

## Steps to prepare an insulated container (and related material) prior to transportation or storage

1. Pre-chill the insulated container by placing icepacks inside the insulated container for at least 1 hour. After the hour, remove all icepacks.
2. Precondition icepacks. Vaccines are vulnerable to freezing when transported in an insulated container if icepacks have not been correctly conditioned. Icepacks come out of the freezer at a temperature of approximately  $-20^{\circ}\text{C}$ . Keeping the icepacks at room temperature for a period of time allows the ice at the core of the icepack to rise to  $0^{\circ}\text{C}$ . This process is called **"conditioning."** An icepack is adequately conditioned as soon as beads of water cover its surface. The conditioning process usually takes approximately 20 to 30 minutes.
3. Prepare your temperature monitoring device. (See details on page 8.)
4. Ensure that all other items necessary to pack the insulated container are ready and easily accessible.

■ **Ice and/or gel packs must be correctly conditioned before use. The risk of freezing vaccines increases if the icepacks/gel packs are not correctly conditioned.**

■ **Incorrect use of gel packs is even riskier than icepacks because the gel packs remain colder than  $0^{\circ}\text{C}$  for longer than icepacks.**

■ **Freezing episodes happen very easily in all coolers, usually in the first 2 hours after packing.**

■ **Pre-chill the cooler before use.**

## Steps to packing an insulated container (and related material) prior to transportation or storage

Freezing episodes happen very easily in all insulated containers, usually in the first 2 hours after packing.

To ensure vaccines arrive at the destination safely:

1. Place 1 or 2 icepacks at the bottom of the insulated container.
2. Place a pre-conditioned ( $+2^{\circ}\text{C}$  to  $+8^{\circ}\text{C}$ ) ice blanket(s) on top of the icepacks.
3. Place the vaccine package on top of the ice blanket(s).
4. Position the temperature monitoring device or the sensor in the centre of the vaccine package.
5. Insulation material (e.g., bubble wrap, newspaper) may be loosely wrapped around the vaccine packages. This allows for cool air circulation around the vaccines and minimizes the risk of "hot" or "cold" spots.
6. Place another pre-conditioned ice blanket(s) over the vaccine.
7. Place 1 or 2 pre-conditioned icepacks on top of the ice blanket(s).
8. Add newspaper or bubble wrap as necessary to fill vertical void.
9. Clearly mark all insulated containers storing vaccine with the following label: "VACCINES – STORE BETWEEN  $+2^{\circ}\text{C}$  to  $+8^{\circ}\text{C}$ ."

■ **Correctly packing a cooler reduces the risk of freezing.**

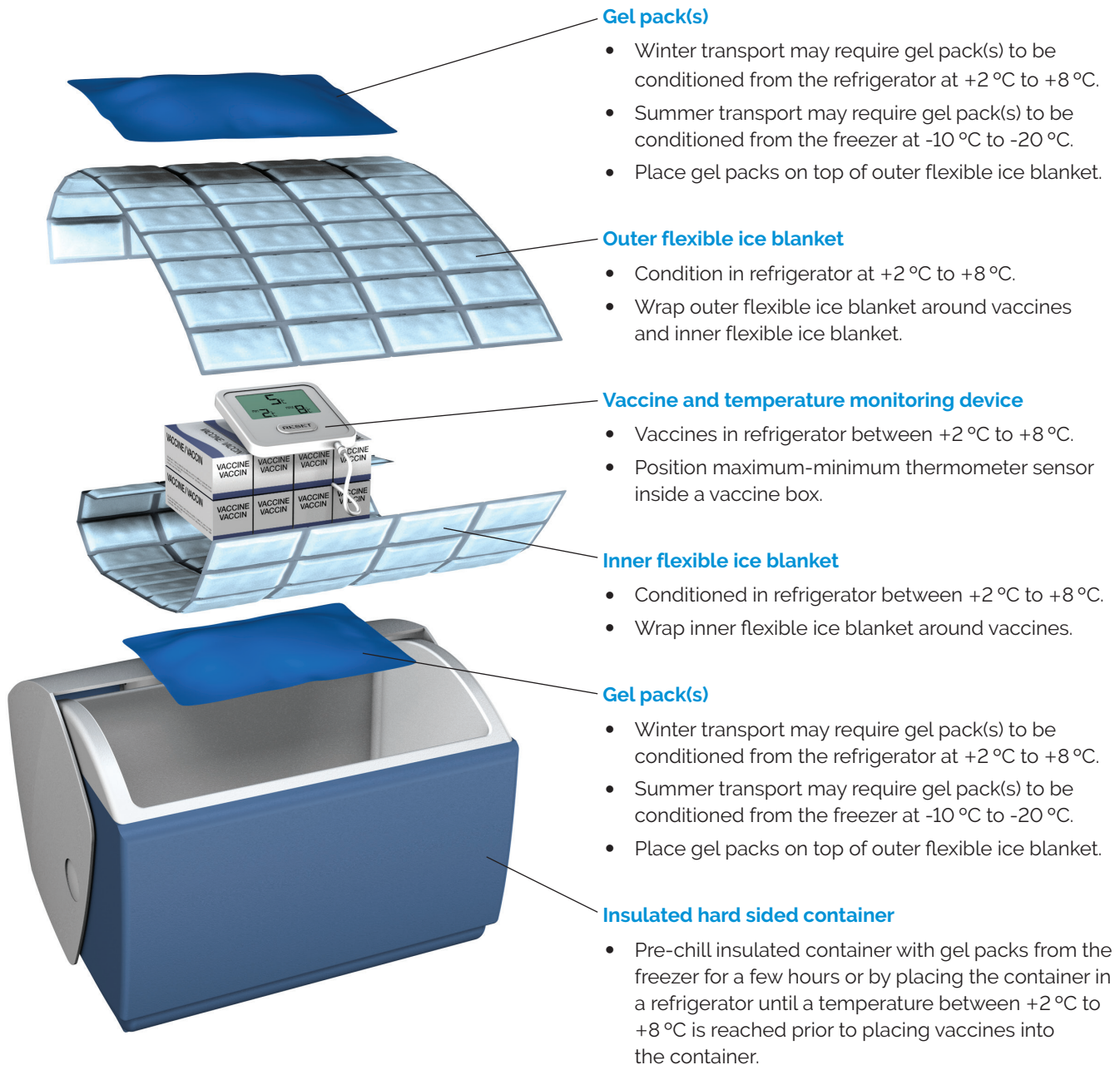
Experiment to find the correct combination of icepack(s) and/or gel pack(s) to ensure the insulated container is able to maintain the required temperatures for:

1. The maximum length of time the vaccine might have to be in the insulated container;
2. The amount of vaccines to be transported; and
3. The external temperatures (e.g., winter climate vs. summer climate).

■ **Experiment to find the correct combination of icepack(s) and/or gel pack(s) to ensure the insulated container is able to maintain the required temperatures.**

# Ministry of Health

## Detailed instructions on how to pack an insulated container:



**Note:** Additional icepacks may be required depending on cold-life needed for the length of transport. Additional insulating material (e.g., bubble wrap, Styrofoam chips, crumpled or shredded newspaper) should be placed inside (bottom, top and sides) the insulated container to allow for cool air circulation.