



Temperature Log for Refrigerator – Fahrenheit

DAYS 1–15

Monitor temperatures closely!

1. Write your initials below in “Staff Initials,” and note the time in “Exact Time.”
2. If using a temperature monitoring device (TMD; digital data logger recommended) that records min/max temps (i.e., the highest and lowest temps recorded in a specific time period), document current and min/max *once* each workday, preferably in the morning. If using TMD that does not record min/max

temps, document current temps *twice*, at beginning and end of each workday.

3. Put an “X” in the row that corresponds to the refrigerator’s temperature.
4. If any out-of-range temp observed, see instructions to the right.
5. After each month has ended, save each month’s log for 3 years, unless state/local jurisdictions require a longer period.

For information on storage and handling of COVID-19 vaccines, see the **COVID-19 Vaccine Addendum** in CDC’s updated *Vaccine Storage and Handling Toolkit* at www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html.

Month/Year _____ VFC PIN or other ID # _____

Facility Name _____

Take action if temp is out of range – too warm (above 46°F) or too cold (below 36°F).

1. Label exposed vaccine “do not use,” and store it under proper conditions as quickly as possible. Do not discard vaccines unless directed to by your state/local health department and/or the manufacturer(s).
2. Record the out-of-range temps and the room temp in the “Action” area on the bottom of the log.
3. Notify your vaccine coordinator, or call the immunization program at your state or local health department for guidance.
4. Document the action taken on the attached “Vaccine Storage Troubleshooting Record.”

Day of Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Staff Initials																
Exact Time	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Min/Max Temp in Unit (since previous reading)																

Danger! Temperatures above 46°F are too warm! Write any out-of-range temps and room temp on the lines below and call your state or local health department immediately!

TEMPERATURES	46°F															
	45°F															
	44°F															
	43°F															
	42°F															
Aim for 41°	41°F															
ACCEPTABLE	40°F															
	39°F															
	38°F															
	37°F															
36°F																

Danger! Temperatures below 36°F are too cold! Write any out-of-range temps and room temp on the lines below and call your state or local health department immediately!

ACTION	Write any out-of-range temps (above 46°F or below 36°F) here:															
	Room Temperature															

If you have a vaccine storage issue, contact your state or local health department for guidance and complete the attached “Vaccine Storage Troubleshooting Record.”

DISTRIBUTED BY THE

IMMUNIZATION ACTION COALITION

Mississippi State Department of Health

Saint Paul, Minnesota • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

Adapted with appreciation from California Department of Public Health

www.immunize.org/catg.d/p3037F.pdf • Item #P3037F (8/21)



Temperature Log for Refrigerator – Fahrenheit

DAYS 16–31

Monitor temperatures closely!

1. Write your initials below in “Staff Initials,” and note the time in “Exact Time.”
2. If using a temperature monitoring device (TMD; digital data logger recommended) that records min/max temps (i.e., the highest and lowest temps recorded in a specific time period), document current and min/max *once* each workday, preferably in the morning. If using TMD that does not record min/max

temps, document current temps *twice*, at beginning and end of each workday.

3. Put an “X” in the row that corresponds to the refrigerator’s temperature.
4. If any out-of-range temp observed, see instructions to the right.
5. After each month has ended, save each month’s log for 3 years, unless state/local jurisdictions require a longer period.

For information on storage and handling of COVID-19 vaccines, see the **COVID-19 Vaccine Addendum** in CDC’s updated *Vaccine Storage and Handling Toolkit* at www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html.

Month/Year _____ VFC PIN or other ID # _____

Facility Name _____

Take action if temp is out of range – too warm (above 46°F) or too cold (below 36°F).

1. Label exposed vaccine “do not use,” and store it under proper conditions as quickly as possible. Do not discard vaccines unless directed to by your state/local health department and/or the manufacturer(s).
2. Record the out-of-range temps and the room temp in the “Action” area on the bottom of the log.
3. Notify your vaccine coordinator, or call the immunization program at your state or local health department for guidance.
4. Document the action taken on the attached “Vaccine Storage Troubleshooting Record.”

Day of Month	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Staff Initials																
Exact Time	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Min/Max Temp in Unit (since previous reading)																

Danger! Temperatures above 46°F are too warm! Write any out-of-range temps and room temp on the lines below and call your state or local health department immediately!

TEMPERATURES	46°F															
	45°F		Page 1 of 2							F-670 Refrigerator						
	44°F															
	43°F															
	42°F															
Aim for 41°	41°F															
ACCEPTABLE	40°F															
	39°F															
	38°F															
	37°F															
	36°F															

Danger! Temperatures below 36°F are too cold! Write any out-of-range temps and room temp on the lines below and call your state or local health department immediately!

