

TDAAC Histology RNAScope Specific Sample Requirements and Essential Slide Storage

Tissue Collection and Fixation

Specific Recommendations

- Collect tissue immediately after euthanasia to prevent postmortem autolysis and decomposition. Changes occur in tissues within minutes of death.
- **Mouse organs:** Heart, kidney and brain must be cut in half on either the transverse, sagittal or coronal plane based on your preference in order for adequate penetration by fixative. Remember the basic rule of thumb for proper tissue size for fixing and embedding of any mouse organ:
“As thick as an American nickel, 3-4mm, and no larger than a postage stamp!”
- In animals larger than a mouse (rats, rabbits, swine, etc.) many or all organs will need to be cut to no thicker than 4 mm in order for the fixative to penetrate the tissue rapidly.
“As thick as an American nickel and no larger than a postage stamp!”
- Place tissue into **FRESH 10% neutral buffered formalin (NBF)** immediately after collection. **20:1 ratio of fixative to tissue**. Please avoid conical tubes. Flat-bottomed jars work best. Don't let tissue dry out before it gets placed in fixative. Dry edges can create artifacts.

NOTES: Fix sample for 16-32 HOURS at ROOM TEMPERATURE.

Fixation time will vary depending on tissue type.

Over or under-fixation will result in significant signal loss when performing the RNAScope® Assay

If storage is required after fixation, place samples in 70% ethanol for no longer than 24hr at 4C. Proceed to alcohol series and embedding.

Why Optimize Your Assay?

FFPE optimal fixation
10% NBF for 16 - 32 hours at RT

Under fixed:
4% PFA for 24 hours at 4°C 4% PFA for 24 hours at RT
10% NBF for 24 hours at 4°C

Over fixed :
10% NBF for 48 hours at RT
10% NBF for 48 hours at 4°C

Special sample types: Non-slide based
Xenograft Whole mount

Special Tissues: pretreatment
Bone (decalcification) Retina/Lymphoid (mild) Liver/Muscle (extended)

▶ 31:51 / 49:42 Contact ACD Technical Support at support.acd@bio-technie.com ASD

Requesting Processing, Embedding and Sectioning/Slides

- **SAMPLE DROPS OFFS ARE ACCEPTED MONDAY-THURSDAY.**
- When submitting your order form, please write a note alerting TDAAC Histology staff that samples are for RNAScope.
- Please do not submit order for sectioning unless you CONFIRM w/ TDAAC histology staff that RNAScope will be performed within 3 months.

NOTES: Paraffin Embedded tissue BLOCKS may be stored at room temperature for years.

SLIDES for RNAScope must be used within 3 months of sectioning.

Store slides with desiccants at ROOM TEMPERATURE up to 3 months.