

## Shipment of frozen Embryos/Sperm/Oocytes

IVF/Andrology laboratories or Cryobanks are often asked by the owners of embryos, sperm or oocytes stored at their facility to ship these embryos/sperm/oocytes to other facilities located in a different state, to another facility within the same state, or out of the country. Shipping is handled using a standard courier e.g., FEDEX or UPS. These biological tissues must be shipped in a cryopreserved state at very low temperature in order to maintain viability of the tissue. In order to maintain the temperature of approximately  $-180^{\circ}\text{C}$ , which is essential to maintain these materials at the frozen stage, laboratories use a special shipping container which can hold liquid nitrogen vapors during the transportation. These containers are called dry shippers. It is the only currently available method to transport these biological tissues in a frozen state. Once these shippers are fully charged with liquid nitrogen they can maintain the temperature below  $-180^{\circ}\text{C}$ . for at least 7 days. However, despite the best preparation of the dry shipper, there are few risks involved with shipping these tissues which are outlined below:

1. These tanks can experience mechanical failure due to which liquid nitrogen can escape. If this occurs, the temperature may rise above a safe level resulting in thaw of the biological material rendering them nonviable.
2. If the dry shipper is not fully charged with liquid nitrogen by the lab shipping the tissue prior to loading the tissue into the tank, then it may not maintain the liquid nitrogen vapors at a sufficiently safe level which may result in thawing of the tissue.
3. To maintain the largest amount of liquid nitrogen in the shipper, the tanks should always be kept vertical during the transport by courier services. Studies have shown that tanks transported horizontally may lose liquid nitrogen faster and therefore may not maintain the proper temperature properly to keep the tissue frozen during the transport. This will result in thawing of the tissue and the loss of viability. There is no ability of the shipping or receiving laboratory to monitor the status of the tank during shipping.
4. Delays in the transport can happen due to unforeseen circumstances beyond the control of the laboratory, such as a missed/delayed flight, or transportation disruption due to bad weather or other unanticipated failure in transportation. Such delays may make it possible for these tanks to remain at the warehouse for a longer than anticipated period and tanks may discharge the liquid nitrogen resulting in thawing of the tissue. Other risks of transport such as damage to the tanks due to accidents, flooding can occur.
5. It is possible for the tank to be delivered to an incorrect location or be lost by the shipping courier.
6. Standard shipping contracts specifically exclude the courier from liability for the loss or destruction of human biological material during handling or transportation.

CONSENT TO FULLY RELEASE AND PROMISE NOT TO SUE  
THE UNIVERSITY OF ROCHESTER AND ITS REPRESENTATIVES FOR NEGLIGENCE

I/We \_\_\_\_\_ have read the above-  
described information regarding the risks associated with shipping of my/our biological material  
(described as \_\_\_\_\_) and wish to voluntarily have this material  
removed from storage at the University of Rochester (or alternatively from \_\_\_\_\_),  
and permit Cryoport (or shipper selected by us, \_\_\_\_\_) to ship this material to  
\_\_\_\_\_.

I/We understand the risks of shipping biological material, including that the material may be destroyed  
and unavailable to use in the future.

All such risks are being assumed knowingly and voluntarily.

I/We will not hold the University of Rochester, its employees and agents responsible for any damage or  
harm that results from the process of shipping the biological material.

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Date

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Print Name(s)

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Signature(s)