



Sea-Bird Scientific CDOM Notices

1 message

Wed, Jan 15, 2025 at 10:37 AM

Dear Profiler Customer,

Our records indicate that you have a Profiler (MMP, ITP or Prawler) with a Sea-Bird CDOM BBFL2 or FLBBCD sensor. We recently received Sea-Bird technical notices regarding two separate issues that could affect your CDOM fluorometer sensor(s).

We are passing this information along so that you can contact Sea-Bird if necessary.

Issues Summary

- Issue 1 affects CDOM fluorometer sensors purchased or serviced **prior to January 13, 2023** and possible incorrect CDOM values
- Issue 2 affects CDOM sensors shipped between **January 2021- July 2023** and a possible out-of-tolerance UV LED

Your Steps

- Review the attached notices from Sea-Bird
- Contact Sea-Bird directly for more details and your next steps


Best wishes,

Alison Sargent
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www.mclanelabs.com

2 attachments

 **Sea-Bird Scientific - UV LED CDOM Notice.pdf**
804K

 **Sea-Bird Scientific - CDOM Data Notice.pdf**
807K



SEA-BIRD
SCIENTIFIC

13431 NE 20th St.
Bellevue, Washington 98005

Date: December 11, 2024
To: Users of Sea-Bird Scientific CDOM fluorometer sensors shipped between January 2021- July 2023
From: Sea-Bird Scientific
Subject: Out-of-tolerance UV LED

Notice

This notice is to inform users of Sea-Bird Scientific (SBS) CDOM sensors that instruments purchased or serviced with new optical heads between January 2021 – July 2023 may contain an out-of-tolerance UV LED. The CDOM data is irretrievable from CDOM fluorometers built with out-of-tolerance UV LEDs.

Context

Upon investigation, SBS determined it received product lots of 370 nm UV LEDs that contained some LEDs with out-of-tolerance spectral and power characteristics. Since July 2023, SBS screens all LEDs as part of our incoming inspection process.

Path forward

- **CDOM sensors purchased or serviced with a calibration date after July 2023 contain screened UV LEDs that meet all required specifications.**
- Since July 2023, all CDOM fluorometers that have been returned for service and/or calibration have been screened for this issue and affected customers have been contacted.
- If you have a CDOM sensor purchased or serviced with a new optical head between January 2021 – July 2023, please contact the SBS Tech Support Team (techsupport@seabird.com) to schedule a UV LED check or send it in for service and we will screen it for this issue.
- Instruments with out-of-tolerance UV LED will show a reduced raw signal output response in the field. Unfortunately, this response can not be corrected in historical data; however, once the out-of-tolerance UV LEDs are replaced, the instrument will meet all specifications and requirements.

If you have any questions, please contact techsupport@seabird.com. Please include the model(s) and serial numbers(s) of your CDOM fluorometers in the email.

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All the best,

Sea-Bird Scientific

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BY
SCIENTISTS.

www.seabird.com



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13431 NE 20th St.
Bellevue, Washington 98005

Date: December 11, 2024
To: Users of Sea-Bird Scientific CDOM fluorometer sensors purchased or serviced prior to January 13, 2023
From: Sea-Bird Scientific
Subject: Incorrect CDOM values

Notice

This notification is to inform users of Sea-Bird Scientific (SBS) CDOM sensors that instruments purchased or serviced prior to January 13, 2023 have a systemic bias. We believe that historical data will be correctable; however, the absolute measurement and the change in CDOM over time versus the relative measurement that occurs over time may be erroneous.

Context

In a careful review of our CDOM metrology, SBS found two separate issues that require action:

- The primary standard used to establish CDOM fluorometers' scaling to standardization units of ppb QSDE (Quinine Sulfate Dihydrate Equivalent) had been improperly prepared. This error can be mathematically corrected.
- Additionally, it was discovered that the CDOM reference sensors used as transfer standards prior to January 13, 2023 also carry an additional bias and will require a separate correction factor.

Path forward

- **CDOM sensors purchased or serviced after January 13, 2023 provide accurate data and can be used for both absolute and relative measurements of CDOM.**
- We recommend that CDOM sensors with calibration dates prior to January 13, 2023 be returned for a free recalibration. Please indicate this is your intention in the notes section of our RMA form.
- To correct historical data:
 - For the incorrect CDOM standard, we have determined a Reference Adjustment Factor (RAF) of 5.62 to apply to data: $\text{CDOM adjusted} = 5.62 * \text{CDOM}$
 - SBS updated its primary CDOM standard as of January 13, 2023. All SBS CDOM fluorometers with a calibration date of January 13, 2023 or later have the correct scale factor.
 - For the additional reference sensor bias, we are working diligently to determine the appropriate correction factor based on serial number and calibration date and will provide the full correction table by the end of March 2025. If you have any instrument data that does not align after applying the RAF value of 5.62, please contact the SBS Tech Support team (techsupport@seabird.com).

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If you have any questions about your CDOM sensors or the validity of your historical data, please reach out to SBS Tech Support (techsupport@seabird.com). Please include the model(s) and serial numbers(s) of your CDOM fluorometers in the email.

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All the best,

Sea-Bird Scientific

www.seabird.com