

# Non-lethal Bulk Sampling Finfish Tissues for DNA Analysis

## ADF&G Gene Conservation Lab, Anchorage

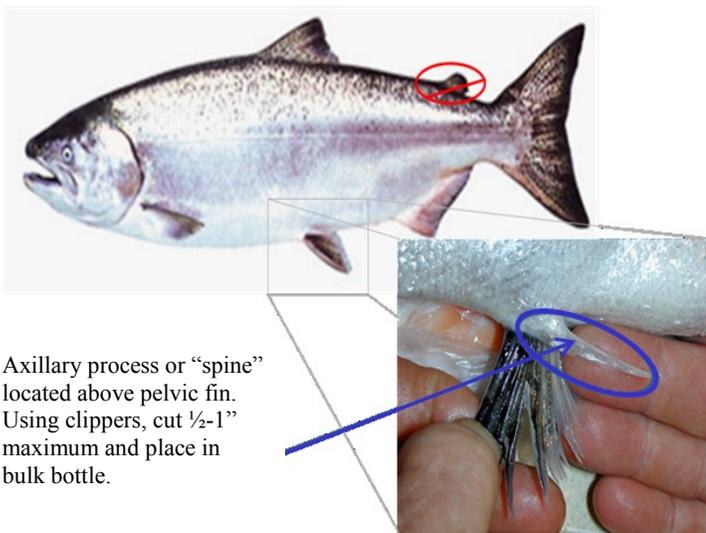
### I. General Information

We use axillary process samples from individual fish to determine the genetic characteristics and profile of a particular run or stock of fish. This is a non-lethal method of collecting tissue samples from adult fish for genetic analysis. The most important thing to remember in collecting samples is that **only quality tissue samples give quality results**. If sampling from carcasses: tissues need to be as “fresh” and as cold as possible and recently moribund, do not sample from fungal fins.

### II. Sampling Method

**Preservative used: Isopropanol/Methanol/Ethanol (EtOH) preserves tissues for later DNA extraction. Avoid extended contact with skin.**

Sampling instructions are written for (N=100 fish/125ml) bulk bottle. Steps for collecting axillary process tissues:



Axillary process or “spine” located above pelvic fin. Using clippers, cut ½-1” maximum and place in bulk bottle.

- Wipe dry the axillary process “spine” prior to sampling to avoid getting excess water or fish slime into the 125ml bottle (see diagram).
- Clip off the axillary “spine” using dog nail clippers or scissors to get roughly a ½ - 1” **inch maximum** piece and/or about the size of a small fingernail.
- Place each tissue piece into bulk bottle (**place only one piece of axillary from each fish**).
- Repeat: **up to 100 fish /125ml bulk bottle** (into same bottle). If you don’t reach this number of fish per location, that’s ok. Maximum storage capacity 125ml bulk for proper preservation of axillary tissue is (N=100).
- Record on **each label**: Location, sampling date (mm/dd/yyyy), sampler’s name(s), total number of fish sampled, latitude/longitude, and field notes (if any). Use pencil. This insures correct data with each collection bottle.
- If collection occurs over 4~5 day period, “refresh” EtOH at end of the collection.
- After the collection is complete and 24 hours have passed, “refresh” the axillary tissues as follows: carefully pour off ¾ EtOH and then pour fresh EtOH into sample bottle containing axillary clips. Cap and invert bottle twice mixing EtOH and tissue.
- Freezing not required, store sample bottle in upright cool location for good tissue quality.



SILLY: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Sample Date(s): \_\_\_/\_\_\_/\_\_\_  
 Sampler's name: \_\_\_\_\_  
 Total # fish sampled: \_\_\_\_\_  
 Latitude: \_\_\_\_\_  
 Longitude: \_\_\_\_\_  
 Species: \_\_\_\_\_  
 Comments: \_\_\_\_\_  
 ADF&G: Preserved in EtOH



#### Supplies included in sampling kit:

1. Clipper- used to cut a portion of **one** axillary process per fish.
2. Sample target: 100 axillary clips/125ml bulk bottle.
3. Labels on bulk sample bottles: Location, Sample date, Sampler, Total # fish sampled and comments (if any).
4. **1:125ml** wide mouth bottle(s) for EtOH “refresh” step.
5. Sampling instructions.

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