

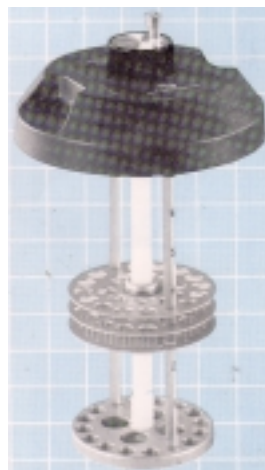
HANDI-FREEZE FREEZING TRAY

For 35HC, 35VHC, 36VHC
or 750RS Refrigerators

The Handi-Freeze tray provides an economical method of freezing biologicals when a 35HC, 35VHC and 36VHC or 750RS Cryogenic Refrigerator is available. This accessory replaces the necktube core of the four refrigerator modules and allows the user to take advantage of the cold nitrogen gas in the necktube for freezing purposes.

When materials are placed in the tray, the depth of the tray may be adjusted by turning the knob on the top of the unit. Clockwise rotation will move the tray upward toward the warmer portion of the necktube; counter clockwise rotation will move the tray deeper into the colder area.

SAFETY NOTICE – Do not attempt to use this accessory until you read and understand the safety precautions for cryogenic refrigerators that are found in Form TW-10 “Handle with Care”. The improper handling of cryogenic fluids can cause personal injury.



Operation

The tray is designed to hold 24 vials, 12.5 mm in diameter or less. The freezing rates involve many variables and must be determined by the user from actual test data. In general, the top tray position is used for temperature down to 0°F (-18°C), the middle position to -50°F (-46°C), and the lower position to cryogenic temperatures -200°F (-129°C).

Convenient index numbers on the freeze tray guide rods aid in indexing freeze rates. The tray positioning control will change the tray location by approximately ¼ in. (6.4 mm) for each complete turn of the knob.

The necktube core of the refrigerator (35HC, 35VHC, 36VHC or 750RS) must be removed and the Handi-Freeze tray can be inserted into the necktube. The canisters/racks, if used, need not be removed, as the freeze tray design has allowed clearance for the canister/rack handles.

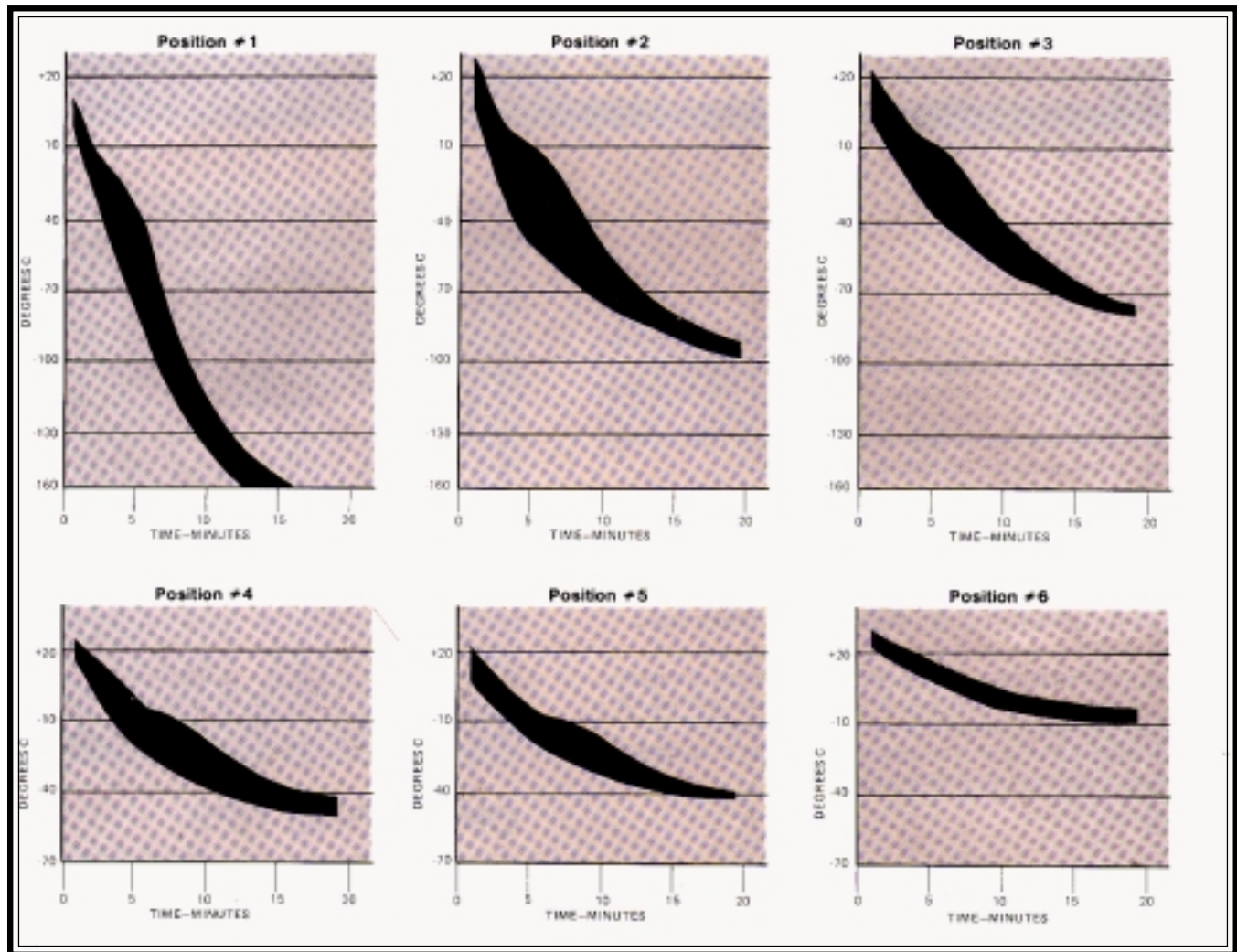
Operating Tips

- Frost formation may make operation of the mechanism difficult. If the cold unit is exposed to moist air, frost will form. If frost formation makes the control knob difficult to turn, remove the unit, and allow it to warm-up, then dry the moisture with warm air or a dry cloth.
- Remove the Handi-Freeze tray from the refrigerator when not in use. The unit is not insulated and its use as a replacement for the insulated necktube core provided with the refrigerator will result in much greater liquid nitrogen consumption.
- When removing the Handi-Freeze tray, use the indentations on the cap. Do not use the tray position control knob as a handle or the unit may be damaged.
- The refrigerator should be at least half full of liquid nitrogen.
- A cooldown time of at least one day should be allowed after filling a warm refrigerator. Allow one hour after adding liquid refrigerant or after the addition of a warm specimen canister/rack.

Performance Characteristics

This data is general in nature. Performance in your application will vary depending upon the refrigerator used, the nitrogen level, the number of samples, and many other factors. The range of freeze rates shown at each tray position is indicative of the fluctuation that may occur in a

given instance. When using this accessory, you should obtain your data empirically before proceeding with valuable samples. The practicality of the Handi-Freeze tray is in its repeatability and economy; it cannot assure that the user will obtain these exact freeze rates.



Replacement Parts

The construction methods used on this product do not allow parts replacement due to modern adhesives used for assembly. If specific replacement elements are needed for an unusual case please contact.



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