



Standard Operating Procedure

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Revision History		
Version No.	Effective Date	Description
1.0	01/01/2024	<i>Original composition by M. Kachmar</i>

Procedure Owners:

Date:

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Date:

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1 Purpose

The purpose of this SOP is to provide concise guidance and methodology for collecting water samples at the oyster bed sites for water quality testing.

2 Scope

This SOP is pertaining to the EPA Long Island Sound Study funded Oyster Health project where water quality metrics will be incorporated to understand host-pathogen-environment relationships.

3 Definitions/Acronyms

4 Safety Precautions

All survey team members will wear appropriate clothing dependent on weather conditions including but not limited to waders, rubber boots or protective footwear, gloves, hats, sunglasses, long sleeve shirts, and pants. Thick protective gloves (e.g. garden gloves) should be worn when handling oysters and other fouling organisms. Team members will wash hands thoroughly after field trips end. A first aid kit will be present for any injury. Extra water will be provided to avoid dehydration or heat stroke. Team members will take regular breaks when needed.

Exercise weather-appropriate field safety measures by monitoring conditions before and during the trip. Do not perform fieldwork during dangerous conditions (e.g. lightning, extreme winds, extreme floods). Do not visit field sites alone (use buddy system). Inform PIs of dates and times of fieldwork. Confirm safe return to the lab. At intertidal sites, perform procedures during low tide. At subtidal sites, divers are to follow NOAA diving regulations according to the instructions of the lab diving coordinator (Barry Smith).

5 Supplies/Materials

- 250mL amber nalgene bottle
- cooler with ice
- data sonde
- 60mL (60cc) syringes
- 0.45 μ m syringe tip filter

6 Quality Control

All team members will be trained to complete all field tasks, including training on data entry requirements for each specific task. To ensure completeness, field

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notebooks will include a checklist of all data that needs to be recorded during each visit. All datasheets will be screenshots as back up in the event data is lost before connecting to the network.

7 Procedures

1. In Field (<24 hours storage before laboratory processing):
 - a. Take the 250 mL nalgene amber bottle with the appropriate site label (Figure 1) out to the sonde station
 - i. Prelabeled and cleaned amber bottles are kept in the oyster health study field gear station in the garage on the bottle shelf.
 - b. Fill and rinse the bottle 3 times with surrounding sea water
 - c. Reaching to the approximate depth of where the sonde records measurements, fill the bottle to the very top and cap under water
 - d. Store the bottle in the cooler on ice for transport back to the lab
 - e. Record salinity and temperature at the site with a handheld YSI or last 5 reads of the downloaded sonde data (See [Sonde SOP](#)).
2. In Field (>24 hours storage before laboratory processing):
 - a. Fill 5 60mL (60 cc) syringes from the desired location (near Sonde deployment) and cap them under water.
 - b. On shore, attach a 0.45 µm filter to the end of each syringe and filter them into a clean, prelabeled 250 mL amber nalgene bottle.
 - c. Store the bottle in the cooler on ice for transport back to the lab
 - d. Record salinity and temperature at the site with a handheld YSI or last 5 reads of the downloaded sonde data (See [Sonde SOP](#)).
3. Laboratory:
 - a. *Storage: Upon returning to the lab, move the bottles immediately to the fridge next to the fume hood in Building 2 Room 20 (second floor) and alert Genevieve (tex/call 617-780-7289 or email genevieve.bernatchez@noaa.gov).*

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- b. *Samples should ideally be processed within 24 hrs of collection, but if refrigerated and filtered can be processed up to 48 hrs after collection without chemically treating the sample.*



Figure 1: Water chemistry sampling bottles.

8 Waste Disposal**9 References****10 Appendices**

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