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## HuBMAP: Paraffin Embedding Tissue Samples

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**We use this protocol and it's working**

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## Abstract

The purpose of this Standard Operating Procedure (SOP) is to outline procedures for the paraffin embedding of HuBMAP specimens.

## Guidelines

- Managers and supervisors - are responsible for making sure that technicians are properly trained and equipment and facility are maintained in good working order.
- Laboratory personnel - are responsible for reading and understanding this SOP and related documents and to perform these tasks in accordance with the SOPs.

## Materials

### MATERIALS

☒ Paraplast **Catalog #39501006**

☒ Gauze 4×4 Non-Sterile Squares **Fisher Scientific Catalog #MSD-1400249**

☒ Disposable Embedding Molds **Fisher Scientific Catalog #22363553**

☒ Electron Microscopy Sciences - Tissue Embedding Center **Fisher Scientific Catalog #50-293-24**

☒ Curved Medium Point General Purpose Forceps **Fisher Scientific Catalog #16-100-110**

☒ General-Purpose Broad-Tipped Forceps **Fisher Scientific Catalog #10-300**

-Tissue Embedding Center OR Paraffin Wax Dispenser and Cold Plate

- Paraplast

-4×4 Gauze

- Preference of Forceps / Tweezers

## Troubleshooting



## Safety warnings

- Use physical safety precautions when working with sharps (disposable blades).

## Before start

- Embedding can be a messy process, to protect your clothes it is best to wear a lab coat or apron.
- Gloves are required when working with human specimens.



## Post-Processing Tissue Acquisition

- 1 Place processed cassettes in wax holding chamber of embedding center.  
Stock station with embedding utensils, gauze, and disposable embedding molds.

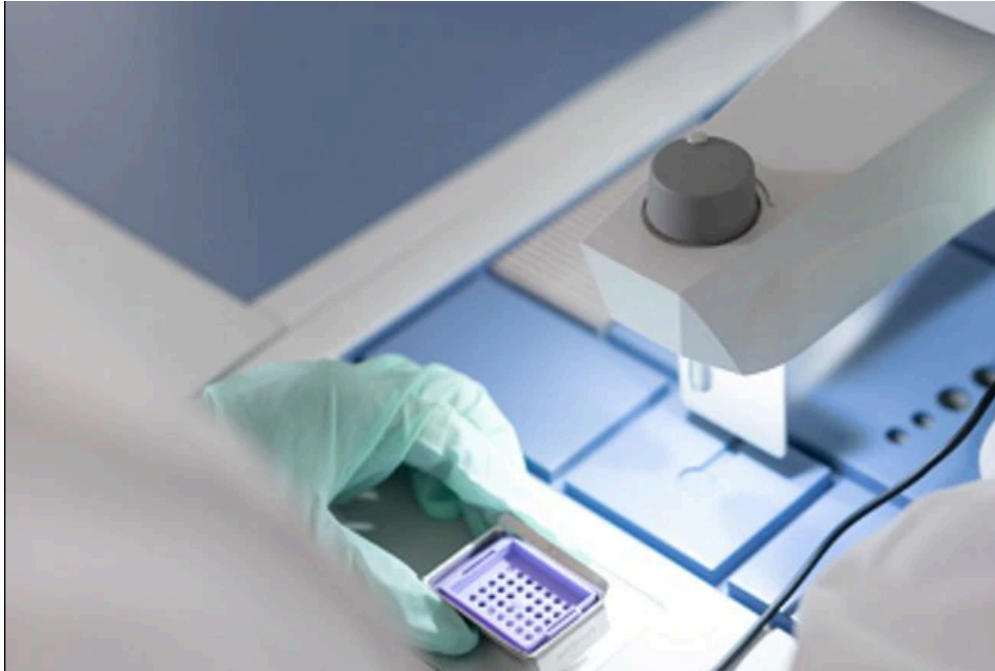
3m 30s
- 2 Preheat embedding utensils in the forceps warming chambers located on the sides of the paraffin dispensing nozzle.  
Turn on station cold plate module. .

3m 30s
- 3 Open the cassette carefully maintaining tissue orientation. Dispose of cassette lid.

30s
- 4 View the tissue sample and select an appropriately sized disposable embedding mold.

30s
- 5 Using forceps, tap the dispenser plate on the embedding center's dispensing nozzle and partially fill a mold with molten paraffin.

30s
- 6 Using heated forceps, carefully transfer the tissue inside the cassette into the mold, placing the tissue cut side down (surface viewed when opening the cassette).
- 7 Transfer the mold to the cold pad in front of the dispensing nozzle, and gently press tissue flat with forceps or a tamper.  
Allow paraffin to solidify in a thin layer, to hold the tissue in position.
- 8 Once oriented with the tissue specimen in the center of the mold, place the lower basket of the emptied cassette on top of the mold.



- 9 Add additional molten paraffin to 2/3 fill the cassette basket.  
Remove any bubbles that may form between the mold and the cassette by slowly lifting and repositioning the cassette.
- 10 Carefully transfer paraffin filled mold to freezing/cold plate module of embedding station.  
Allow paraffin to completely solidify.
- 11 If you have additional tissue samples to embed, return to step 4 and repeat through step 11.

⇒ go to [step #3](#) if you have additional samples.