

FILTERED MEDICATIONS GUIDELINES

FILTRATION RECOMMENDATIONS TABLE

Drug	Class	Type of Filter		Comment
		Preparation	Administration	
Abatacept (<i>Orencia</i> ®)	Immunomodulator	n/a	Administer with an infusion set and 0.2 to 1.2 micron filter ¹	
Abciximab (<i>Reopro</i> ®)	Platelet aggregation inhibitor	0.2 or 5 micron filter ²	0.22 micron filter: Upon continuous infusion administration ²	
Albumin (<i>AlbuRx</i> ® or <i>Albuminar</i> ®)	Human protein	n/a	None for <i>AlbuRx</i> ® or <i>Albuminar</i> ® (CSL manufacturer) <i>see comments</i>	CSL Behring recommends the administration of its products only as directed in the approved product labeling. A filter is not required for the administration of albumin. CSL Behring has not conducted clinical studies with <i>AlbuRx</i> ® or <i>Albuminar</i> ® administered using an IV infusion set containing a filter or with an in-line filter.
(<i>Buminate</i> ®)			(<i>Buminate</i> ®) <i>see comments</i>	Follow directions for use printed on the administration set container and product. Make certain that the administration set contains an adequate filter (15-micron or smaller). ³
Amiodarone (<i>Nexterone</i> ®)	Antiarrhythmic agent	n/a	0.22 micron in-line filter ^{4,5} (<i>see comments</i>)	Data on file with manufacturer of <i>Nexterone</i> suggests no loss of potency with use of a 0.2 micron in-line filter with the 1.8 mg/mL concentration; other sources suggest no significant loss of drug potency with the use of a 0.22 micron cellulose ester membrane filter (<i>Ivex-HP</i> , Millipore). ^{6,7}

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Amphotericin B	Antifungal agent	n/a	<i>see comments</i>	May administer thorough 1 micron or larger in-line filter. ⁸
Amphotericin B liposomal (<i>Ambisome</i> ®)	Antifungal agent	Dilute product with 5 micron filter needle provided by the manufacturer ⁸	<i>see comments</i>	May administer through 1 micron or larger in-line filter. ⁹
Amphotericin B lipid complex (<i>Abelcet</i> ®)	Antifungal agent	Use 5 micron filter needle provided by manufacturer ¹⁰ (<i>see comments</i>)	n/a	Do not use an in-line filter. Each filter needle may be used to filter the contents of up to four 100 mg vials. ¹⁰
Anti-thymocyte globulin, equine (<i>Atgam</i> ®)	Immune globulin	n/a	0.22 micron in-line filter ¹¹	
Anti-thymocyte globulin, rabbit (<i>Thymoglobulin</i> ®)	Immune globulin	n/a	0.22 micron in-line filter ¹²	
Asparaginase (<i>Elspar</i> ®)	Antineoplastic agent	n/a	5 micron in-line filter ¹³	Loss of potency has been observed with a 0.2 micron filter. ⁵
Cabazitaxel (<i>Jevtana</i> ®)	Antineoplastic agent	n/a	0.22 micron in-line filter ¹⁴	
Cetuximab (<i>Erbitux</i> ®)	Antineoplastic agent	n/a	0.22 micron in-line filter ¹⁵	

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Cladribine (Leustatin®)	Antineoplastic agent	0.22 micron filter (see comments)	n/a	When preparing the 7-day infusion solution, both cladribine and the diluent should be passed through a sterile disposable hydrophilic syringe filter as each solution is being introduced into the infusion reservoir.16
Clofarabine (Clolar®)	Antineoplastic agent	0.2 micron filter (see comments)	n/a	Filter prior to dilution.17
Cytomegalovirus immune globulin IV, human (CytoGam®)	Immune globulin	n/a	0.22 micron in-line filter (see comment)	0.2 or 15 micron filter is acceptable.18
Epoprostenol (Flolan®)	Vasodilator	n/a	0.22 micron in-line filter	An in-line filter was used during clinical trials.19
Etoposide	Antineoplastic agent	n/a	0.22 micron in-line filter	Etoposide solutions of 0.2 mg/mL may be filtered through a 0.22 micron cellulose ester membrane filter (Ivex-HP, Millipore) without significant loss of drug.6
Factor VIII Products: Human	Antihemophilic agents			
Antihemophilic factor/ vonWillebrand factor complex (Humate-P®)		Use filter for withdrawal from the vial. Use either the Mix2Vial® filter transfer set provided by manufacturer or a commercially available double-ended needle and vented filter spike ²⁰	n/a	
<i>Monoclate-P®</i>			n/a	

