



# STATE OF CONNECTICUT

## DEPARTMENT OF AGRICULTURE

### Bureau of Aquaculture and Laboratory

#### **PROCEDURE FOR THE COLLECTION OF SHELLSTOCK SAMPLES FOR BACTERIOLOGICAL TISSUE EXAMINATION USED IN THE CLASSIFICATION OF GROWING AREAS**

Amended: January 31, 2013

#### **INTRODUCTION**

Bacteriological examination of tissues from bivalve molluscan shellstock for fecal coliform bacteria is used in conjunction with seawater examination and sanitary survey information to assess the bacteriological water quality of shellfish growing areas in Connecticut in accordance with the National Shellfish Sanitation Program (NSSP) Model Ordinance<sup>1</sup>. Failure to follow this sampling procedure could result in improper sample identification, inaccurate measurement of the bacteriological burden of shellfish in the growing area, and the exclusion of such results from the database used for growing water classifications and for reopening studies following sewage or rain related closures of growing areas.

All bacteriological analysis of shellfish (clams, mussels, oysters and scallops whole or roe-on) must be performed by a laboratory that is evaluated for compliance with the NSSP. The Connecticut Department of Agriculture/Bureau of Aquaculture (DA/BA) laboratory is the only laboratory in Connecticut that meets this requirement. Shellfish tissue results analyzed by any laboratory that does not meet the NSSP requirements cannot be accepted by the DA/BA.

#### **EQUIPMENT**

1. Heavy-weight plastic bags (food grade) supplied by the DA/BA laboratory to collect shellstock samples, or other clean, waterproof container.
2. An appropriate implement (clam rake, etc.) shall be used for collection of the species of interest, for shellstock collected from recreational areas.
3. A cooler to hold samples.
4. A water bottle to be used as a temperature control for samples. Any small water bottle may be used for the temperature control.
5. Ice and frozen ice packs in cooler to cool and maintain the temperature of the samples at 50°F (10°C) or less until samples are delivered to the laboratory.
6. Nautical chart or GPS showing location of sampling stations approved by the DA/BA.
7. CT DA/BA Shellfish Meats Collection Form (see attached AQ-Lab-02).
8. Disposable gloves are recommended for collection of samples from areas suspected of being polluted with sewage or close to water pollution control facilities.

#### **SAMPLE COLLECTION**

1. **Shellstock samples must be scheduled in advance with an analyst in charge of the area.** The shellstock bacteriological examination may take up to 48 hours, and must be appropriately scheduled when the laboratory can accept the sample.

2. The shellstock monitoring station identification number must be written on the bag using a waterproof, permanent marker. The monitoring station number will consist of the Town's state tax number, followed by the DA/BA assigned station number or name of lot or growing area.
3. A representative sample of shellstock from the assigned station is collected. 15 individuals *of the same species* are taken in order to obtain a representative sample. With most species, this allows for 200 g of combined liquor and meats. At least 200 g of shellfish tissue are used for analysis. Select the shellstock to be examined and place in the bag. Shellstock should be free of excess mud and silt. Clean in original harvest area if necessary. Close top of bag. If individuals are smaller, more animals are needed to meet the necessary weight requirements for examination.
4. Place sample in cooler. The sample must be kept above freezing and below 50°F (10°C) until examined. The shellstock must **not** come into direct contact with ice or melted ice water, please use sealed plastic bag and keep sample upright.
5. A temperature control should be collected at the same time, or prior to, meat collection. Any small water bottle may be used for the temperature control. The temperature of the water will be taken when the sample arrives in the laboratory. Any samples that are collected without a temperature control will not be accepted. If temperature control is above 50°F (10°C) when the sample arrives in the lab, the sample will not be examined.
6. Complete a Shellfish Meats Collection Form (AQ-Lab-02). The following information is needed:
  - a. Town, date collected, time collected, collector
  - b. Sample location (station number assigned by DA/BA or name of lot/growing area)
  - c. Sample Type (species)
  - d. Date harvested, harvester (for samples collected by a harvest vessel)
  - e. Shellfish relayed from (original harvest area) and date relayed (if applicable)
  - f. Latitude/Longitude coordinates should be recorded under comments if available.
7. Samples of shellstock should be examined within 6 hours after collection, and in no case more than 24 hours after collection.

**Who may collect and submit samples to DA/BA laboratory:**

Only those individuals who have been trained and approved by DA/BA Environmental Analyst staff may collect samples for the shellfish program. Local health department personnel or their designees, local shellfish commission members or wardens may collect water and shellfish samples for the shellfish program.

**SCHEDULING OF SAMPLES**

1. The shellstock samples must be scheduled in advance with an analyst in charge of the area. The shellstock bacteriological examination may take up to 48 hours and the number of samples that can be processed is limited.
2. The laboratory can only accept shellstock samples Monday, Tuesday, or Wednesday. Samples must be submitted **no later than 1 pm** on Wednesday.
3. In case of an emergency situation, it may be possible to make other arrangements with the approval of the laboratory director.

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**Laboratory Address:**

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References

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<sup>i</sup> [ISSC] Interstate Shellfish Sanitation Conference. 2005. National Shellfish Sanitation Program: Guide for the Control of Molluscan Shellfish. US Department of Health and Human Services Public Health Service Food and Drug Administration. Greenberg, A., Clesceri, L.S., and Eaton, A.D., editors. 1992. Standard methods for the Examination of Water and Wastewater, 18<sup>th</sup> edition. APHA, Washington, D.C. Recommended Procedures for the Examination of Sea Water and Shellfish, 4<sup>th</sup> Edition. 1970. APHA, New York, NY.