

## STEP BY STEP TSU SAMPLING GUIDE

1. **Prepare Supplies and Animal ID:** Gather a TSU applicator gun and new, one-time-use TSU vials. Record the unique barcode/ID number of the TSU vial and match it to the specific animal's ID on your form or a spreadsheet.
2. **Load the TSU Applicator:**
  - Squeeze the spring-loaded retainer clips on the applicator and insert the TSU vial.
  - Release the clips to lock the vial in place.
  - Gently squeeze the applicator handles until the internal piston is seated correctly, then release the handles.
  - Remove the red cutter safety guard carefully and discard it. The applicator is now ready.
3. **Collect the Sample:**
  - Ensure the animal is safely restrained.
  - Select a sampling location on the ear, generally about 1-2 cm (approx. 1 inch) from the edge, avoiding visible veins, ridges, or existing tattoos/ink.
  - Position the applicator over the chosen spot and squeeze the handles together in one swift, fluid motion. This action punches a small tissue sample and seals it within the TSU vial's buffer solution.
  - Release the handles to free the animal's ear.
4. **Verify the Sample:**
  - Remove the TSU vial from the applicator by squeezing the retainer clips and sliding the vial out.
  - Visually check the TSU vial to confirm that the tissue sample and the green/float ball are present and submerged in the preservation liquid.
  - If no sample is present, discard the TSU and re-sample with a new unit.
5. **Remove Used Cutter and Record Data:**
  - Pull the applicator handles apart to release the used metal cutter, and dispose of it carefully as it is sharp.
  - Ensure the animal's ID is clearly written next to the corresponding TSU barcode number on your submission form or record-keeping system.

**6. Store and Ship Samples:**

- Store the sealed TSU samples in a cool, dry place at room temperature (they can last up to a year). Avoid direct sunlight, heat, or auto-defrost freezers.
- Place samples in a padded envelope or box, include the completed order form, and send them to your genomic service provider.

For optimal results, sample as early as possible and wipe the ear clean if it is a newborn calf to avoid contamination from the dam's DNA.

