



SEA-BIRD
SCIENTIFIC

13431 NE 20th St.
Bellevue, Washington 98005

Date: May 25, 2023
To: Users of Sea-Bird Scientific pH sensors shipped after June 2022
From: Sea-Bird Scientific
Subject: Notification about an elevated risk of early-life failure of pH sensors

Summary

This notification is to inform users of Sea-Bird Scientific (SBS) pH sensors shipped after June 2022 of an elevated risk of early-life failure. 17 of these SBS pH sensors have been deployed. Three of these 17 pH sensors have failed with symptoms pointing to a reference leak. The failures occurred after six to 14 cycles at 10-day intervals. As a partner to the ocean science community, SBS wants to be fully transparent as you are preparing for BGC float deployments. For more information on the nature of the issue and steps SBS is undertaking to resolve it, please see below.

Context

In 2021, Sea-Bird Scientific investigated pH sensors on profiling floats for high rate of failure due to leakage in the reference electrode. SBS worked closely with their customers, especially MBARI, and performed extensive pressure testing to identify the failure mechanism. A comprehensive review of the SBS pH reference design was conducted, improvements were implemented in the manufacturing process, and the new design was also validated at MBARI before clearing these sensors for use. The data from the deployed pH sensors available now suggests that the issue may not be fully resolved in some sensors.

Path Forward

SBS is moving forward replacing the current reference design in the pH sensor with MBARI's version of the corresponding subassembly. SBS will continue to update the BGC Argo community as more information becomes available.

If you have any questions, please contact support@seabird.com.

BUILT
FOR
TRUST.

BUILT
BY
SCIENTISTS.

www.seabird.com