Sea-Bird Coastal Cycle PO_4

In Situ Dissolved Phosphate Analyzer

The Sea-Bird Coastal Cycle P with technology by WET Labs is designed specifically for long-term moored operations in biologically rich water. The Cycle P methodology is based on US EPA standard methods and combines WET Lab's precision fluidics with state-of-the-art optics to provide unparalleled precision and accuracy in nutrient monitoring.

Ideally suited for unattended monitoring the Cycle P includes premixed onboard reagent cartridges and onboard calibration spike. The keyed and color coded cartridges make it easy to swap cartridges in and out during the field service. In addition the Cycle P ships with NIST traceable check standards. These onboard and check standards give users complete confidence in the quality of the data they are collecting.

The intuitive software provides all the necessary functions to set up the device, run the calibration check standard, and download the logged data. In addition, data can be plotted in real time or after it has been acquired and downloaded.

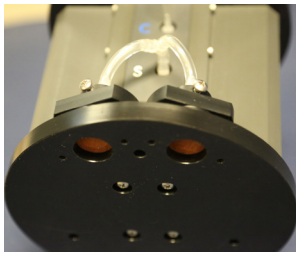
Cycle PO_4 – Robust and Reliable In Situ Nutrient Data

Applications

- For continuous or real-time measurement of dissolved phosphate in:
- Lakes and reservoirs
- Streams, rivers, channels, or canals
- Estuaries

Ideal for monitoring for:

- Point and non-point source nutrient inputs
- Environmental dynamics and change



Performance Features and Benefits

- Robust – Excellent anti-fouling capability provided by copper mesh screens and 10 µm stainless steel intake filters
- Accurate – Nanomolar resolution and scattering insensitive optical cell
- Cost Effective – Over 1000 samples including onboard spike calibration for QA/QC, typical deployment duration of three months, reducing field costs

Additional Features

- Each instrument is factory calibrated and ships with a NIST traceable check standard

View live Cyle P data on the LOBO monitoring platform at:
http://yaquina.loboviz.com

Specifications

Mechanical

Height (w/handle)	56 cm
Width	18 cm
Weight in air	6.8 kg (w/reagents)
Depth	200 m
Temperature[1]	1- 35°C

Optical

LED Wavelength	870 nm
Pathlength	5 cm
Linearity ≥	95% R2

Electrical

Input	10 – 18 VDC
Current Draw	2.0 A max; 125 mA avg
Data Output	RS-232 or SDI-12
Host Connector	MCBH-6-MP
SDI Connector	MCBH-8-MP
Sample rate	2 per hour
Data Memory	1 GB

Analytical

Detection limit, three standard deviations of 18 MOhm water
≤ 0.075 µM
≤ 0.0023 mg/L PO_4-P

Quantification limit, ten standard deviations of 18 MOhm water
≤ 0.25 µM
≤ 0.0077 mg/L PO_4-P

Standard deviation of standard solution of 2.6 µM
≤ 0.05 µM
≤ 0.0015 mg/L PO_4-P

Range, nominal[2]
0 – 10 µM
0 – 0.3 mg/L PO_4-P

[1] Both storage and operating temperature for sensor and reagent .
[2] Higher range is possible (0-40 µM, 0-1.2 mg/L PO_4-P, but is outside specifications.

SEA-BIRD COASTAL

Sea-Bird Coastal
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Technology by WET Labs