



Tissue samples in RNAlater for qPCR gene expression

A short SOP for collecting animal tissue into RNAlater for RT-qPCR or RNA-Seq: piece size, RNAlater volume, incubation and storage.

Step 1. Prepare materials

- RNAlater solution; RNase-free scissors and forceps; RNase-free 1.5 or 2 mL tubes.
- Ice bucket (for brief handling only), labels and waterproof marker, gloves (change often).

Step 2. Collect the tissue

- Euthanise the animal according to approved ethical guidelines.
- Dissect the target tissue quickly, ideally within 2–5 minutes, and blot off excess blood with sterile gauze or RNase-free paper.
- Do not leave tissue at room temperature.

Step 3. Cut into small pieces

RNAlater penetrates slowly. Cut pieces no thicker than **5 mm** and **20–100 mg** per tube. Cut large organs (liver, spleen, kidney, muscle) into several pieces. Do not mince into a paste.

Step 4. Add RNAlater

Use about **10 volumes** of RNAlater per volume of tissue. The tissue must be fully covered; do not overfill tubes.

Tissue weight	RNAlater
20 mg	200 µL
50 mg	500 µL
100 mg	1 mL

Step 5. Incubate

Keep the tubes at **4 °C for 12–24 hours** so RNAlater soaks in fully. Do not freeze straight away.

Step 6. Store and ship

After incubation, store at **–80 °C**. Ship on ice or cold packs. Avoid repeated thawing and refreezing.

Checklist

- ✓ RNase-free tools and tubes; clean gloves, changed often
- ✓ Every tube labelled: animal ID, tissue, date
- ✓ Pieces small and fully covered by RNAlater
- ✓ 12–24 hours at 4 °C, then –80 °C

Questions before sending samples? WhatsApp / phone +880 1308-222824 · bdgenome@yahoo.com · bdgenomes.com/guides/qpcr-tissue-rnalyzer/