStar Characterizatio

Date: December 12, 2013

S/N: WS

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

CHL(µg/l) = Scale Factor x (Output - Clean Water Offs

	Analog output
Clean Water Offset (CWO)	0.052 V
Scale Factor (SF)	5.6 µg/l/V
Maximum Output	5.13 V
Resolution	0.28 mV
Ambient Characterization Temperature	22 ± 1°C
Current Draw	30 mA @ 12V (typical)
12-hour Stability	0.41 mV/hr
Temperature Stability, 25–2 °C	0.30 mV/°C

Range	
15 µg/l	0
28 µg/l	X
150 µg/l	0

Definitions:

CWO: Clean Water Offset value obtained using pure filtered de-ionized water.

SF: Scale Factor is used to convert the fluorescence response of the instrument into chlorophyll-a concentra determined at WET Labs during a cross calibration using a liquid fluorescent standard and a reference fluor chlorophyll fluorescence response has been characterized in a laboratory using a mono-species lab culture *weissflogii* phytoplankton.

Maximum Output: Maximum signal output of the fluorometer.

Resolution: Standard deviation of 1 minute of clean water data, sampled once per second.

Ambient Characterization Temperature: Room temperature at time of characterization.

Current Draw: The amount of current the instrument uses for operation.

12-hour Stability: Deviation of output averaged over 12 hours.

Temperature Stability: Measured output variation per degree.