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

Dightheria & Tetanus Toxoid Adsorbed   Be Used; Return to DOPS   Clearly Identified	Vaccine	(≤34 F / ≤1.1 C)	35 to 46 F	(≥47 F/≥8.3 C)
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Clearly Identified  Per Glaxo: Vaccine Cannot Be Used; Return to DOPS Clearly Identified  Per Merck: May still be Gardasil (Merck)  Product stability has been demonstrated for 7 days up to 98.6° F¹  Per Merck: May still be Stable, need to contact DIS  Normal Range for Vaccine Storage in Vaccine Storage in  Vaccine Storage in				
Engerix-B (Glaxo)  Per Glaxo: Vaccine Cannot Be Used; Return to DOPS Clearly Identified  Per Merck: May still be Gardasil (Merck)  Product stability has been demonstrated for 7 days up to 98.6° F¹  Per Merck: May still be stable, need to contact DIS Vaccine Storage in  Product stability has been demonstrated for 7 days up to 98.6° F¹  Per Merck: May still be stable, need to contact DIS Vaccine Storage in				The state of the s
Be Used; Return to DOPS Clearly Identified  Human Papillomavirus Vaccine Gardasil (Merck)  Be Used; Return to DOPS Clearly Identified  For 7 days up to 98.6° F¹  Normal Range for Vaccine Storage in Vaccine Storage in Vaccine Storage in				
Be Used; Return to DOPS Clearly Identified  Human Papillomavirus Vaccine Gardasil (Merck)  Be Used; Return to DOPS Clearly Identified  Normal Range for Vaccine Storage in vaccine Stora	Engerix-R (Glaxo)	Per Glaxo: Vaccine Cannot		Product stability has been demonstrated
Clearly Identified   Per Merck: May still be   Normal Range for   Per Merck: May still be stable, need to   Contact DIS   Stable, need to contact DIS   Contact DIS   Stable, need to   Contact DIS	goria D (Gimo)			
Human Papillomavirus VaccinePer Merck: May still be stable, need to contact DISNormal Range for Vaccine Storage inPer Merck: May still be stable, need to contact DIS with information below²				101 / <b>uays</b> up to 20.0 1
Gardasil (Merck) stable, need to contact DIS Vaccine Storage in contact DIS with information below <sup>2</sup>	Human Papillomavirus Vaccine		Normal Range for	Per Merck: May still be stable need to
	(	with information below <sup>2</sup>	a Refrigerator	The state of the s

Influenza A & B	Per Sanofi: Vaccine Cannot	Normal Range for	Per Sanofi: May still be stable, need to
Fluzone (Sanofi)	Be Used if frozen (<32 F);	Vaccine Storage in	contact DIS with the information below <sup>2</sup>
	Exposure to temp of 32 F to	a Refrigerator	
	35 F okay as long as no		
	freezing occurs; Return to		
	normal refrigerator		
	temperatures ASAP		
Measles, Mumps & Rubella	Per Merck: Vaccine remains	Normal Range for	Per Merck: <b>May still be stable</b> , need to
MMR II (Merck)	<b>okay to use</b> , it may be stored	Vaccine Storage in	contact DIS with the information below <sup>2</sup>
	either at normal refrigerator or	a Refrigerator	
	freezer temperatures. (Store		
	diluent at room temperature or		
	refrigerate.)		
Meningococcal Conjugate Vaccine	Per Sanofi: Vaccine Cannot	Normal Range for	Per Sanofi: May still be stable, need to
Menactra (Sanofi)	<b>Be Used</b> ; Return to DOPS	Vaccine Storage in	contact DIS with information below <sup>2</sup>
	Clearly Identified	a Refrigerator	
Meningococcal Polysaccharide	Per Sanofi: Vaccine Cannot	Normal Range for	Powder can tolerate 6-8 weeks at room
<u>Vaccine</u>	<b>Be Used</b> ; Return to DOPS	Vaccine Storage in	temperature. <sup>1</sup>
Menomune (Sanofi)	Clearly Identified	a Refrigerator	
Pneumococcal Vaccine:	Per Wyeth: Vaccine Cannot	Normal Range for	Per Wyeth: <b>May still be stable</b> , need to
<u>7-valent</u>	<b>Be Used</b> ; Return to DOPS	Vaccine Storage in	contact DIS with information below <sup>2</sup>
<b>Prevnar</b> (Wyeth) - Pediatric	Clearly Identified	a Refrigerator	
Pneumococcal Vaccine;	Per Merck: Vaccine Cannot	Normal Range for	Product can tolerate a few days at room
23-valent	<b>Be Used</b> ; Return to DOPS	Vaccine Storage in	temperature <sup>1</sup>
Pneumovax 23 (Merck) - Adult	Clearly Identified	a Refrigerator	
		17 17 0	
Poliovirus Vaccine, Inactivated	Per Sanofi: Vaccine Cannot	Normal Range for	Per Sanofi: May still be stable, need to
Ipol (Sanofi)	Be Used if frozen (<32 F);	Vaccine Storage in	contact DIS with the information below <sup>2</sup>
	Exposure to temp of 32 F to	a Refrigerator	
	35 F okay as long as no		
	freezing occurs; Return to		
	normal refrigerator		
D. L. T. T.	temperatures ASAP	N 1D 0	D Cli D 1 1 1 1 1 1 1 1
Rabies Vaccine Kit	Per Chiron: Product is still	Normal Range for	Per Chiron: Product is stable for 1 year up
RabAvert (Chiron)	stable if frozen, but must	Vaccine Storage in	to 68°F.
D	check for cracks in the vials.	a Refrigerator	D 16 1 16 (11)
Rotavirus Vaccine Live, Oral	Per Merck: May still be	Normal Range for	Per Merck: May still be stable, need to
RotaTeq (Merck)	stable, need to contact DIS	Vaccine Storage in	contact DIS with information below <sup>2</sup>
DODG - Donaston out of Pharmacon Comm	with information below <sup>2</sup>	a Refrigerator	

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 (<u>for frozen vaccines only</u> see below)

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

Created by: University of Michigan Drug Information Service; Approved by the Immunization Committee: November 2007 Last revision: October 2007

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

Vaccine	(≤-15C/+5F)	-15C to 8 C (5F to 46F)	≥ 47 F/≥ 8.3 C
	<b>∢</b> Recommended▶		
Measles, Mumps,	Vaccine should be stored at -15C (+5F)	Per Merck: May still be	Per Merck: May still be
Rubella, and Varicella	or colder until reconstituted for	stable, need to contact DIS	stable, need to contact DIS
Vaccine	injection. (Store diluent separately at	with information above <sup>2</sup>	with information above <sup>2</sup>
ProQuad/MMRV	room temperature or in the		
(Merck)	refrigerator.)		
Varicella Vaccine, Live	Vaccine should be stored at -15C (+5F)	Product remains stable if	Loss of potency may result,
Varivax (Merck)	or colder until reconstituted for	exposed to refrigerator	therefore cannot use if
	injection. (Store diluent separately at	temperatures for up to 72	exposed to Room
	room temperature or in the	hours prior to reconstitution	Temperature for > 30
	refrigerator.)		minutes prior to
			administration
Zoster Vaccine, Live	Vaccine should be stored at -15C (+5F)	Per Merck: May still be	Per Merck: May still be
Zostavax (Merck)	or colder until reconstituted for	stable, need to contact DIS	stable, need to contact DIS
	injection. (Store diluent separately at	with information above <sup>2</sup>	with information above <sup>2</sup>
	room temperature or in the		
	refrigerator.)		

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