

**University of Michigan Health System
Department of Pharmacy Services
Stability of Immunizations Exposed to Out-of-Range Refrigerator Temperatures**

Vaccine	(≤ 34 F / ≤ 1.1 C) ◀Below Range▶	35 to 46 F (1.7 to 7.8 C)	(≥ 47 F / ≥ 8.3 C) ▶Above Range▶
<u>Diphtheria & Tetanus Toxoid, Adsorbed</u> DT – Pediatric (Sanofi)	Per Sanofi: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Product can tolerate 4 days at room temperature ($<100^{\circ}\text{F}$) ¹
Td – Adult (Sanofi)	Per Sanofi: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified		Product can tolerate 4 days at room temperature ($<100^{\circ}\text{F}$) ¹
<u>Diphtheria & Tetanus Toxoid, Acellular Pertussis</u> Infanrix (DTaP) – Pediatric (Glaxo)	Per Glaxo: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Glaxo: May still be stable, need to contact DIS with information below ²
Adacel (Tdap) – Adol/Adult (Sanofi)	Per Sanofi: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified		Per Sanofi: May still be stable, need to contact DIS with information below ²
<u>DTaP + Haemophilus TriHIBit</u> (Sanofi)	Per Sanofi: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Sanofi: May still be stable, need to contact DIS with information below ²
<u>DTaP + Hepatitis B + Inactivated Poliovirus</u> Pediarix (Glaxo)	Per Glaxo: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Stability for 24 hours has been shown up to 77°F ¹
<u>Haemophilus ActHIB</u> (Sanofi)	Per Sanofi: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Sanofi: May still be stable, need to contact DIS with information below ²
PedvaxHIB (Merck)	Per Merck: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified		Per Merck: May still be stable, need to contact DIS with the information below ²
<u>Haemophilus + Hepatitis B</u> Comvax (Merck)	Per Merck: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Merck: May still be stable, need to contact DIS with the information below ²
<u>Hepatitis A</u> Havrix (Glaxo)	Per Glaxo: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Product stability has been demonstrated for 7 days up to 98.6°F ¹
<u>Hepatitis B</u> Recombivax (Merck)	Per Merck: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Merck: May still be stable, need to contact DIS with the information below ²
Engerix-B (Glaxo)	Per Glaxo: Vaccine Cannot Be Used ; Return to DOPS Clearly Identified		Product stability has been demonstrated for 7 days up to 98.6°F ¹
<u>Human Papillomavirus Vaccine</u> Gardasil (Merck)	Per Merck: May still be stable, need to contact DIS with information below ²	Normal Range for Vaccine Storage in a Refrigerator	Per Merck: May still be stable, need to contact DIS with information below ²

<u>Influenza A & B</u> Fluzone (Sanofi)	Per Sanofi: Vaccine Cannot Be Used if frozen (<32 F); Exposure to temp of 32 F to 35 F okay as long as no freezing occurs; Return to normal refrigerator temperatures ASAP	Normal Range for Vaccine Storage in a Refrigerator	Per Sanofi: May still be stable, need to contact DIS with the information below²
<u>Measles, Mumps & Rubella</u> MMR II (Merck)	Per Merck: Vaccine remains okay to use, it may be stored either at normal refrigerator or freezer temperatures. (Store diluent at room temperature or refrigerate.)	Normal Range for Vaccine Storage in a Refrigerator	Per Merck: May still be stable, need to contact DIS with the information below²
<u>Meningococcal Conjugate Vaccine</u> Menactra (Sanofi)	Per Sanofi: Vaccine Cannot Be Used; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Sanofi: May still be stable, need to contact DIS with information below²
<u>Meningococcal Polysaccharide Vaccine</u> Menomune (Sanofi)	Per Sanofi: Vaccine Cannot Be Used; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Powder can tolerate 6-8 weeks at room temperature. ¹
<u>Pneumococcal Vaccine;</u> <u>7-valent</u> Pevnar (Wyeth) - Pediatric	Per Wyeth: Vaccine Cannot Be Used; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Per Wyeth: May still be stable, need to contact DIS with information below²
<u>Pneumococcal Vaccine;</u> <u>23-valent</u> Pneumovax 23 (Merck) - Adult	Per Merck: Vaccine Cannot Be Used; Return to DOPS Clearly Identified	Normal Range for Vaccine Storage in a Refrigerator	Product can tolerate a few days at room temperature ¹
<u>Poliovirus Vaccine, Inactivated</u> Ipol (Sanofi)	Per Sanofi: Vaccine Cannot Be Used if frozen (<32 F); Exposure to temp of 32 F to 35 F okay as long as no freezing occurs; Return to normal refrigerator temperatures ASAP	Normal Range for Vaccine Storage in a Refrigerator	Per Sanofi: May still be stable, need to contact DIS with the information below²
Rabies Vaccine Kit RabAvert (Chiron)	Per Chiron: Product is still stable if frozen, but must check for cracks in the vials.	Normal Range for Vaccine Storage in a Refrigerator	Per Chiron: Product is stable for 1 year up to 68°F.
<u>Rotavirus Vaccine Live, Oral</u> RotaTeq (Merck)	Per Merck: May still be stable, need to contact DIS with information below²	Normal Range for Vaccine Storage in a Refrigerator	Per Merck: May still be stable, need to contact DIS with information below²

DOPS = Department of Pharmacy Services: Pharmacy Returns/ 1500 E. Medical Center Dr./ Rm. B2 D400/ Ann Arbor, MI 48109-5008

1. Grabenstein JD. *ImmunoFacts: Vaccines and Immunological Drugs*. St. Louis, MO: Wolters Kluwer Health; 2006

2. Where indicated, contact the Drug Information Service (734-936-8200) with the following information:

- Name of vaccine(s) affected;
- Whether opened or unopened;
- Length of time vaccines were exposed to out-of-range temperature;
- Lot # and expiration date (for frozen vaccines only – see below)

Drug Information will contact the manufacturer to determine stability of vaccines; Note this process may take several hours

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Stability of Immunizations Exposed to Out-of-Range *Freezer* Temperatures**

Vaccine	(≤-15C/+5F) ◀Recommended▶	-15C to 8 C (5F to 46F)	≥ 47 F/ ≥ 8.3 C
<u>Measles, Mumps, Rubella, and Varicella Vaccine</u> ProQuad/MMRV (Merck)	Vaccine should be stored at -15C (+5F) or colder until reconstituted for injection. (Store diluent separately at room temperature or in the refrigerator.)	Per Merck: May still be stable, need to contact DIS with information above²	Per Merck: May still be stable, need to contact DIS with information above²
<u>Varicella Vaccine, Live</u> Varivax (Merck)	Vaccine should be stored at -15C (+5F) or colder until reconstituted for injection. (Store diluent separately at room temperature or in the refrigerator.)	<u>Product remains stable if exposed to refrigerator temperatures for up to 72 hours prior to reconstitution</u>	Loss of potency may result, therefore cannot use if exposed to Room Temperature for > 30 minutes prior to administration
<u>Zoster Vaccine, Live</u> Zostavax (Merck)	Vaccine should be stored at -15C (+5F) or colder until reconstituted for injection. (Store diluent separately at room temperature or in the refrigerator.)	Per Merck: May still be stable, need to contact DIS with information above²	Per Merck: May still be stable, need to contact DIS with information above²

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