

PrestoCHILL

The science of cryoembedding
for high-quality frozen sections



MILESTONE
H E L P I N G
P A T I E N T S

Need good results? Start with good preparation

The optimal frozen section begins with an evenly and completely frozen tissue block in which the block face to be sectioned is flat and includes a complete, full faced section of the tissue submitted.

The section should be free of ice crystal artifacts, knife lines, or tears.

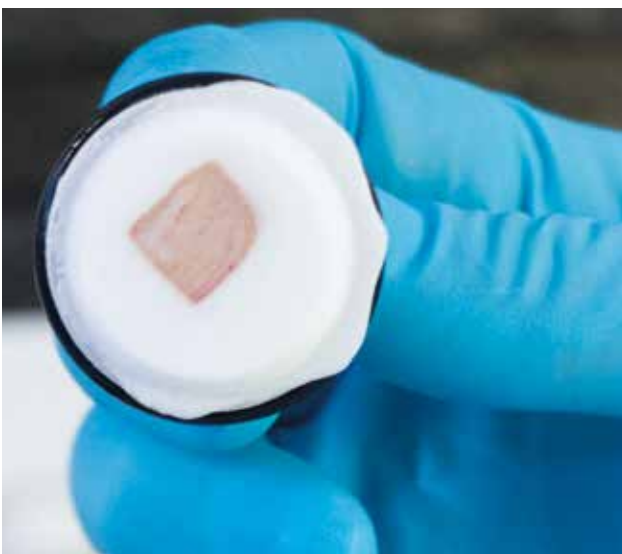
The speed and simplicity of operations of the PrestoCHILL revolutionize the rapid freezing process while keeping the “true to life” microscopic appearance of tissues.



PrestoCHILL - Benchtop cryoembedding station

Time to redefine frozen sections

- **Reduce freezing time to 60 seconds.**
- **Eliminate freezing artifacts** through ultrafast freezing, preventing formation of ice crystals.
- **Cut fatty tissues** like breast, lymph nodes without difficulty and without distortion of delicate honeycomb structure.
- **Obtain perfectly “flat plane” surfaces** for reduced trimming time and for easy cutting while using the patented “face down” embedding technique.
- **Eliminate compression artifacts** caused by ultra low temperatures.
- **Eliminate retraction of tissues:** for example, Glomeruli from Bowman’s capsule, and vacuolation spaces around nucleated brain cells, compared to formaline fixed, paraffin embedded (FFPE) sections.



Freezing time 60”

PrestoCHILL. The first step towards high-quality frozen sections



Heat extractors

Chuck freezing area

Touch screen terminal (4.3")

Cool trap for defrost step

4 removable aluminum molds diam. 25-30 mm (Other sizes, shapes available)

USB port for full documentation

This is cryoembedding the way it should be

NO FREEZING ARTIFACTS

60 SECOND FREEZING TIME

AN ALL-DRY SYSTEM

FULL DOWNLOADABLE DOCUMENTATION

NO LIQUID NITROGEN

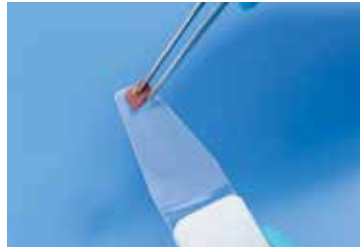
NO CO₂ - NO ISOPENTANE

Simple. Intuitive operation makes everyone an expert



1

Place a drop of cryo-embedding compound on the tip of the spatula.



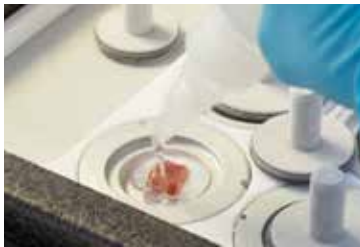
2

Orient the specimen.



3

Transfer the specimen to the bottom of the mold.



4

Add cryo-embedding compound to fill the mold.



5

Place chuck into the mold.



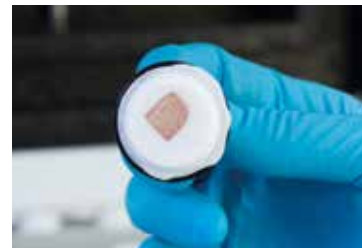
6

Add extractor and close the cover.



