

PO Box 518  
620 Applegate St.  
Philomath OR 97370



(541) 929-5650  
Fax (541) 929-5277  
<http://www.wetlabs.com>

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## WETStar Characterization

Date: 01/15/03 Customer: Sea-Bird Electronics  
Serial #: WS3S-652P  
Job #: 0005009 Work Order: 002

### Instrument Response

Pure H<sub>2</sub>O ( $V_{\text{blank}}$ ) = 0.053volts @ 21.1°C  
Scale Factor\* = 16.47µg/l per volt @ 21.1°C

**Full Scale Voltage:** 5.423V

**Current Draw:** 40.4 @ 10 V (typical)

**Short Term Noise:** .622mV

- Standard deviation of voltage output with air in the instrument's flow tube.
- Samples taken at a one-second interval over approximately 60 seconds.

**Long Term Stability:** .751 mV/hour

- Deviation of voltage output over a 12-hour period with air in the flow tube.
- One sample/minute for 12 hours. Ambient temperature is constant.

**Temperature Stability:** 74.0mV @ 29°C  
67.0mV @ 2°C

**Ambient temperature during characterization:** 23.1°C

\*The Scale Factor is used to convert the fluorescence response (analog volts) of the instrument into chlorophyll-*a* concentration. The Scale Factor is determined at WET Labs my means of a cross calibration using a solid fluorescent standard and a dedicated fluorometer whose chlorophyll fluorescence response has been characterized in a laboratory setting using a mono-specific lab culture of ### phytoplankton.