

Sampling Non-lethal Finfish Tissues for DNA Analyses

Alaska Department of Fish and Game, 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.

Sample preservative: **Ethanol (ETOH) preserves tissues for later DNA extraction without having to store frozen tissues (Avoid extended contact with skin).**

These sampling instructions are written for bulk method (N=100/125ml or N=200/250ml) bottle per site.

How to collect the axillary process tissues:

- Preservative used: Isopropanol/Methanol/Ethanol (ETOH).
- Wipe dry the axillary process “spine” prior to sampling to avoid getting excess water or fish slime in the 125/250ml bottle (see attached print out of axillary process).
- Clip off the axillary “spine” using dog nail clippers or scissors to get roughly a ½ - **1” inch max.** piece and/or about the size of a small fingernail.
- Place this piece into the sample bottle (**place only one piece of axillary from each fish**).
- Repeat procedure for **up to 100 or 200 individual fish** per bottle (dependant on bottle size). This is the limit for proper preservation of axillary tissue.
- Record on pre-printed label: Sample location, date samples are collected, number of fish sampled, species and field notes.
- After 24 hours; “**refresh**” step - pour out the alcohol from the sampling container and pour in fresh alcohol to assure proper preservation. If collections are under 100 fish and/or collected over time (~ 7-10 days) don’t worry about refresh until collection is complete.
- Freezing not required, store sample bottle in cool location for good tissue quality.

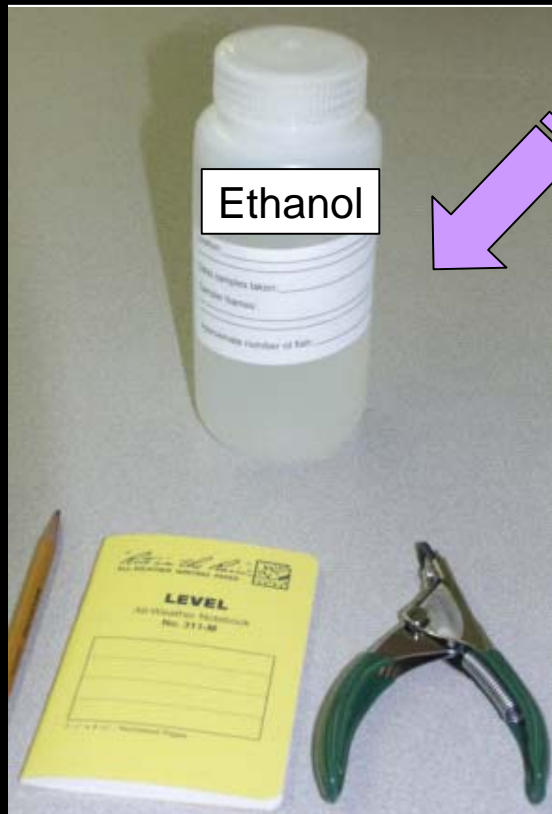
Return to ADFG Anchorage office:

ADF&G – Genetics
333 Raspberry Road
Anchorage, Alaska 99518

Lab staff: 1-907-267-2247
Judy Berger: 1-907-267-2175
Shipping code:

Supplies included with sampling kit:

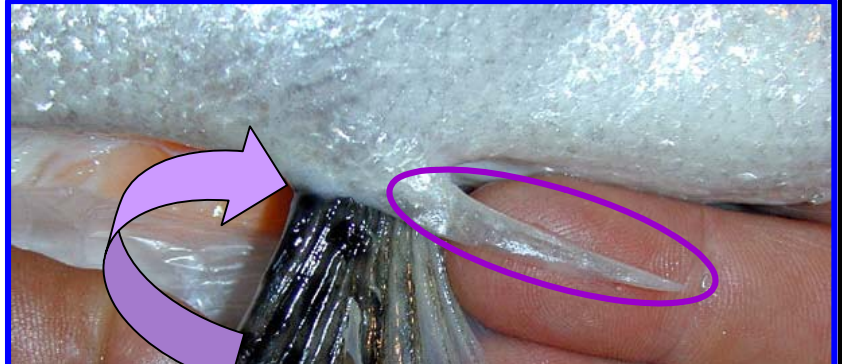
1. (1) - Dog toe nail clippers and/or scissors: used to cut a portion of **one** axillary process.
2. 125 ml or 250 ml wide mouth bottle(s) for ETOH.
3. Pencil
4. Sampling instructions



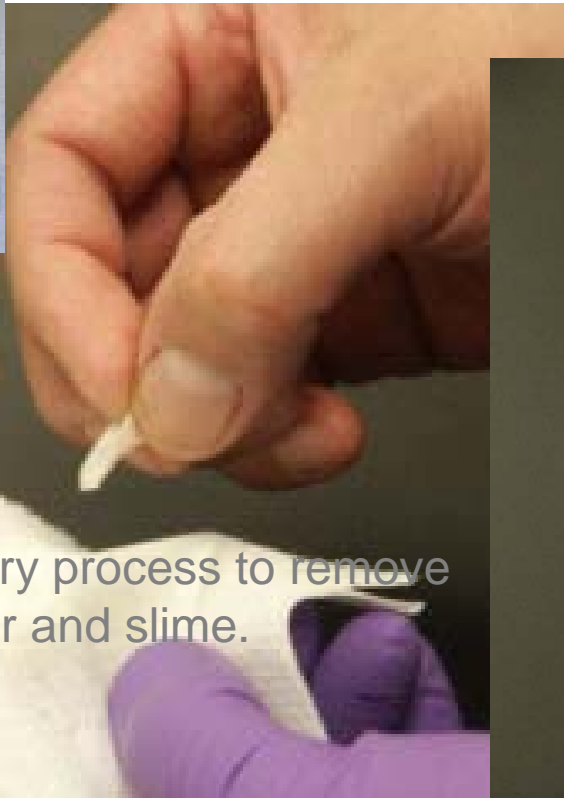
Sampling kit:

Sampling supplies for bulk sample collection.

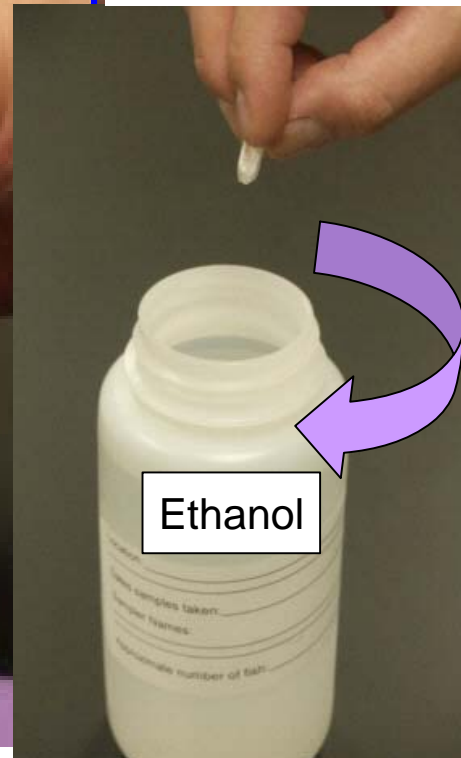
One axillary "spine" per fish.



Axillary process or "spine" located above the pelvic fin. Using the nail clippers, cut one axillary per fish.



Drying axillary process to remove excess water and slime.



Put axillary "spine" (1 per fish)

100 fish/125ml
200fish/250ml
bottle

All tissues should be covered in ethanol. Always store in upright and in cool place.
Refresh 24 hours!