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WETStar Characterization

Date: 01/15/03 Customer: Sea-Bird Electronics

Serial #: WS3S-566P

Job #: 9907002 Work Order: 006

Instrument Response

Pure H₂O (V_{blank}) = 0.053volts @ 21.1°C

Scale Factor* = 16.46µg/l per volt @ 21.1°C

Full Scale Voltage: 5.478V

Current Draw: 42.2 @ 10 V (typical)

Short Term Noise: .544mV

- 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: .513 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: 59.0mV @ 29°C

55.0 mV @ 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 by 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.