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<i>Koate®-DVI</i>		Use filter needle provided by manufacturer ^{21,22}		
Recombinant				
<i>Helixate® FS</i>		Use filter needle provided by manufacturer ^{23,24}	n/a	
<i>Recombinate®</i>				
<i>Feiba NF®</i>	Anti-factor VIII Inhibitor	Use filter needle provided by manufacturer ²⁵	n/a	
Factor IX products: Human	Antihemophilic agents			
Factor IX Complex (Profilnine SD®)		Use filter needle provided by manufacturer ²⁶	n/a	
Recombinant				
<i>BeneFIX®</i>		Use filter needle provided by manufacturer ²⁷	n/a	
Ibritumomab tiuxetan (Zevalin®)	Radioimmunotherapeutic monoclonal antibody	n/a	0.22 micron in-line filter	Use in-line filter between syringe and infusion port prior to injection of each component. ²⁸

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Infliximab (Remicade®)	Monoclonal antibody	n/a	Administer with an infusion set and 1.2 micron or smaller in-line filter ²⁹	
Ipilimumab (Yervoy®)	Antineoplastic agent	n/a	0.2 to 1.2 micron in-line filter ^{30,31}	
Ixabepilone (Ixempra Kit®)	Antineoplastic agent	n/a	0.2 to 1.2 micron in-line filter ³²	
Lipid emulsion (Intralipid®)	Nutritional product	n/a	1.2 micron or larger	Filters < 1.2 micron pore size must not be use with Intralipid 20%. ³³
Mannitol (Osmitol®)	Osmotic diuretic	5 micron filter needle	0.22 micron in-line filter (see comment)	Recommend using a 5 micron filter needle with the 25% diluted mannitol during preparation and a 0.22 micron in-line filter during administration for all mannitol parenteral solutions.
Ofatumumab (Arzerra®)	Antineoplastic agent	n/a	Use in-line filter set supplied by manufacturer ³⁴	
Paclitaxel (Taxol®)	Antineoplastic agent	n/a	0.22 micron or smaller in-line filter for paclitaxel ³⁵	

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Paclitaxel albumin-bound (Abraxane®)	Antineoplastic agent	n/a	See comments	Use of a filter is not recommended for Abraxane. ³⁶
Panitumumab (Vectibix®)	Antineoplastic agent	n/a	0.22 micron in-line filter 37	
Phenytoin sodium	Anticonvulsant	n/a	0.22 micron in-line filter (see comment)	Although not recommended by the manufacturer, some studies indicate that an IV infusion of phenytoin may be feasible if proper precautions are observed, such as a suitable vehicle (eg, 0.9% sodium chloride or Ringer's lactated injection), appropriate concentration, preparing the infusion shortly before administration, and using an in-line filter ^{7,38} ; according to most studies, a 0.22 micron in-line filter is required; phenytoin sodium (250 mg/5mL in a 5 mL syringe) was filtered at a rate of 1 mL/min through a 5 micron stainless steel depth filter without significant reduction in potency. ⁷
Prothrombin Complex Concentrate, Human (Kcentra®)	Hemostatic agent	Use filter needle provided by manufacturer	39 n/a	
Ranibizumab (Lucentis®)	Vascular endothelial growth factor antagonist	5 micron filter (see comment)	n/a	Withdraw the solution from the vial through a 5-micron, 19-gauge filter needle attached to a 1 mL tuberculin syringe. Discard filter needle and use a non-filter needle for intravitreal injection. ⁴⁰
Solution from glass ampul	n/a	5 micron filter	n/a	

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Temsirolimus (Torisel®)	Antineoplastic agent	n/a	0.2 to 5 micron in-line filter (see comment)	Administer with in-line polyethersulfone filter (≤ 5 micron) or an endset polyethersulfone filter (0.2 to 5 micron). Do not use both an in-line and endset filter. ⁴¹
Thiotepa	Antineoplastic agent	0.22 micron filter	n/a	Filter prior to administration; polysulfone membrane (Gelman's Sterile Aerodisc, Single Use) or triton-free mixed ester of cellulose/PVC (Millipore's MILLEX-GS Filter Unit) are recommended by the manufacturer ⁴² ; solutions of 10 to 300 mcg/mL did not adsorb to cellulose nitrite/cellulose acetate ester filters (Millipore's MILLEX-OR) or Teflon filters (Millipore's MILLEX-FG). ⁷
Total Parental Nutrition (TPN)	Nutritional product	n/a		
Without Lipids			0.22 micron in-line filter	
With Lipids			1.2 micron in-line filter	
Ziv-Aflibercept (Zaltrap®)	Antineoplastic agent	n/a	0.2 micron filter ⁴³	

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References

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