

Standard Operating Procedure

Sample Receipt, Handling, and Storage V 1.0

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October 6, 2025

I. Purpose and Scope

This SOP describes the procedures for receiving, checking, logging, and storing headspace equilibration samples. It ensures consistent tracking, documentation, and quality control from receipt through 90-day post-analysis hold, while maintaining full traceability of each sample.

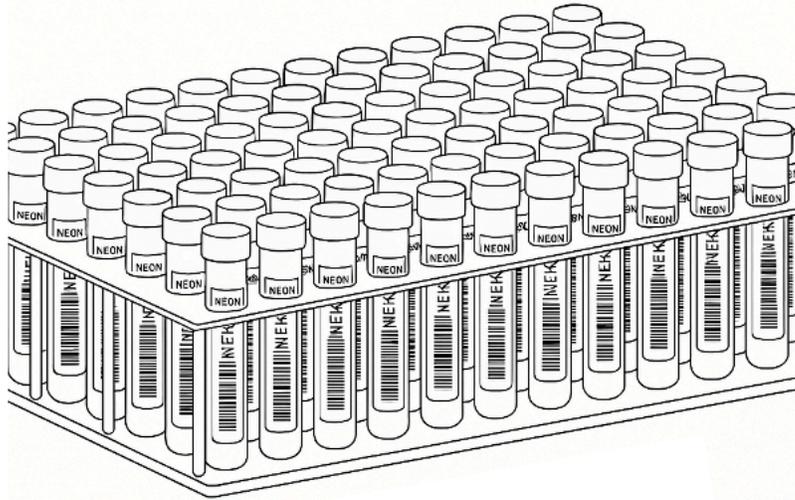
II. Equipment and Materials

- Symcode 2D Mini Barcode Scanner (or equivalent)
 - Laboratory Information Management System (LIMS; e.g., freeLIMS, LabCollector Inventory version)
 - Shipping inventory sheets (provided electronically by Battelle)
 - Sample storage racks with labeled positions
 - Room-temperature storage space with restricted access
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III. Procedure

1. Anticipating Shipment
 - Monitor email for electronic shipping inventory and tracking information from Battelle.
 - Prepare space in the sample receipt area for incoming packages.
2. Unboxing and Initial Inspection
 - Unbox samples within two weeks of arrival.
 - Compare received samples against the electronic shipping inventory to find any missing or extra samples.
 - Visually inspect all vials for
 - Breakage or cracks
 - Missing labels
 - Barcode errors
 - If any samples are missing or compromised:
 - Reply All to the original shipping notification email, noting the issue. Include photos if damage is observable.
3. Logging Samples and Ensuring Traceability
 - Handle samples one at a time during logging to prevent mix-ups

- Using a Symcode 2D Mini Barcode Scanner (or equivalent), scan each sample barcode into the LIMS
 - Verify that each scanned ID matches the electronic shipping inventory.
 - Assign each sample a unique internal tracking code in the LIMS that includes:
 - NEON barcode
 - Date of receipt
 - Shipping batch ID. The shipping batch ID will reflect the date received (e.g., 20251001)
4. Electronic Receipt Form Submission
- Complete the NEON electronic receipt form within two weeks of sample receipt with information about any missing, extra, or compromised samples.
 - Upload the completed form to the NEON Data Portal.
5. Sample Storage
- Store samples at room temperature in the designated, restricted-access storage area until analysis. At all times, samples should be stored away from direct sunlight.
 - Arrange vials upright in labeled racks, ensuring that barcodes face forward for easy scanning.



- Keep storage racks organized so that positions remain fixed until analysis.
- Maintain chain-of-custody in the LIMS by recording every movement of the sample (receipt, pre-analysis storage, analysis, 90-day post-analysis storage).

IV. QA/QC Notes

- Verify barcode scanner function before each logging session.
- Review LIMS entries for typos or missing data after logging each batch.
 - Verify number of samples
 - Initial 100% data entry check of sample ID and internal tracking code.

- Retain shipping emails, photos, and receipt forms for at least one year for audit purposes.
- Throughout sample processing cross-check physical inventory against the LIMS database to confirm storage accuracy.