7

Start timer. After 60 seconds...



8

... a frozen block with a perfectly "flat plane" surface is ready for cutting

What sets us apart ?

THE UNIQUE COMBINATION OF THE
PATENTED* TECHNIQUE OF
FACE-DOWN EMBEDDING,
WITH A STATE-OF-THE-ART, RAPID
STIRLING COOLING DEVICE AT -40°C.

*US PATENT 6,536,219 B2

Cryoembedding of delicate tissues - small fragments/Mohs surgery

**In the practice of frozen section pathology, pathologists are often faced with the task of embedding tissues that are extremely delicate because of the nature of the consistence and structure of the tissue. This situation is a daily occurrence in Mohs surgery, where the technologist is faced with delicate slivers of skin with the goal of embedding this tissue precisely and completely visualizing the epidermis and margin.

The PrestoCHILL paper embedding technique offers a safe and rapid solution to these problems.

The science of paper cryoembedding



1

Wet both sides of a small section of lens paper with cryo-embedding compound.



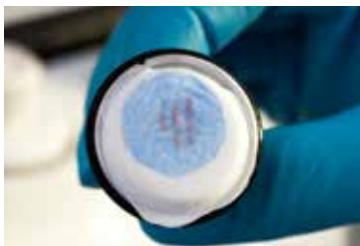
2

Position the specimen on the lens paper. Check orientation.



3

Gently slide the specimen, paper side down, into the mold. Add cryo-embedding compound, chuck and heat extractor.



4

After 60 seconds, the specimen is ready to cut.



5

The lens paper is eliminated during the initial trimming of the block.



6

The result.

Fully automatic defrost feature

To eliminate potential formation of ice on the freezing platform, an automatic defrost cycle is provided.

It consists of a heater embedded in the freezing platform and a vacuum pump to extract water vapors from the chamber. Vapors are condensed and collected in a cold-trap placed in the front of the unit for easy handling. A HEPA filter is provided on the exhaust side of the pump.

Integrated software can set the defrost cycle to take place during off hours, then automatically, restart the cooling cycle at a preset time to ensure availability for the first case of the day. Removing the need to manually monitor the system.



The PrestoCHILL unique features

HIGH FLEXIBILITY

- Standardized freezing at -40°C for all types of tissues, even for the most difficult to cut at the cryostat (breast, lymph nodes).
- Rapidly changeout molds with a range of different sizes and designs.

FAST

- Only 40 minutes from room to operating temperature of -40°C.
- At the set temperature 4 biospecimens can be frozen simultaneously in only 60 seconds.
- Reduced trimming time at the cryostat through planarity of specimen mounted in cryo-embedding compound.

SAFE

- No liquid nitrogen, no CO₂, no isopentane.
- No operations inside the cryostat chamber during the freezing step.
- HEPA cap filter.

ENVIRONMENTAL FRIENDLY

- Advanced technology Stirling cooler uses Helium gas as a refrigerant in a sealed stainless steel chamber. No standard compressor, therefore no CFC (Chlorofluorocarbon).

FULL DOCUMENTATION

- USB port enables both updating of software and downloading of event logs.

SPACE SAVING

- Small footprint accommodates space restricted lab environments.

Technical specifications

- Stirling cooler freezing module
- Anodized aluminium freezing platform
- 4.3" touch screen terminal. 1 USB port
- Dimensions: *h* 45cm/17,7" (with cover open 73cm/28,7") - *w* 30cm/11,8" - *d* 54cm/21,3"
- Weight: 22Kg
- Power supply: 230V~ 50/60Hz or 115V~ 60Hz (250W)

***The Art of Embedding Tissue for Frozen Section. Part I: A System for Precision Face Down Cryoembedding of Tissues Using Freezing Temperature-Embedding Wells. Stephen R. Peters - The Journal of Histology / Vol. 16, No.1 / March 2003*

***Paper Cryoembedding Stephen R. Peters - The Journal of Histology / Vol. 26, No.3 / September 2003*

MILESTONE



HELPING
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