ACTION	Write any out-of-range temps (above 46°F or below 36°F) here:															
	Room Temperature															

If you have a vaccine storage issue, contact your state or local health department for guidance and complete the attached “Vaccine Storage Troubleshooting Record.”

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Vaccine Storage Troubleshooting Record

(check one) **Refrigerator** **Freezer** **Ultra-Cold Freezer**

Use this form to document any unacceptable vaccine storage event, such as exposure of refrigerated vaccines to temperatures that are outside the manufacturers' recommended storage ranges.

A fillable pdf of this form is available at www.immunize.org/catg.d/p3041.pdf

Date & Time of Event <small>If multiple, related events occurred, see Description of Event below.</small>	Storage Unit Temperature <small>at the time the problem was discovered</small>		Room Temperature <small>at the time the problem was discovered</small>	Person Completing Report	
Date:	Temp when discovered:		Temp when discovered:	Name:	
Time:	Minimum temp:	Maximum temp:	Comment (optional):	Title:	Date:
Description of Event <i>(If multiple, related events occurred, list each date, time, and length of time out of storage.)</i> <ul style="list-style-type: none"> • General description (i.e., what happened?) • Estimated length of time between event and last documented reading of storage temperature in acceptable range (2° to 8°C [36° to 46°F] for refrigerator; -50° to -15°C [-58° to 5°F] for freezer; -80° to -60°C [-112° to -76°F] for ultra-cold freezer (may be used for Pfizer COVID-19 vaccine). • Inventory of affected vaccines, including (1) lot #s and (2) whether purchased with public (for example, VFC) or private funds (Use separate sheet if needed, but maintain the inventory with this troubleshooting record.) • At the time of the event, what else was in the storage unit? For example, were there water bottles in the refrigerator and/or frozen coolant packs in the freezer? • Prior to this event, have there been any storage problems with this unit and/or with the affected vaccine? • Include any other information you feel might be relevant to understanding the event. 					
Action Taken <i>(Document thoroughly. This information is critical to determining whether the vaccine might still be viable!)</i> <ul style="list-style-type: none"> • When were the affected vaccines placed in proper storage conditions? (Note: Do not discard the vaccine. Store exposed vaccine in proper conditions and label it “do not use” until after you can discuss with your state/local health department and/or the manufacturer[s].) • Who was contacted regarding the incident? (For example, supervisor, state/local health department, manufacturer—list all.) • IMPORTANT: What did you do to prevent a similar problem from occurring in the future? 					
Results <ul style="list-style-type: none"> • What happened to the vaccine? Was it able to be used? If not, was it returned to the distributor? (Note: For public-purchase vaccine, follow your state/local health department instructions for vaccine disposition.) 					

Vaccine Storage Troubleshooting Record (check one) Refrigerator Freezer Ultra-Cold Freezer

Use this form to document any unacceptable vaccine storage event, such as exposure of refrigerated vaccines to temperatures that are outside the manufacturers' recommended storage ranges.

