

Pathology Core Protocol



Protocol Section:	General Procedures	Policy No:	P-CMHD1-CUT-01
Protocol Subject:	Cutting and Drying Slides	Effective Date:	
		Date Reviewed:	6 January 2003
		Date Revised:	May 18, 2004

ALL blocks are cut at 4 microns unless otherwise requested. If the tissue is very small, a ribbon of 4 or 5 sections is put on each slide, but ordinarily, one section per slide is enough.

Cutting Procedure:

Blocks are trimmed then cooled in ice water while the cutting area is made ready.

Water baths should preferably be filled with boiled and/or distilled water to minimize bubble formation on the bottom and sides of the water bath. Tapwater can be used as long as the bubbles are removed from the bottom with a brush. The surface of the water bath must be clean and free of tissue fragments and paraffin during cutting. Clean it by skimming the surface with a paper towel or Kleenex.

Slides are labelled with the lab no and sample ID, in pencil.

The blocks are trimmed carefully and sections taken as soon as the whole tissue is exposed, leaving as much tissue in the block as possible in case more sections are required later.

Drying:

Normally, sections are dried in the slide dryer (20 min.) at 70C or 2 hours at 60C in a convection oven

Routine Staining:

Slides are stained with H & E, left unstained or stained with another stain if requested.

Cutting Faults and Their Correction:

1. Sections scored or split vertically.
 - nick in the knife edge.
 - dirty knife.
 - dirt in the wax block or the tissue.
 - calcified tissue, foreign bodies or grit in the wax.
2. Alternate thick and thin sections or chattering.
 - loose adjusting screws.
 - too large blocks.
 - too hard blocks - soak in Mollifex.
 - tilt of the knife insufficient to clear bevel.
3. Ribbon fails to form.
 - wax is too hard or too cold.
 - tilt the knife less.
 - cut thinner sections.
 - dull knife.
4. Crooked ribbons.
 - slides of the block are not trimmed parallel (block not squared).
 - nick in the knife or dull knife.

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5. Sections compressed, wrinkled and jammed together.
 - knife is dull.
 - block is not cold enough.
 - dirty knife.
 - cutting too rapidly.

6. Sections crumble or tear out.
 - tissue is not properly dehydrated, cleared or impregnated.
 - tissue is very hard and/or improperly embedded.

7. Sections lift from the knife on the upstroke.
 - increase knife tilt.
 - knife is dull or dirty.
 - cutting too slowly.

8. Holes in sections.
 - when blocks are trimmed rapidly with thick slices, the tissue is torn off the block rather than cut off, leaving holes in the block face.

Issued by Lab Manager: _____ **Date:** _____

Approved by Facility Management: _____ **Date:** _____