VERMONT
DEPARTMENT OF HEALTH

Vaccine Carrier Assembly Tutorial

December 2024

A vaccine carrier is a portable, temperature-controlled system designed to maintain vaccines within their required temperature range during transportation. Vaccines need to be stored at precise temperatures to ensure their efficacy, and a well-built vaccine carrier plays a crucial role in preventing vaccine waste.

This tutorial will guide you through the process of assembling a **TempArmour® Vaccine Carrier** that is capable of maintaining the correct temperature for vaccines.

Materials required:

- TempArmour® Vaccine Carrier
- Teal refrigerated panels (6)
- Infrared Thermometer
- LogTag® Data Logger and glycol bottle

Storage of Panels

- There are two methods for conditioning the refrigerated panels: using a refrigerator (preferred) or a freezer. You can condition the panels in a refrigerator set to a consistent temperature. Panels stored in a refrigerator may or may not allow the liquid inside to solidify. **Note**: A panel that has not solidified but shows an appropriate infrared temperature, is still suitable for use. Alternatively, the freezer may be the quicker option, but the conditioning process could be lengthy depending on the freezer's temperature and the ambient room temperature. To condition the panels in the freezer, place them with space between each panel in a freezer maintaining a steady temperature of -23°C or colder.

Storage of Glycol bottle for LogTag® Device

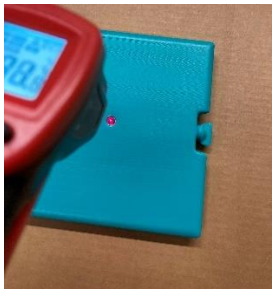
- The Glycol bottle should be stored with refrigerated panels, at a temperature between 2°C and 8°C. Storing them together ensures an equivalent temperature for all materials.

Temperature Readings on Panels

- Keep the refrigerator doors and vaccine carrier lid closed as much as possible during the assembly process.

- Remove one panel at a time.

- The temperature of the panel should be measured using the infrared thermometer, with the laser pointed at the circle on the back of the panel, at an equal distance on each panel. We are aiming for 4 - 5 °C, the warmer the panels the less time you will have at a clinic.



Assembling the Vaccine Carrier

- The first panel will be placed at the bottom, label side up.

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- The next four panels – two long and two short – will fit into place against the walls of the vaccine carrier, with the finger grips at the top facing inwards.

- Remove the glycol bottle from the refrigerator. **Note: Do not handle the bottle with your fingertips. Hold the bottle by the wire or the cap.** It is very important not to transfer body heat, as this could affect the accuracy of the temperature reading. Place the glycol bottle immediately at the bottom of the vaccine carrier, ensuring it is free from obstructions. The wire should exit from the right side of the carrier. Place the final refrigerated panel on the top, label side down.

- Close the lid and secure it with the buckles.

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- Only vaccines in their original manufacturer packaging or an approved depot vial box, along with the glycol bottle, are allowed inside the vaccine carrier. **No bubble wrap, paper, or other materials are allowed.**
  - The equipment ID on the LogTag® and the sticker on the wire should match.

- Plug the glycol bottle wire into the corresponding LogTag® data logger. Press the start button on the LogTag® to begin temperature monitoring.

- Store the monitored LogTag® in the clear zippered viewing area, with any excess wire. Your LogTag® device is programmed to monitor every five minutes.

Temperature Range

- Ensure that the carrier can maintain the required temperature, which for refrigerated vaccines is between 2°C and 8°C. Monitor closely for 20–30 minutes and verify that the temperature is stable before placing the vaccine in the carrier. **If temperature is not stable, do not add vaccine. Continue to monitor, and refer to your regional Immunization Specialist to troubleshoot temperature instability.** Once stable monitoring has been achieved, the vaccine may be placed in its original manufacturer packaging into the vaccine carrier. Keep the lid closed at all times when not in use to maintain stable temperatures.