Date & Time of Event <small>If multiple, related events occurred, see Description of Event below.</small>	Storage Unit Temperature <small>at the time the problem was discovered</small>		Room Temperature <small>at the time the problem was discovered</small>	Person Completing Report	
Date: <i>(see below)</i>	Temp when discovered: 45° F		Temp when discovered: 77° F	Name: <i>Natalie Nurse</i>	
Time: <i>(see below)</i>	Minimum temp: 38° F	Maximum temp: 53° F	Comment (optional): <i>temp is approx.</i>	Title: <i>VFC Coordinator</i>	Date: <i>6/29/21</i>
Description of Event <i>(If multiple, related events occurred, list each date, time, and length of time out of storage.)</i> <ul style="list-style-type: none"> • General description (i.e., what happened?) • Estimated length of time between event and last documented reading of storage temperature in acceptable range (2° to 8°C [36° to 46°F] for refrigerator; -50° to -15°C [-58° to 5°F] for freezer; -80° to -60°C [-112° to -76°F] for ultra-cold freezer (Pfizer COVID-19 vaccine only) • Inventory of affected vaccines, including (1) lot #s and (2) whether purchased with public (for example, VFC) or private funds (Use separate sheet if needed, but maintain the inventory with this troubleshooting record.) • At the time of the event, what else was in the storage unit? For example, were there water bottles in the refrigerator and/or frozen coolant packs in the freezer? • Prior to this event, have there been any storage problems with this unit and/or with the affected vaccine? • Include any other information you feel might be relevant to understanding the event. 					
<p><i>At 8 am on Tuesday (6/29/21) morning when clinic opened, identified 4 temperature excursions over the weekend in refrigerator with readings as high as 54°, 50°, 49° & 53°F in primary vaccine storage unit #1. Recordings taken every 15 min on calibrated digital data logger overnight. Data logger probe in glycol located in middle of refrigerator with vaccines.</i></p> <p><i>Total time out of range: approximately 3 hrs — maximum temp 53°F (see attached document of continuous temp readings)</i></p> <p><i>Inventory of vaccines: see attached</i></p> <p><i>Water bottles in refrigerator door. No vaccine stored in freezer. No problems with storage unit prior to Saturday night. Thunderstorms in area over weekend may have affected power.</i></p>					
Action Taken <i>(Document thoroughly. This information is critical to determining whether the vaccine might still be viable!)</i> <ul style="list-style-type: none"> • When were the affected vaccines placed in proper storage conditions? (Note: Do not discard the vaccine. Store exposed vaccine in proper conditions and label it "do not use" until after you can discuss with your state/local health department and/or the manufacturer[s].) • Who was contacted regarding the incident? (For example, supervisor, state/local health department, manufacturer—list all.) • IMPORTANT: What did you do to prevent a similar problem from occurring in the future? 					
<p><i>Vaccines currently stored appropriately at 41°F. Refrigerator and vaccines labeled "Do Not Use."</i></p> <p><i>My State Immunization Program contacted at 8:30 am. Spoke with Victor Vaccine. Provided Victor with details of event and list of vaccines. Vaccine to remain quarantined until we hear back from Victor.</i></p> <p><i>Called electric company and confirmed 2 short power outages during weekend.</i></p> <p><i>Checked refrigerator seals — called refrigerator maintenance company to replace seals.</i></p> <p><i>Checked plug on unit — placed tape over plug to prevent inadvertent dislodging. Plan to purchase plug guard.</i></p> <p><i>Plan to follow up with Immunization Program on data loggers with alarms that could be sent to coordinator and back-up phones.</i></p>					
Results <ul style="list-style-type: none"> • What happened to the vaccine? Was it able to be used? If not, was it returned to the distributor? (Note: For public-purchase vaccine, follow your state/local health department instructions for vaccine disposition.) 					
<p><i>Late on Monday, I talked with Victor regarding continued use of vaccine. Victor had checked with manufacturers which confirmed that vaccine is acceptable for use. He told me that vaccine could therefore be removed from quarantine. I discussed the entire situation with Susie Supervisor and Dr. Director (clinic medical director) who agreed that we could put vaccine back in use.</i></p>					

Vaccine Storage Troubleshooting Record (check one) Refrigerator Freezer Ultra-Cold Freezer

Use this form to document any unacceptable vaccine storage event, such as exposure of refrigerated vaccines to temperatures that are outside the manufacturers' recommended storage ranges.

