National Specimen Transport Supply Program: Guidance for Sustainable Use of Supplies

Association of Public Health Laboratories (APHL) and US Centers for Disease Control and Prevention (CDC)

This document is intended to provide guidance on how the supplied materials can be implemented into a sustainable, tiered specimen transport system. However, note that the number of high-efficiency coolers provided is insufficient to meet the needs of all specimen transport activities. Therefore, we recommended that coolers be used to support the national laboratories within the country. To do this, national laboratories will need to identify the regional and district laboratories they support which have the greatest specimen transport needs.

Allocation of Supplies

It is recommended that two coolers be assigned to each identified site (national laboratory, regional and/or district). Store coolers in a secure location to prevent personal use or theft of these coolers. Coolers should be labeled in black impermeable marker with the name and contact telephone number of the issuing laboratory.

By triple packaging samples for transport, the coolers do not need to enter the laboratory area where they risk being contaminated. The secondary containers can be removed at the facility specimen receiving area, and replacement secondary containers, which have been decontaminated, can be obtained. The cooler and clean secondary containers can then be taken back to the sending laboratory by the courier. However, in the event that the secondary container cannot be removed from the tertiary container prior to entering the laboratory area, both can be decontaminated and reused.

If the courier comes from the receiving laboratory, they should bring coolers and secondary containers to replace those being collected from the sending laboratories. This will prevent coolers and secondary containers from accumulating at the receiving laboratory, rendering them unavailable to the sending laboratory for future specimen shipments.

Unloading Samples

Removing the samples from their secondary containment in the lab presents the highest risk of agent exposure from leaking or broken primary sample containers. Secondary containers that contain the transported samples should be taken into the laboratory and opened within a biosafety cabinet while wearing appropriate personal protective equipment (PPE). Laboratories need to have a Specimen Shipping Logbook to record information concerning all lab specimens shipped and received by the laboratory.

Decontaminating Supplies

Secondary containers can be soaked or wiped down with a 10% bleach solution (made fresh daily) for 10 minutes, followed by a rinse with ethanol or water to make them safe for future use; this same method may also be used to decontaminate the coolers on a periodic basis. The ethanol or water rinse will help maintain the cooler’s integrity.

Securing Samples

Programmable padlocks (supplied with the coolers) will allow increased biosecurity during specimen transport. We recommend establishing a standard combination for use by all laboratories. Unique combinations can be used for exceptional high-risk shipments or as needed.

Cold Chain Transport

Frozen commercial water bottles will work, as well as freezer packs or wet ice, for shipping samples at 4 degrees Celsius. Add a small amount of dirt to the water bottle and mark “Do Not Drink” to prevent its consumption after use.

A CDC study has shown that these coolers will maintain ice for up to three days, if sealed tightly and not opened repeatedly.

Dry ice can be used to ship frozen samples, if the cooler pressure release valve (marked in red in photo) is opened during transport.

The lock shaft will need to be at a 90 degree angle to the lock body for it to fit on these coolers.