**Purpose**

This procedure provides instructions for thawing fresh frozen plasma (FFP) and cryoprecipitate (cryo) using the Helmer Quickthaw System.

**Notes:**

* Use appropriate PPE when handling blood components.
* Confirm that the Quickthaw is turned on and the water temperature has reached the setpoint.
* Confirm that the chamber is filled with the appropriate amount of water by checking that the water level meets the fill line inside the chamber.
* For optimal performance, allow the water temperature to return to the setpoint before starting another thawing process. Not allowing the water to reach the setpoint temperature will result in increasingly longer cycle times.
* A thawing process cannot be started if there is an active alarm for the basket. If there is a temperature alarm, it is not possible to start a process on either basket. (See operations manual for troubleshooting alarms). If there is a lift-out malfunction alarm on one basket arm, you may start a process on the other arm.

**Procedure:**

|  |
| --- |
| **Operating the Quickthaw:** |
| **Input Options** | **Action** | **Related Documents** |
| * **LIFT OUT**
 | * Pressing will raise the baskets out of the chamber when they are down, or lower them into the chamber if pressed when baskets are lifted.
 |  |
| * **CYCLE TIME**
 | * Pressing will indicate times for cycle. Press and release until desired time appears.
 |  |
| * **CYCLE START**
 | * Pressing will start or stop the thawing process.
 |  |
| **Thawing Products:** |
| **Step** | **Action** | **Related Documents** |
| **1** | * Place unit(s) of FFP or cryo in Helmer plasma bag overwrap.
 |  |
| **2** | * Press LIFT OUT to raise baskets.
 |  |
| **3** | * If loading a large-sized product, remove the basket divider by squeezing the sides of the divider together and pulling the divider away from the basket.
 |  |
| **4** | * Load the product(s) into the compartment on the basket(s), hooking the slot in the top of the overwrap around the tab on the top of the basket.
 |  |
| **Thawing Products: continued** |
| **Step** | **Action** | **Related Documents** |
| **4****cont.** | * ***NOTE:*** *All bags loaded on the same arm should require the same thawing time.*
 |  |
| **5** | * For each arm (set of four baskets):
* Select the cycle time appropriate for the size and number of bags to be thawed by pressing the CYCLE TIME button until the appropriate time appears on the LED. (See following charts)
 | * + **Table A: Thawing Times for Plasma & Cryoprecipitate**
 |
| **6** | * Press the CYCLE START button to lower the basket(s) and begin the thawing process.
 |  |
| **7** | * When the Cycle Time set point is reached, the alarm will sound and the baskets will lift.
* Remove the overwrapped cryo or plasma units from the basket(s) and inspect them:
	+ Leaking bags must be discarded.
	+ The unit should be completely thawed. If the unit exhibits frozen chunks, it must thaw for an additional time. Place it in a fresh overwrap, and continue thawing and monitor.
 |  |
| **8** | * When cycle is complete, lower the baskets back into the chamber by pressing the LIFT OUT button. Replace the cover on the Quickthaw.
 |  |
| **9** | For Thawed Plasma:* Print a Hematrax Label, entering appropriate information per SOP.

For Thawed Pre-Pooled Cryoprecipitate:* Change the expiration date of the thawed unit to 4 hours from the time the thaw cycle was started.

For Thawed single Cryoprecipitate:* Change the expiration date of the thawed unit to 6 hours.
 | Hematrax Label CreationBlood Product Label VerificationLabel Verification Form |
| **10** | * Attach the transfusion tag to the unit.
 |  |
| **Thawing Products: Additional Steps If Necessary:** |
| **11** | * **Pause:** Press the LIFT OUT button. The basket is lifted out of the chamber and the remaining time flashes on the cycle time indicator.
 |  |
| **12** | * **Resume:** Press the LIFT OUT button again. The cycle time stops flashing and the basket is lowered into the chamber.
 |  |
| **13** | * **Extend Time:** Press the CYCLE TIME button. HL (hold) appears on the indicator, indicating the cycle is in progress but on hold indefinitely.
 |  |
| **14** | * **Cancel Extended time:** Press the CYCLE TIME button once more. The remaining cycle time appears on the indicator, and the cycle time is resumed.
 |  |
| **Alarms:**  |
| **High Temperature** | * Audible alarm will sound if high temperature set point (37.6) is reached. Also, “AL” will appear on temperature LED, and “E1” will appear on cycle time indicator.
 |
| **Lift-out system malfunction** | * Audible alarm will sound and “E2” will appear on cycle time indicator.
 |

 **Table A: Thawing Times for Plasma and Cryoprecipitate**

|  |
| --- |
| **Plasma Thawing Times** |
| **Number of Units flat folded** | **Time expected** |
| 1-2 FFP (approximately 300 ml each) | 10-15 minutes |
| 3-4 FFP (approximately 300 ml each)  | 15-20 minutes |
| 5-8 FFP (approximately 300 ml each) | 20-30 minutes |
| **Cryoprecipitate (Cryo) Thawing Times** |
| 10 ml to 15 ml single bag cryoprecipitate | 5 minutes |
| 1-2 prepooled cryo (approx.125 ml each) | 8-10 minutes (from PSBC experience) |
| 3-4 prepooled cryo (approx.125 ml each) | 10-15 minutes |

**References:**

Helmer Quick Thaw Plasma Thawing System Operation Manual

Standards for Blood Banks and Transfusion Services, Current Edition: American Association of Blood Banks. AABB Press, Bethesda, MD.

Technical Manual, Current Edition: American Association of Blood Banks. AABB Press, Bethesda, MD.