Date & Time of Event <small>If multiple, related events occurred, see Description of Event below.</small>	Storage Unit Temperature <small>at the time the problem was discovered</small>		Room Temperature <small>at the time the problem was discovered</small>	Person Completing Report	
Date: 7/13/2021	Temp when discovered: 28° F		Temp when discovered: 77° F	Name: Natalie Nurse	
Time: 8:00 am	Minimum temp: 28° F	Maximum temp: 42° F	Comment (optional): temp is approx.	Title: VFC Coordinator	Date: 7/13/21
Description of Event <i>(If multiple, related events occurred, list each date, time, and length of time out of storage.)</i>					
<ul style="list-style-type: none"> • General description (i.e., what happened?) • Estimated length of time between event and last documented reading of storage temperature in acceptable range (2° to 8°C [36° to 46°F] for refrigerator; -50° to -15°C [-58° to 5°F] for freezer; -80° to -60°C [-112° to -76°F] for ultra-cold freezer (Pfizer COVID-19 vaccine only) • Inventory of affected vaccines, including (1) lot #s and (2) whether purchased with public (for example, VFC) or private funds (Use separate sheet if needed, but maintain the inventory with this troubleshooting record.) • At the time of the event, what else was in the storage unit? For example, were there water bottles in the refrigerator and/or frozen coolant packs in the freezer? • Prior to this event, have there been any storage problems with this unit and/or with the affected vaccine? • Include any other information you feel might be relevant to understanding the event. 					
<p>When checked main clinic fridge (in lab) at 8:00 am on Tuesday, 7/13/2021, digital readout on data logger read 28°F. Data logger located in center of fridge with probe in glycol. Review of computer readings (taken every 15 minutes) showed steady drop in temps from 42°F at 8:15 pm (7/12/2021) to 28°F reading discovered when arrived at clinic on Tuesday morning (7/13/2021). Readings hit 34°F at 11 pm (7/12) and 32°F at 2 am (7/13). Total time out of recommended storage temps = 9 hours, with 6 hours at freezing or below (see attached document of continuous temp readings). Inventory of vaccines attached.</p> <p>Water bottles in refrigerator door and crisper area. No vaccines stored in freezer. No recent adjustments to temp controls and no previous temp excursions noted with this refrigerator before 7/13.</p>					
Action Taken <i>(Document thoroughly. This information is critical to determining whether the vaccine might still be viable!)</i>					
<ul style="list-style-type: none"> • When were the affected vaccines placed in proper storage conditions? (Note: Do not discard the vaccine. Store exposed vaccine in proper conditions and label it “do not use” until after you can discuss with your state/local health department and/or the manufacturer[s].) • Who was contacted regarding the incident? (For example, supervisor, state/local health department, manufacturer—list all.) • IMPORTANT: What did you do to prevent a similar problem from occurring in the future? 					
<p>Upon discovery, vaccines marked “Do Not Use” and stored in 2nd clinic fridge (in exam room #3 at 41°F). Also placed “Do Not Use” note on main fridge in lab. Notified Susie Supervisor about the issue. Contacted Victor Vaccine at My State Immunization Program at 8:30 am. Provided Victor with details of event and list of vaccines in fridge. Victor said to maintain vaccines in 2nd fridge and that he would check with manufacturers to determine next steps.</p> <p>Called Jim’s Appliance Repair to examine fridge. Repairman found and replaced faulty thermostat in unit.</p> <p>Reset data logger on center shelf in fridge with probe in glycol.</p>					
Results					
<ul style="list-style-type: none"> • What happened to the vaccine? Was it able to be used? If not, was it returned to the distributor? (Note: For public-purchase vaccine, follow your state/local health department instructions for vaccine disposition.) 					
<p>After fridge thermostat repaired, monitored temps in empty fridge for 1 week, per state requirements. Fridge maintained 39°-41°F temps for entire week. Submitted repair documentation and data logger readings to Victor Vaccine for approval and ordered replacement vaccines. Victor had checked with manufacturers who confirmed that all vaccines in fridge EXCEPT MMR were no longer viable and should be returned per state policy guidelines. MMR may be used because pkg insert allows storage down to -58°F. Discussed entire situation with Susie Supervisor and clinic director, Dr. Director, who agreed on continued use of MMR. Will continue to monitor fridge closely to watch for pattern of temp fluctuations indicating potential problem with thermostat. If problems, contact Victor Vaccine for advice on purchasing new fridge meeting criteria for appropriate vaccine storage.</p>					

**MISSISSIPPI STATE DEPARTMENT OF HEALTH
FORM INSTRUCTIONS**

**TEMPERATURE LOG FOR REFRIGERATOR (F-670)
AND
TEMPERATURE LOG FOR FREEZER (F-670F)**

FORM NUMBER F-670 and F-670F
REVISION DATE 01/12/2022
RETENTION PERIOD Each log is to be maintained in each clinic for three (3) years

PURPOSE

This form is to be used to record the internal temperature of vaccine storage units used in all County Health Departments and Vaccine for Children providers where publicly supplied vaccines are stored. The VFC coordinating nurses are responsible for ensuring that the temperature logs are maintained in each clinic.

INSTRUCTIONS

All refrigerators and freezers used to store vaccine must use a thermometer that has an external display of the current temperature and must be capable of recording the minimum and maximum temperature of a recording period.

The internal temperature of refrigerator units should be between 36° Fahrenheit and 46° Fahrenheit and freezer units must be maintained between 5° Fahrenheit and -58° Fahrenheit. Appropriate adjustments must be made to maintain temperature readings in these ranges for each unit.

Follow all instructions displayed on the temperature logs for recording daily temperature ranges.

Out of Range or Danger Zone temperatures:

- Place potentially compromised vaccine under quarantine
- Alert your supervisor immediately
- Notify the Mississippi VFC Program at (601) 576-7751.
- Contact the vaccine manufacturer to determine if the potency of the vaccines were affected
- Document all actions taken to prevent vaccine loss on Vaccine Storage Troubleshooting Record (F-670 Attachment)

OFFICE MECHANICS AND FILING

Each VFC provider will complete the 670 / 670F for each unit that stores publicly supplied vaccine. Copies of the form will be forwarded to District Immunization Staff.