



Clinical Process Instruction Manual

Tissue Transportation and Drop Off Post Recovery Process Instruction

Policy:

Following recovery, tissue is packaged in a manner established by the tissue bank that permits required environmental conditions for the duration of transport necessary to maintain the integrity of the tissue for its intended use. Only packaging that has been validated to maintain required environmental conditions, including temperatures may be utilized for transportation of tissue.

Transportation of tissue and microbiology samples shall be conducted by Trillium Gift of Life Network (TGLN) staff or by pre-approved transport agents as detailed in this process instruction.

Process:

1. This document is intended to describe the procedures for transporting tissues to various processors and labs.
2. All transportation receptacle must be labelled. See *Tissue and Transport Labelling Process Instruction, CPI-9-534*.
3. Drop off of each tissue type is performed by a transportation service (except MSAT).
 - 3.1 Documentation of the acceptance of cardiovascular tissue is the responsibility of the Hospital for Sick Children Tissue Laboratory.

Cardiovascular Tissue/Sample Transportation and Drop Off

4. Cardiovascular tissue shall be shipped at wet ice temperatures (temperatures ranging from $> 0^{\circ}\text{C}$ to 10°C).
5. The transportation provider will be contacted to pick up and deliver the tissue to the tissue bank. See Appendix 1.
6. Cardiovascular tissue must be dropped off at the receiving tissue bank within sufficient time following recovery to allow for the start of disinfection within the cold ischemic time limit.
7. Timely drop off of the recovered cardiovascular tissues is required as disinfection and processing must be completed within 24 hours after the time of placement into cold transport solution.
8. It is the responsibility of Sick Kids Blood and Tissue Laboratory to document time of acceptance of cardiovascular tissue.
9. Sick Kids Blood and Tissue Laboratory will clean the transport cooler and notify TGLN inventory team when it is ready for pick up.



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Skin Tissue/Sample Transportation and Drop Off

10. Skin that is to be cryopreserved shall be transported at wet ice temperatures.
11. Immediately following the skin recovery, the skin and donor blood samples must be packaged in a transport container that has been validated to maintain the temperature from above freezing ($> 0^{\circ}\text{C}$) to 10°C during transport (wet ice temperatures). This ensures that, following recovery and during transport, the skin is maintained in the required environmental conditions.
12. The transportation provider will be contacted to pick up and deliver the tissue to the tissue bank, see Appendix 1.
13. Once all recoveries have been completed, the skin tissue cooler will be transported to the accepting tissue bank:
 - a. Blood and Tissue Bank at Sunnybrook Health Sciences Centre: Tissue should be delivered to the tissue bank within 24 hours following recovery. The Blood and Tissue Bank at Sunnybrook Health Sciences Centre will empty the transport cooler immediately. Arrangements to return the empty cooler to TGLN will be made between the Sunnybrook Blood and Tissue Bank and the TGLN inventory team.
 - b. RegenMed: The transportation provider will make all transportation arrangements including booking the flight. See Appendix 1. RegenMed will make arrangements for empty transport containers to be returned to TGLN.

Musculoskeletal Transportation and Drop off

14. Multi Tissue Recovery Coordinators (MTRC) are responsible for arranging the transportation service to Lake Superior Centre for Regenerative Medicine (RegenMed) and Mount Sinai immediately after tissue recovery is complete.
15. For musculoskeletal tissue, the tissue shall be wrapped in an aseptic fashion with at least one moisture barrier, and transported at wet ice temperatures. See *Musculoskeletal Tissue Recovery Process Instruction, CPI-9-529*. Musculoskeletal tissue transported at wet ice temperature must be received by the receiving tissue bank within 74 hours of being placed on wet ice.
16. Osteoarticular tissue (fresh graft or en bloc) shall be transported at wet ice temperatures and shall remain at wet ice temperatures for a maximum of three (3) days prior to processing.



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MSAT

17. The date and time of departure from the recovery facility and arrival to the MSAT shall be documented in the donor record.
18. Musculoskeletal tissue shall be transported to MSAT in a validated cooler that has been packed with a sufficient amount of wet ice in order to maintain a temperature of above freezing ($\geq 0^{\circ}\text{C}$) to 10°C .
19. Bone tissue intended to be stored frozen shall be placed into the "Quarantine" fridge located in the MSAT office.
 - 19.1 Enter through the Murray St. entrance and contact security (desk on right side immediately after entering).
 - 19.2 Identify that you are from TGLN (show ID) and that you are dropping off tissues for MSAT.
 - 19.3 Security will accompany you to the MSAT office where the tissues will be placed into the fridge.
 - 19.4 Remove the tissues and place in the freezer. Make sure the freezer door is properly closed.
 - 19.5 Sign and date the log sheet. Security is responsible for closing/locking the door.
 - 19.6 Osteochondral tissue (fresh graft or en bloc) shall be placed into the recovery refrigerator. Make sure the refrigerator door is properly closed.
 - 19.7 Sign and date the log sheet.
 - 19.8 Blood and culture swabs shall be placed in the refrigerator. Make sure the refrigerator door is closed.
 - 19.9 Blood Cultures shall be placed into the incubator. Make sure the incubator door is closed properly
20. The empty transport cooler shall be brought to TGLN's "Utility Room" and cleaned with the appropriate cleaner immediately.



