

Vaccine Storage Unit Thermometer Guide

Washington State Childhood Vaccine Program

Using accurate thermometers protects your vaccine. It also helps make sure you give safe and effective vaccines to your patients. This guide shows federal and Washington State requirements for vaccine storage unit thermometers. It includes examples of thermometers that meet these requirements.

Thermometer Requirements

Clinics storing state-supplied vaccine must:

- Use at least one (“primary”) thermometer with a current certificate of calibration in each refrigerator and freezer.
- Use the “primary” thermometer to visualize and record vaccine storage unit temperatures twice a day.
- Buy thermometers through a scientific supply company or other specialized vendor; not a hardware store.
- Keep the current certificate of calibration handy. You will need to show it during your Vaccines for Children site visits.
- Follow the manufacturer’s recommendations for recalibration. This makes sure your thermometers accurately measure vaccine storage unit temperatures.

Thermometer Recommendations

- Use a back-up thermometer with a current certificate of calibration in each refrigerator and freezer.
- Ask your vendor if the thermometer comes with a certificate of calibration.
- Contact the Office of Immunization and Child Profile if you have questions about which thermometer brands and models meet the requirements.

What is a Certificate of Calibration?



The certificate of calibration shows the thermometer’s true level of accuracy, measured against a National Institute of Standards and Technology (NIST) or American Society for Testing and Materials standard. When you buy a thermometer, you’ll get this certificate, which assures the accuracy for a certain period. You can get another certificate when your thermometer gets recalibrated. Some vendors charge for the

certificate.

What is Recalibration?

Recalibration means the thermometer was tested and adjusted to keep its accuracy after purchase. Most manufacturers recommend recalibration every one or two years.

Vaccine Storage Unit Thermometer Types and Examples

All thermometers talked about in this guide meet program requirements and correctly record vaccine storage unit temperatures. **Remember, your thermometer must have a current certificate of calibration.** The third column below shows which thermometers come with a certificate of calibration and which ones require you to request or pay extra for the certificate.

We made this list for your information only. We do not endorse specific vendors or products. It includes examples of current vendors and products to show the range of types, options, and prices to meet specific provider needs. You can buy other thermometers not on this list but that also have certificates of calibration that meet program requirements.







Type	Model/Features	NIST Certificate	Example Manufacturer / Vendor
Digital	Easy to read. Some have alarms and remote temperature probes. About \$50-\$100, each depending on accessories and price of certification.		
	Models MM120 (one-probe); MM125 (two-probe) for refrigerator and freezer. Digital display and remote sensor.	Must ask/pay for certificate	Dickson Co. www.dicksondata.com/
	Model 12213 for refrigerator and freezer. Digital display and remote sensor.	Must ask/pay for certificate	DeltaTRAK Inc. www.deltatrak.com/
	Streck Temp-Chex Digital Thermometer Model 240056 for refrigerator and freezer. Digital display and remote sensor.	Standard-no extra cost	Streck www.streck.com/
	Fisher Scientific* Traceable series digital thermometers for refrigerator and freezer.	Standard-no extra cost	Fisher Scientific www.fishersci.com/
Digital Data Logger	Reads the temperature inside the unit at all times, 24 hours a day, and records it in the unit's memory. You must download the data to a computer to view or print. Continuous reading thermometers are the most effective tool to track the refrigerator/freezer temperature over time. About \$100-\$200, each depending on accessories and price of certification.		
	USB data logger for refrigerator and freezer. Model VFC5000-TC has LCD display and remote sensor. Other models available.	Must ask/pay for certificate	Lascar electronics. Available through Control Solutions Inc. www.vfcdataloggers.com/ . Other vendors sell USB data loggers.
	Model SP425 for refrigerator and freezer. Data logger with LCD display	Must ask/pay for certificate	Dickson Co. www.dicksondata.com/

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Type	Model/Features	NIST Certificate	Example Manufacturer / Vendor
Mechanical Data Logger	Records the temperature inside the unit at all times, 24 hours a day, on paper. You must change the paper when it runs low. Continuous reading thermometers are the most effective tool to track the refrigerator/freezer temperature over time. About \$350 each with charge for certification.		
	Model VFC70 for the refrigerator and freezer.	Must ask/pay for certificate	Dickson Co. www.dicksondata.com/
Standard Fluid Filled	Easy to see and read temperatures. About \$50-\$100 each.		
	Model T210-11T for refrigerator (5 to 15°C); Model T120-22 (-30 to 0°C)	Standard -no extra cost	MG Scientific www.mgscientific.com/
	Streck Temp-Chex Models 240052/240043 for refrigerator (-5 to +15°C), Model 240046 for freezer (-30 to +1°C)	Standard -no extra cost	Streck www.streck.com/
	Fisherbrand* Exact-Temp 150 and 151 series for refrigerator or freezer.	Standard -no extra cost	Fisher Scientific www.fishersci.com/
Dial 	Not the most accurate. May be hard to find models that have a certificate of calibration.		
Minimum / Maximum 	Shows the highest and lowest temperatures reached. Fluid-filled types can be hard to read. Some digital thermometers show minimum and maximum temperatures.		
Digital Built-In	Comes as a standard or optional accessory on commercial lab or medical-grade refrigerators/freezers. Before you buy one, ask if the built-in thermometer has a certificate of calibration. If not, you must use a stand-alone thermometer with a certificate as the primary thermometer.		