

Paraffin Sections from Blocks for Molecular Testing

Tissue block selection

- **Note:** Blocks are preferred however slides will be accepted when using the appropriate molecular preparation technique.
- Select a block with the greatest amount/area of the highest grade carcinoma, morphologically consistent with the submitting diagnosis.
- Formalin is the preferred fixative. Tissues processed in other fixatives should not be submitted.

Slide type

- Unstained slides for Immunohistochemistry or FISH submit on “Superfrost Plus” charge slides cut at 4 microns.
- Unstained slides for Molecular tests must be on **uncharged** slides. Submit six slides at 10 µm thickness for Molecular requests.
- **Note:** Use plain glass slides for genetic tests and “Superfrost Plus” charge slides cut at 4 microns for other laboratory testing.

Block cutting and slide preparation for Molecular tests

1. Cool paraffin block on a clean ice tray
2. Thoroughly clean the microtome and blade holder with mineral oil soaked gauze.
3. Wipe with gauze and then with 70% alcohol. Let dry.
4. Clean the water bath between cases (e.g., using a clean Kimwipe).
5. Clean the space that holds the blade with filter paper folded in a “Z” pattern, cleaning the front and back of the blade holder as well as the blade space. Use a new blade for each block.
6. Change gloves (after cleaning microtome but before inserting new blade) for each case.
7. Cut one or two 5 µm sections from the face of the block to remove any surface contaminants, and discard.

8. For RNA tests, cut 10 μm curls and transfer to labelled 1.5 ml tube using a clean 200 μl pipette tip. For specimens 5-6 cm^2 use one 1 curl, 1-4 cm^2 use 2 curls, intact needle core biopsies use 4 curls, fragmented needle core biopsies use 6 curls.
9. After taking sections for testing, cut one 4 μm section for a post-PCR H&E to confirm the presence of tumour in the test sections.
10. For DNA tests, cut 1 H&E slide at 4 microns followed by six 10 micron unstained slides with one 10 μm serial section on each slide. Ensure sections on each slide are oriented similarly.
11. Allow the slides to air dry. Do not place the slides in a dryer or hot plate.
12. Do not place cover slips on the unstained slides.
13. Once the slides are dry, insert them into slide carrier.