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RegenMed

21. Musculoskeletal tissue shall be shipped at wet ice temperatures (temperatures above freezing ($\geq 0^{\circ}\text{C}$) to 10°C).
22. The transportation provider will be contacted to deliver the tissue. This provider will make all transportation arrangements including booking the flight. See Appendix 1.
23. RegenMed will make arrangements for empty transport containers to be returned to TGLN.

Time Restrictions and Storage Conditions – Pre and Post Mortem Blood

24. The following is a summary of instructions on blood sample storage and shipping requirements:
 - 24.1 Blood samples should be refrigerated as soon as possible following collection, and must be refrigerated within twenty-four (24) hours of collection.
 - 24.2 Blood samples are shipped in an approved cooler, which has been validated to maintain a temperature above freezing ($\geq 0^{\circ}\text{C}$) to 10°C .
 - 24.3 Samples may be stored prior to shipment at above freezing ($\geq 0^{\circ}\text{C}$) to 10°C in an approved shipper for up to forty-eight (48) hours. Record storage dates and times and utilize a new approved shipper when preparing the samples for transport.
 - 24.4 Serum and plasma must be separated within twenty-four (24) hours of blood sample collection.
- 25 The top of the box shall be labelled with “Exempt Human Specimen” as required by Transport Canada and the International Air Transport Association (IATA) and as defined in the U.S. Code of Regulations Title 49: Transportation. The words can be written directly on the box if a label is unavailable.
- 26 Blood samples are shipped with the tissue, see packaging instructions in *CPI-9-511 Blood Collection*.

Time Restrictions and Storage Conditions for Culture Swabs (RegenMed/MSAT)

- 27 DO NOT freeze culture swabs.
- 28 Culture swabs may be stored for a maximum of seven (7) days if refrigerated at 2°C - 8°C , including four (4) days at ambient temperature.



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- 29 If the swabs are not shipped the same day that they are obtained, the swabs should be refrigerated as soon as possible to maximize the length of time before the samples are outdated.
- 30 Culture swabs are shipped in the cooler with the tissue.
- 31 The top of the box shall be labelled with “Exempt Human Specimen” as required by Transport Canada and the International Air Transport Association (IATA) and as defined in the U.S. Code of Regulations Title 49: Transportation. The words can be written directly on the box if a label is unavailable.

Records:

- No Records

References:

- American Association of Tissue Banks Current Standards for Tissue Banking D5.900
- *Musculoskeletal Tissue Recovery Process Instruction, CPI-9-529*
- *Tissue and Transport Labelling Process Instruction, CPI-9-534*



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Appendix 1: Booking Prime Time Service for Tissue Transport

1. Select the appropriate dispatch form. Note: These forms are tissue specific, a form will need to be submitted for each tissue type.
2. Fill in the following information on the form (highlighted with red writing):
 - a. **Ready Date/Time:** This is the time that the shipment will be ready for the service to pick up. Note: Prime Time Messenger requires 2 hours notice for all pickups.
 - b. **Shipment Reference:** Include TGLN donor number here. This should also be referenced in the initial dispatch email.
 - c. **Pickup Name and Address:** This is the name and address of the recovery site. Please include the full address in this section. **Ensure the entrance location is clearly outlined as well.**

Air Canada Cargo Considerations: You will be able ship RegenMed MS tissue only from Air Canada Cargo from the following list of locations if you are within a 90-minute radius of the airport. Otherwise, you will be bringing the MS tissue back with you to the TGLN main office to ship.

- I. North Bay
- II. Ottawa
- III. Sault Ste. Marie
- IV. Sudbury
- V. Timmins
- VI. Thunder Bay (pick up for direct delivery)

Notes/Considerations:

- This is a fillable form. You will not be able to alter any of the information in any of the boxes not listed above.
 - MSAT MS tissue, Skin and HV tissues must be brought back with the MTRC team to the Bay Street office for pickup when recovering in a region outside the GTA.
 -
3. Email form to NFO@dif.ca, Sasha Rice, Alex Deveza
 - Ensure to reference the TGLN number in the initial dispatch email
 - A confirmation email will be sent to confirm they have received the email and confirm the pickup time.
 - If you do not receive an email confirmation you can contact dispatch at 905-300-4458
 - Ensure that a MTRC is able to meet the transportation service at the specified time of pick up and location.