

Non-lethal Sampling Finfish Tissue for DNA Analysis

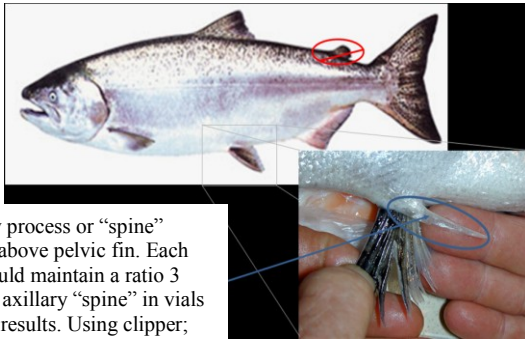
ADF&G Gene Conservation Lab, Anchorage

I. General Information

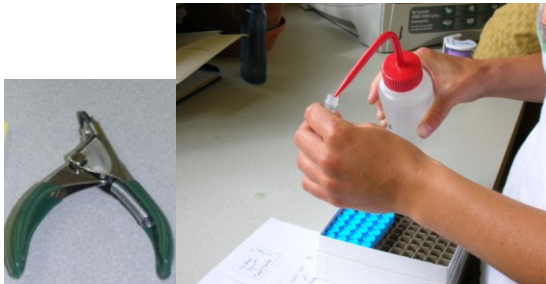
We use axillary tissue samples from individual fish to determine the genetic characteristics and profile of a particular run or stock of fish. The most important thing to remember in collecting samples is that **only quality tissue samples give quality results**. If sampling from carcasses: tissues need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

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

II. Sampling Method



Axillary process or “spine” located above pelvic fin. Each clip should maintain a ratio 3 EtOH/1 axillary “spine” in vials for best results. Using clipper; cut ½ - 1” max.



- Wipe excess water and/or slime off the axillary process “spine” prior to sampling to avoid getting either water or fish slime into the 2.0ml vial (see diagram).
- Prior to sampling, fill the tubes half way with EtOH. Fill only the tubes that you will use for each sampling period. The squirt bottle is for day use only since it will leak overnight when unattended.
- 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 axillary process into EtOH. The ethanol/tissue ratio should be **slightly less than 3:1** to thoroughly soak the tissue in the buffer.
- Top up tubes with EtOH and screw cap on securely. Invert tube twice to mix EtOH and tissue. Periodically, wipe or rinse the clippers with water so not to cross contaminate samples.
- Data to record: Record **each vial number to paired data** information (i.e. location, lat./long., sample date(s), etc.). Electronic version preferred.
- Discard remaining ethanol from the 500ml bottles before shipping. **Tissue samples must remain in 2ml EtOH**, these small quantities require HAZMAT paperwork. Please follow packing instructions for HAZMAT items. Store vials containing tissues at room temperature, but away from heat. In the field: keep samples out of direct sun, rain and store capped vials in a dry, cool location. Freezing not required.

III. Supplies included with sampling kit:

1. Dog toe nail clipper - for cutting a portion of the axillary process.
2. Cryovials - 2.0ml pre-labeled plastic vial or tube.
3. Caps – cap for each vial.
4. Cryovial rack- white plastic rack with holes for holding cryovials while sampling.
5. Ethanol (EtOH) – in Nalgene bottle(s).
6. Squirt bottle – to fill and/or “top off” each cryovial with EtOH
7. Laminated “return address” labels
8. Sampling instructions

IV. Shipping: HAZMAT paperwork is required for return shipment of these samples.

Return to ADF&G Anchorage lab:

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

Lab staff: 907-267-2247
Judy Berger: 907-267-2175
Freight code: _____