



Industry Biotoxin Sample Protocol

INTRODUCTION

The following field sampling protocol is required for analysis of paralytic shellfish poisoning (PSP or saxitoxin), amnesic shellfish poisoning (ASP or domoic acid) and other marine toxins. Because a preservative cannot be used at the time of sample collection, it is imperative that the field collectors follow established protocols to ensure the integrity of each sample.

FIELD SAMPLING

A biotoxin sample consists of a single species of bivalve shellfish (mussels, oysters, clams, etc.) collected randomly from the sampling site.

- Each sample will include a **minimum of 15-20 individuals**; this provides adequate material for all analyses.
- A representative sample of intended market product is required; do not collect only very large or very small specimens: this may provide misleading information on the presence or absence of toxin.

SAMPLE COLLECTION: PHYTOPLANKTON WATER SAMPLES

Using any 2L bottle (DMR issue or clean soda bottle), collect a surface water sample by lowering sample bottle (opening capped so no water enters) into the water 6" to 8" deep then uncap and when full recap while still submerged. Note location, date/time on the bottle or field sheet and place in cool, shaded place while in transport, place under refrigeration until pick up by DMR staff.

SAMPLE COLLECTION: LIVE SAMPLES

1. **Collect shellfish:** place in plastic sample bags (provided at drop locations or by DMR staff) and identify the sample with the following information: **Location ID/Lease Site, Collection Date, Collection Time, Type of Shellfish (mussels, scallop, etc.)**.
2. **Refrigerate samples immediately:** place samples under refrigeration and/or always keep the shellfish samples shaded and well iced. **The samples must be alive and kept under 10° C (50° F) until processing.** Transport to a DMR designated drop location or processing lab is required on the **same day as harvest**.
3. **Fill out field sheet:** provide the required information (date, time, location, species, #animals, and comments) including your name and telephone number so we can contact you if necessary. These field sheets can be downloaded from the DMR website: http://www.maine.gov/dmr/rm/public_health/biotoxinmonitoring.htm

SAMPLE COLLECTION: SHUCKED SAMPLES (SCALLOP ONLY)

This protocol is used only for scallop samples and in coordination with DMR approved private testing laboratories. See the list of approved regulatory testing facilities at: http://www.maine.gov/dmr/rm/public_health/biotoxinmonitoring.htm. Training and authorization by DMR can be requested through the MOU process which is required for all scallop Aquaculture.

- Thoroughly clean the outside of shellfish with water.
- Open shell by cutting the adductor muscle(s). Do not use heat or anesthetic before opening shell. **Cut carefully to avoid damage to body of mollusk.**
- Rinse the opened shellfish to remove sand or other foreign materials if needed.
- Open shell and drain off excess liquid. Remove all contents including meat and viscera (guts) from shell without damaging tissue.
- Drain shucked contents on a **#10 mesh sieve** without layering for five (5) minutes.
- Place in plastic sample bags (provided at drop locations or by DMR staff) and with a permanent marker, write on the lower third of the bag (this helps us to read the label after the top has been tied up) **Location ID/Lease Site, Collection Date, Collection Time, Type of Shellfish (scallop, etc.)**. Do not overfill the bag; be sure to leave an air space to accommodate expansion upon freezing.
- Place shucked sample in a cooler with a cooler thermometer keep the sample **under 10° C (50° F) until frozen. Freeze sample within six hours**; ensure that sample is frozen prior to transport to laboratory.

TRANSPORT TO DROP/PICK-UP LOCATIONS: DMR SAMPLE ONLY

Upon delivery to the drop off/pick-up location, drop frozen samples in an agreed upon temperature controlled location and fill out the chain of custody on the field sheet noting **drop location, date, time and temperature (cooler thermometer, walk-in cooler or DMR refrigerator)**. Be sure to leave the field sheet with the sample. If using a private laboratory arrangements should be made directly with that laboratory.

Sample pick up locations will be established by region and weekly pick-ups by DMR will generally occur from May 1st -August 31st (**MOU requirements**) details need to be coordinated with DMR.

FOR FURTHER QUESTIONS PLEASE CONTACT***Western Maine: Eliot to Belfast Areas***

J. Kohl Kanwit, work 207-633-9535, cell 207-557-1318 Kohl.Kanwit@maine.gov
Bryant Lewis, work 207-633-9682, cell 207-441-2796 Bryant.J.Lewis@maine.gov

Eastern Maine: Belfast to Calais Areas

David Miller, office 207-667-5654, cell 207-485-8352 David.W.Miller@maine.gov
J. Kohl Kanwit, work 207-633-9535, cell 207-557-1318 Kohl.Kanwit@maine.gov