

Scope:

Applies to all THERMOGENESIS CORP. Plasma Freezers.

Subject:

SAFETY WARNING PROHIBITING THE USE OF ELECTRIC IMMERSION HEATERS

Prohibits the use of electric immersion heaters to aid in warming up the coolant during a defrost cycle.

Background

InstaCoolant IV (Dow Chemical Company Syltherm XLT) is a silicone based heat transfer fluid specifically designed for use in low temperature systems. At -50°C (-58°F) the coolant has the consistency (thickness) of water. This makes it ideal for fluid pumping systems such as the ThermoGenesis Plasma Freezers. However, as with all fluids there are limitations. While the fluid operating range is -100°F to $+500^{\circ}\text{F}$ (-73°C to $+260^{\circ}\text{C}$), the vapors of the fluid have a flashpoint¹ at 116°F (47°C).

Because of the danger of vapors from InstaCoolant IV being ignited at elevated temperatures, THERMOGENESIS CORP. **STRICTLY PROHIBITS THE USE OF ELECTRIC IMMERSION HEATERS** into either the freezer chamber(s) or the coolant reservoirs for use in warming the coolant.

1. For plasma freezers with electric defrost

Plasma Freezers equipped with the electric defrost option do not require additional means to warm the coolant to a suitable temperature to remove accumulated water in the reservoir. To defrost a THERMOGENESIS CORP. plasma freezer equipped with electric defrost follow the instructions as listed in Technical Service Bulletin #010-003 (attached).

2. For plasma freezers without electric defrost

Plasma freezers not equipped with electric defrost can bring the coolant to suitable temperature to remove water ($+3^{\circ}\text{C}$ to $+5^{\circ}\text{C}$) by turning off the refrigeration system and running continuous pump cycles (*with the keypad(s) set at the maximum freeze cycle setting - 99 minutes and 59 seconds - See the Operation and Maintenance Manual for detailed instructions*).

What to do!!

For further help on defrost cycles for freezers not equipped with electric defrost, please call the THERMOGENESIS CORP. Customer Service Department at (800) 783-8357 (United States) or (916) 858-5100 (Outside the United States).

¹ The lowest temperature at which the vapor of a combustible liquid can be made to ignite momentarily in air. This assumes an ignition source is present such as a flame or electric heater element.