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Product Information

PolyFreeze® Tissue Freezing Media

Catalog Numbers **SHH0023 (Green), SHH0024 (Yellow), SHH0025 (Blue), and SHH0026 (Clear)**

Product Description

PolyFreeze® is a support matrix for frozen tissue sectioning. This medium freezes quickly, supporting the tissue for sectioning at 3 μm and up with no cracking of the matrix at temperatures from –8 to –25 °C. Tissue samples may be snap frozen using PolyFreeze with isopentane and liquid nitrogen, dry ice (slush/slurry or bunker), or in a cryostat.

PolyFreeze media do not cause autofluorescence and can easily be washed away during tissue fixation when rinsed prior to staining. Once rinsed off the slide, there is no trace of the support matrix to interfere with staining or immunohistochemistry (IHC) reactions.

Standard frozen sections at 3–6 μm are easy to obtain and mount on glass slides for drying and/or fixation prior to staining, while thicker sections can be taken as required. Sections will flow freely under an anti-roll device, allowing flat sections to be picked up from the knife-edge. Sections can be either fixed immediately in the fixative of choice or air dried for later fixation and staining. Drying or fixing the slides in the cryostat for specific procedures will not affect the PolyFreeze medium.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store PolyFreeze tissue freezing medium at room temperature. A cloudy appearance of the unfrozen product has no effect on performance.

Store specimens frozen in PolyFreeze medium in liquid nitrogen canisters or in airtight containers in a –80 °C freezer.

Additional Product Recommended but Not Provided

- Peel-A-Way embedding molds, Square S-22, Catalog Number E6032

Procedure

1. Add a small amount of PolyFreeze medium to a chuck or specimen holder in the cryostat. Orient the specimen with the specimen face or primary side to be sectioned facing the **top** of the specimen holder.
2. If using Peel-A-Way embedding molds, add a small amount of PolyFreeze medium in the bottom of the mold. Allow the material to begin freezing or stiffening slightly, then add the tissue with the primary side facing the **bottom** of the mold. Since the molds are transparent, the specimen can be easily viewed by holding the mold up to check the position.
3. Add more PolyFreeze medium to the top of the specimen.
4. Freeze using the quick-freeze stage of a cryostat, in dry ice, or in isopentane and liquid nitrogen. Other quick-freezing methods may also be suitable.
5. Add an adequate amount of PolyFreeze medium to protect the specimen from defrosting when it is mounted to the cryostat chuck.
6. If using Peel-A-Way embedding molds remove the sample mold and place the finished block on a chuck in the cryostat with a small amount of PolyFreeze medium. Allow the block to freeze and attach to the chuck. This will allow the best positioning of the specimen and a flat surface to cut from with less section loss.

   Notes

   1. The amount of PolyFreeze tissue freezing medium to be used is dependent on the specimen size and tissue support required by the medium.
   2. For most clinical work, place the chuck on the quick freeze bar or as required by the laboratory procedure.
   3. The time required to freeze a specimen will depend on the amount of medium used and thickness of the specimen. Faster freezing will result in fewer ice crystals and less problems with the tissue after staining.

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VNC,MAM 10/16-1