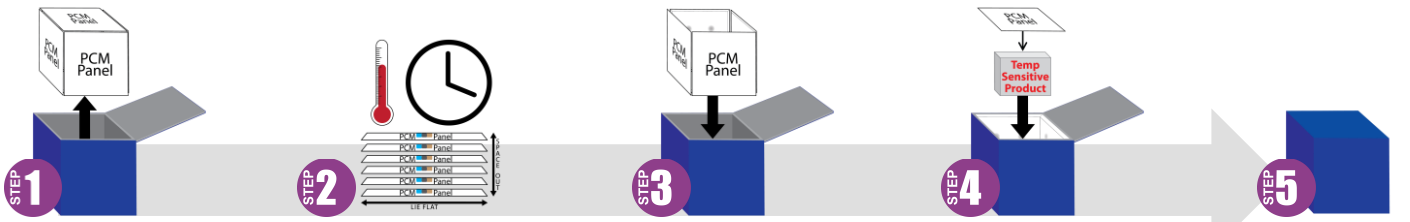
Cool Cube™
Best Practices

Call for Technical Support
(608) 526-6901

- ❑ Prep the PCM (phase change material) panels before use according to one of the described methods provided by VeriCor.
- ❑ Ensure all components are clean and free of damage.
- ❑ Lay panels flat when turning them solid (to disperse liquid throughout the panel).
- ❑ Enable ample air flow around all panel sides.
  - Use spacers (pencils) or racks. →

- ❑ Freezing/melting times vary depending on number of panels being prepped and equipment being used.
- ❑ Assemble using all six panels for maximum hold time.
  - Using less panels does not change the holding temperature, but does decrease the hold time.
- ❑ Panels are reusable (10,000+ cycles).
  - End-of-life disposal: Panels are a plastic #2, typically recycled by businesses/communities. PCM is nontoxic and readily biodegradable.
- ❑ Use a calibrated data logger or other temperature monitoring device to observe internal temperature.
- ❑ Avoid unnecessary opening of the Cool Cube™ after loading payload. Opening of the Cool Cube™ will decrease hold time.
- ❑ An infrared temperature thermometer can assist in ensuring the panels reach a safe pack-out temperature (good for finding out the approximate temperature of each panel).
- ❑ The farther the ambient temperatures are from the melting point, the quicker PCM will change states (solidify/liquefy).



Remove PCM Panels

Prep PCM Panels

Various methods based on type of panel, equipment available & purpose.

Assemble PCM Panels

Pack-Out Product

Close Bag/Case

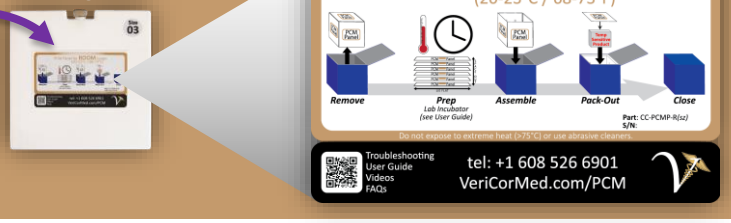
VERICOR LLC

Cool Cube™ Room Temp PCM Panels

for FFPE, platelets, biospecimens & more.

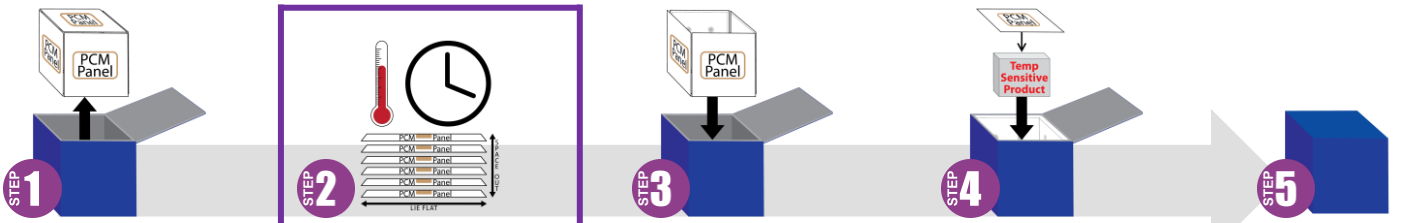
All Sizes

Tan Tab/Label



Video

Prep Method D: **Room** Prep **to keep product warm**



Remove PCM Panels

Prep PCM Panels

Assemble PCM Panels

Pack-Out Product

Close Bag/Case

This prep is for when the Cool Cube™ will be used in **cold conditions (below 15°C).**

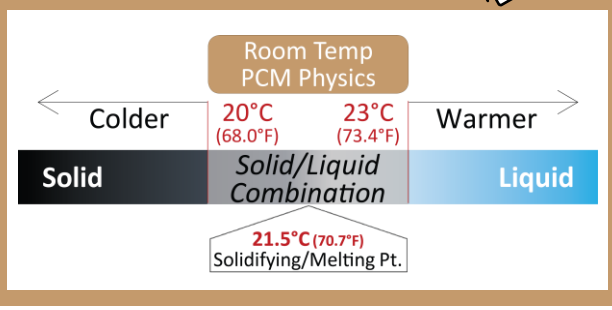
Panel Prep

2.1 Place panels in a room between 23-24°C for at least 24 hours before use so the PCM (phase change material inside the panel) is liquid.*

** Panels may be stored in a room until needed for assembly or the PCM solidifies. If a room maintains 23°C or above, the PCM within the panels will not get solid (the solidifying point is 21.5°C), keeping the PCM liquid indefinitely until pack-out. Liquid panels will protect the product from getting cold until the PCM inside becomes completely solid.*

2.2 Shake panels to verify the PCM is liquid. If they are solid, restart at step 2.1 to ensure the longest hold time. Liquid PCM panels will prevent the product from getting cold (at room temps) in a cold environment the longest. Using solid PCM or panels with a solid/liquid combination decreases the hold time.

PCM Panel Shake Test



ISTA 7D Thermal Performance Study

Lab-Qualified Hold Times When Starting with Solid PCM

	Qualified Temps:	15-25°C	20-24°C
Cool Cube™ 03	**Utilizing Six (6)**	91 hrs	47 hrs
Cool Cube™ 08	**Lab Freezer Temp**	83 hrs	66 hrs
Cool Cube™ 28	**PCM Panels**	141 hrs	85 hrs
Cool Cube™ 96	(Tan Tab/Label)	143 hrs	91 hrs

Times listed are based on lab-validated, 24-hour cycles of summer & winter profiles (hot & cold ambient temperatures) without the additional thermal mass of a payload, which if conditioned properly, will improve hold times. Actual performance times may vary.