

Guide to Submitting a Tissue Sample

Northwest Community Sampling Program

DATASHEETS

- Community Harvested Sample Collection Datasheet
- Land Use Information Datasheet
- Study Area Map

EQUIPMENT REQUIRED

- GPS equipment (if possible)
- Sampling bags (Ziploc)
- Sampling envelopes (available from NWMO upon request)
- Camera (digital, mobile phone, etc.)
- Markers, pens, pencils

SAMPLING DETAILS

- If you would like to submit a tissue sample (i.e., mammal, fish, bird, vegetation) you harvested or found to the Northwest Community Sampling Program, please read below and fill out the Community Harvested Sample Collection Datasheet.
- A description of the sampling location, or preferably UTM coordinates taken using a GPS, should be recorded on the datasheet. Alternatively, the sampling location can also be recorded by dropping a pin in a map application on your phone to share during donation drop-off.
- If possible, please fill out the Land Use Information Datasheet and take pictures at the location the sample was harvested.

What tissue samples are we looking for?

- Walleye
- Northern Pike
- Lake Trout
- Lake Whitefish
- Lake Herring (Cisco)
- White Sucker
- Ruffed /Spruce Grouse
- Canada Goose
- Mallard
- Moose
- Whitetail Deer
- Black Bear
- Lynx
- Wolf
- Snowshoe Hare
- Beaver
- Muskrat
- Mink
- Blueberry
- Cranberry
- Raspberry
- Wild edible mushrooms
- Chaga
- Labrador Tea
- Manoomin/Wild Rice
- Rat Root/Sweet Flag

Regulations: What Should I Know?

All fish and wildlife donated must be obtained legally and be within seasons of the area it was collected from. Fish and wildlife donations will count towards the collector's daily limits and/or quotas, and possession limits when in the possession of the collector. Once the specimen is donated and in the possession of the NWMO, it will no longer contribute to the collector's possession limit.

Processing a Sample

When handling samples, it is essential you practice proper field dressing and handling to the best of your ability. Contamination of meat or fish can occur through the initial wound as well as during field dressing, handling, and transport. It is encouraged that clean equipment is utilized and temperature control (coolers and ice) are used wherever possible. Travelling long distances in warm weather with a carcass can be hazardous to meat and fish safety and quality. It is essential that donors utilize a temperature-controlled environment wherever possible before submitting the sample to the NWMO and transport the carcass to a processing facility with adequate refrigeration as soon as possible.

Fish - It is preferred that whole fish samples are submitted so that ageing structures, internal and external characteristics, and significant tissue samples can be taken.

Large Mammals – If possible, for larger species a sample of the hindquarter of the animal that was harvested, ideally not attached to large chunks of bone, is preferred. A sample of 2 lbs (1 kg) would be ideal to complete all desired analyses, however a submission of at least 1 lb (500 g) will be accepted. The kidneys and liver of larger game including moose and whitetail deer are also valuable if willing to donate to the program. If a muscle sample is collected from the same animal as an organ sample, please be sure to keep muscle and organ samples separate and make note the samples are from the same animal in the *Community Harvested Collection Datasheet* as this is valuable information from a chemical analysis perspective. If the head of the moose or deer is available a sample submission of the front jaw and/or two incisors is also valued for ageing purposes.

If you are submitting black bear, lynx or wolf, it is also asked that 10 or more guard hairs (the longer hair) be plucked and placed in the envelope provided by the NWMO to accompany the tissue sample.

Snowshoe Hare – For snowshoe hare, skinned is preferred but the whole animal will be accepted. It is generally recommended that small animals be handled similarly to large animals, and it is important to dress and cool small game animals as soon as possible.

Semi-aquatic Mammals - Beaver, muskrat, and mink are secondary sample components and, thus, do not require lethal sampling (i.e., there is no need to obtain a large amount of sample for metal and radionuclide analysis). However, these sample components may still be submitted for analysis. If samples are submitted, it will be advantageous to collect 10 or more guard hairs (the longer hairs) samples and a small muscle sample to collect data to support deriving a relationship between the hair and muscle concentrations. It is generally recommended that small animals be handled similarly to large animals, and it is important to dress and cool small game animals as soon as possible.

Migratory and Upland Game Birds - For small birds such as ruffed/spruce grouse and mallards, the whole bird is needed to gather enough tissue sample weight for an analysis of radionuclides. For Canada Goose, the whole bird is also preferred to gather enough tissue sample weight for analysis of metals and radionuclides.

Berries – Berries will be handpicked, preferably while wearing nitrile gloves to prevent contamination of the sample. The current year's growth should be collected and submitted. Berries should be cleaned of debris (but not rinsed with water), bagged, labelled, and frozen prior to submission. If possible, try to obtain a sample of at least 1 lb (500 g), however a submission of 2 lbs (1 kg) would be ideal to complete all desired analyses.

Edible and Medicinal Plants – Edible and medicinal plants (e.g., chaga, Labrador tea, etc.) will be handpicked, preferably while wearing nitrile gloves to prevent contamination of the sample. For the sampling program, the shoots of Manoomin/wild rice and the roots of rat root/sweet flag should be submitted. Best efforts should be made to collect samples using Teflon-coated scissors and/or a stainless-steel shovel. Samples should be rinsed with lake water (i.e., the sediment washed off the roots), bagged, labelled, and frozen prior to submission to the NWMO for analysis. If possible, try to obtain a sample of at least 1 lb (500 g), however a submission of 2 lbs (1 kg) would be ideal to complete all desired analyses.

LABELLING A SAMPLE

- Samples should be preserved in clean and sealed Ziploc bags. Bags should be labelled with a black permanent marker and should provide the following information at a minimum:

Species name
Contents (i.e., muscle, liver, kidneys, whole)
Location of Harvest (as detailed as possible)
Date/time of harvest

Other Structures: Other outlined structures for each species, including teeth and guard hairs, should be collected and stored in separate bags labeled with the same information as well as the bags contents.

Additional Details: Please provide any additional applicable information that maybe useful for the project team and the laboratory, such as, unusual behaviour and/or physical appearance, overall health of the animal/plant tissue, presence of parasites/tumours, estimated age and sex.

QA/QC REQUIREMENTS

GENERAL MEASURES	<ul style="list-style-type: none"> • Ensure that appropriate and clean sample bags are used. • Do not allow the inner surfaces of sample bags to come in contact with anything other than the sample if possible. • Clean tools and knives should be used to process the samples and thoroughly washed with soap and water after or between samples. • All samples will be frozen the day they are collected or within a 12-hour period where possible to minimize the breakdown of tissue until submission.
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If you have any questions or require help preparing a sample, please contact Daila Delescaille at the Nuclear Waste Management Organization via the following contact information or at the Ignace Learn More Centre during open office hours:

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