

Using storage units to keep vaccines at adequate temperatures protects vaccine and helps ensure vaccine viability. We wrote this guide to help providers who have questions about auto-defrosting or frost-free storage units. The Centers for Disease Control and Prevention (CDC) sets requirements for storage units holding vaccine. Currently, the CDC **does not require** auto-defrosting units for vaccine storage. However, auto-defrosting units are *recommended* for vaccine storage.

### **What is an Auto-Defrosting Storage Unit?**

An auto-defrosting storage unit removes condensation and ice inside the unit as it runs. The unit cycles warmer temperatures to melt any ice formed inside. The unit will have a drip tray to collect the melted ice. The auto-defrost feature makes units easier to maintain.

### **What is a Frost-Free Unit?**

The term 'frost-free' is applied to freezer units and can have the same meaning as 'auto-defrost'. A frost-free freezer will cycle warmer temperatures to remove ice, or use a fan to blow dry air around the inside of the unit. The term is not always the same as 'auto-defrost,' so check with the manufacturer for specific details.

### **What are Important Considerations when Using an Auto-Defrosting Storage Unit?**

Auto-defrosting units:

- Prevent ice or frost on stored items.
- Handle humidity better.
- Allow for better organization of stored items than a chest unit.
- Are recommended by the CDC.
- Use more electricity.
- Cost more than manual defrost units.
- Fluctuate in temperature.
- Make more noise during defrost cycles.

### **When using an Auto-Defrosting or Frost Free Unit**

- Monitor internal temperatures for a week before you use the unit. Compensate for temperature variations as needed.
- Stabilize temperatures in the unit during the auto-defrost cycle by storing coolant packs or water bottles.
- Clean the drain pan once a month to prevent mold.

### **Where Can I Purchase an Auto-Defrosting Unit?**

Please see our storage unit recommendation guide. The guide has a list of companies that produce units that meet CDC requirements.

## **Handling Out of Range Temperatures with Auto-Defrosting Units**

The CDC Vaccine Storage and Handling Toolkit notes, “Normal defrost cycles and busy workdays can lead to slight temperature variations that are not necessarily indicative of inappropriate vaccine temperatures.” In order to reduce the likelihood of a temperature excursion during the auto-defrost cycle, please follow these steps:

### *FOR FREEZER UNITS*

- Adjust the thermostat so freezer temperature stays between -58°F (-50°C) and +5°F (-15°C).
- Add coolant packs along the walls, back, and bottom of the freezer and inside the racks of the freezer door. Frozen coolant packs in the freezer door should be placed securely so they cannot dislodge and prevent the unit door from closing.
- Limit the number of times the freezer door is opened.

If you have followed these steps and have out of range temperatures with your auto-defrosting unit:

- Confirm the temperature excursions are because of the auto-defrost cycle.
- Identify the temperature and the length of time the unit has been out of range.
- If the excursion is less than 5°F out of range for less than 60 minutes, take note of it.
- If the excursion is over 5°F out of range or has been out of range for more than 60 minutes, follow standard vaccine emergency procedures.

### *FOR COMBINATION UNITS*

If you have a combination unit, your refrigerator’s temperature may be affected by freezer temperatures.

- Adjust the thermostat so refrigerator temperatures stay between 36°F (2°C) and 46°F (8°C).
- Be aware that changing the freezer thermostat on a combination unit will affect temperatures in the refrigerator.
- Stabilize refrigerator temperature by placing filled water containers against walls and door racks.
- If you have followed these steps and have out of range temperatures with your refrigerator in a combination unit, follow standard vaccine emergency procedures.

If you ever have doubts or concerns about temperature excursions, always refer to the manufacturer of the vaccines for help.