

Dealing with Dead Birds

Sampling Strategy

Collection of appropriate samples is a key part of accurately determining cause of death where 1080 is suspected. Birds should, where possible, be frozen and sent whole. If the carcass is deteriorating quickly then it should be dissected and the appropriate tissues removed and placed separately in bags or specimen containers before freezing. Instructions for the latter option are provided below.

Target Tissue

Sodium fluoroacetate (1080) is a very water soluble compound and rapidly passes through the body. It is at its highest concentration in blood and stomach contents soon after poisoning. After death, muscle is the best tissue to take, along with stomach contents. The liver and kidneys do not normally retain large amounts of 1080, so are therefore not appropriate tissues to sample.

Sample Types and Quantities

Care must always be taken to ensure that samples are not contaminated by other tissues or by pesticide-contaminated surroundings during collection and storage. Always ensure that dissecting equipment is thoroughly cleaned between samples.

Stomach contents

These are taken by dissecting the abdominal cavity and removing the complete stomach intact. For birds the whole stomach can be collected.

Skeletal muscle

Muscle is best taken from the breast of birds. When collecting muscle samples avoid tough sinew and other materials that will be difficult to homogenise in the laboratory. A minimum of 10 g of sample should be provided, though 50 g is preferred. If the birds are small (smaller than ruru) then the whole animals should be collected and sent for analysis regardless of state.

Storage and Transport

Sample packaging and storage

Use the snap-top plastic bags provided for packaging muscle, stomachs and whole birds, but take care to seal the bags properly to prevent leaking. **Each sample must be placed in its own bag and not mixed with other samples.**

Each sample should be labelled **externally** with as much information as necessary to fully identify the sample on the test report. Clear labelling with the provided waterproof pen is essential as the freezing/thawing process tends to obliterate markings. Please use the provided adhesive labels, rather than relying on marking the plastic bag directly. Pencil, though waterproof, is not easy to read in some circumstances and should be avoided.

Please record the following on the specimen label:

- Name of person who collected sample
- Species name
- Animal ID (band number/name)
- Type of sample (muscle tissue/stomach)

- Date located
- General location (e.g. Coastal Waitutu, Slaughter Burn, Crombie, Poteriteri)
- Grid Reference
- Photos taken (yes/no)

Samples should be frozen to below -10°C as soon as possible after collection, and preferably within 8 hours. A chilly-bin packed with ice will be provided for temporary storage to those based at Poteriteri, Crombie and Waitutu Huts until the samples can be removed for longer-term storage.

Sample Analysis

Frozen samples and/or whole birds should be couriered to [s9(2)(a)] at Toxicology Laboratory, Landcare Research (Lincoln) for analysis. Before sending samples please contact [s9(2)(a)] and warn her that samples are on their way and that they need to be tested for 1080. [s9(2)(a)] can be contacted at [s9(2)(a)] or by email [s9(2)(a)]. The address samples are to be couriered to is:

[s9(2)(a)]
 Toxicology Laboratory
 Landcare Research
 Gerald Street
 Lincoln 7608

Individual tissue samples or whole birds should be transported to the testing laboratory in an insulated pack such as a chilly bin. Alternatively, samples well wrapped in insulating material or layers of newspaper and packed in a cardboard carton will suffice. Samples may be quite small and will thaw out rapidly in transit. To prevent this they should be placed in contact with freezer packs or plastic soft-drink bottles filled with water and frozen, before wrapping.

Samples should be sent by courier door-to-door early in the week to avoid the possibility of thawing over the weekend. They should be marked “**Urgent tissue samples - please keep frozen**”. No special declaration is required for samples sent from within New Zealand.

On receipt at the laboratory, the sample details will be entered in the laboratory sample register and the sample placed in a freezer at -20°C to await analysis.

Results

Analysis results should be forwarded to [s9(2)(a)] [s9(2)(a)] and [s9(2)(a)] [s9(2)(a)] [s9(2)(a)] who will submit the results to the Vertebrate Pesticides Residue Database (VPRD).