

Required Thermometer Specifications

December 2024

Overview

NCIP participants are required to use a digital data logger thermometer with the minimum requirements listed below. A thermometer that does meet these requirements should not be used to read and record temperatures.

Digital Data Logger Requirements:

1. Probe Requirements:
 - **Detachable Buffered Probe:** Must be used, and the probe must be capable of being centrally located near the vaccines for accurate temperature monitoring.
2. Accuracy:
 - The thermometer must maintain an accuracy of $\pm 0.5^{\circ}\text{C}$ (1°F) or better.
3. Calibration:
 - **Valid Certificate of Calibration** or a **Report of Calibration testing**, is required.
 - The certificate must indicate one or more of the following:
 - a) Compliance with **ISO 17025** or testing by an ILAC MRA (International Laboratory Accreditation Cooperation) signatory laboratory.
 - A list of ILAC/MRA signatories may be found at [ILAC.org/ILAC-MRA-and-signatories/](https://ilac.org/ILAC-MRA-and-signatories/)
 - b) Traceability to NIST (National Institute of Standards and Technology) standards.
 - c) Compliance with **ASTM Standard E2877 Tolerance Class F** ($\leq 0.5^{\circ}\text{C}$).
 - Calibration Certificate Must Include:
 - a) Clearly identifiable accreditation (e.g., ILAC/MRA signatory).
 - b) Model number of the probe.
 - c) Serial number of the probe.
 - d) Date of calibration (report or issue date).
 - e) Measurement results demonstrating that the unit passed the test, with documented uncertainty within the $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$) range.
 - f) Current, minimum, and maximum temperatures clearly visible.
 - g) Alarm notification for out-of-range temperatures.
 - h) Low battery indicator.
 - i) Downloadable capabilities.
 - j) User-programmable logging interval, with a maximum of 30 minutes.

Temperature Monitoring Requirements

To remain compliant with program requirements, NCIP participants are required to maintain the following on their digital data logger thermometers:

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1. Location & Recording:
 - The digital data logger thermometer must be centrally located near the vaccines.
 - **Manual Temperature Recording:** Temperatures must be manually recorded **once per day**, including on half-days.
 - **Clear Min/Max Readings:** The thermometer’s minimum/maximum temperature readings should be manually recorded and cleared **once a day** when the clinic opens.
2. Log Maintenance:
 - Temperature logs should be posted on the vaccine storage unit and copies must be retained for **3 years**.
 - Ensure all records include:
 - Time of reading.
 - Name or initials of the person conducting the temperature check.
3. Data Review:
 - Download and review data logger readings weekly to ensure continuous monitoring.
4. Calibration Requirements:
 - Calibration of the digital data logger thermometer should occur **every 2 years** (or as per the manufacturer’s recommended schedule).
 - Maintain a valid and **up-to-date certificate of calibration**.
5. Backup Digital Data Logger:
 - Maintain a backup digital data logger with a different calibration date than the primary digital data loggers

Digital Data Logger Thermometer Models

All thermometers must be digital data loggers. The models listed below meet the minimum requirements. *NCIP does not recommend any specific brand or supplier of digital data logger thermometers.*

Table: 1.1 Approved Digital Data Logger Thermometers

| Product Name | Brand | Website |
|--|---------------|---|
| Aegis Remote Temperature Monitoring for Vaccine and Product Storage (Model: SNT X1 Web enabled with glycol bottle and A2LA Calibration Certificate) | Aegis | aegisfridge.com |
| Berlinger Fridge-tag® 2L Vaccine Thermometer Data Logger (Refrigerator model and freezer model) | Berlinger USA | berlinger.com fishersci.com ; us.vwr.com |
| DeltaTrak® FlashLink® Certified Vaccine USB PDF Data Logger (Models 20932, 20938, or 40527) | DeltaTrak | deltatrakvfc.com ; deltatrak.com |

| | | |
|---|-------------------|--|
| InTemp® VFC Bluetooth Low Energy Temperature (with Glycol) Data Logger (Model: CX402-VFCxxx) | Onset | onsetcomp.com |
| McKesson Datalogging Refrigerator / Freezer Thermometer (Fahrenheit / Celsius -58° to +158°F (-50° to +70°C, Models: MCK80021P, MCK80022P) | McKesson | mms.mckesson.com |
| SensoScientific (with bi-annual A2LA Calibration, Models: B11- 200-XV10C, B10-202-XV10C, B10-202-K202C, B80-202-OTA) | SensoScientific | sensoscientific.com |
| Temperature Guard VM605 E (with A2LA Calibration Certificate) | Temperature Guard | temperatureguard.com |
| Thermco® Vaccine Temperature Data Logger (Model: ACCRT8002, Software- Less Reporting) | Thermco | thermcoproducts.com ; amazon.com ; mms.mckesson.com |
| Traceable® Excursion-Trac™ Datalogging Refrigerator or Freezer Thermometer (Models: 6430, 6431, 6437, or 6438, with glycol or vaccine bottle) | Traceable | traceable.com ; fishersci.com |
| Traceable® Memory-Loc™ Datalogging Refrigerator or Freezer Thermometer (Models: 6440, 6441, 6447, or 6448, with bottle or vaccine bottle) | Traceable | traceable.com ; fishersci.com |
| TraceableLIVE®™ Refrigerator/ Freezer Datalogging Traceable Thermometer (Model: 6500 with glycol bottles) | Traceable | traceable.com ; fishersci.com |

Note: Digital temperature displays must be maintained in the same room as the refrigerator/freezer unit(s) so temperatures can be easily read from the outside of the unit. Web-based products must have a display or computer in the same room as the refrigerator/freezer unit(s) with a battery back-up connected to the computer to ensure no interruption in power to the digital data logger.

For assistance, contact the NCIR Help Desk
 Phone: 1.877.USE.NCIR (873-6247)
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