



Chemical Stability of First Medical Source Disposable Elastomeric Infusion Pumps

FMS Infusion Pump, InFuLife® is a disposable elastomeric infusion system indicated for continuous infusion of medications for antibiotic therapy, chemotherapy, and pain management through intravenous, intra-arterial, intramuscular, subcutaneous, or epidural routes. InFuLife® is ideal for ambulatory patients or patients receiving home or alternate site care.

The chemical stability of elastomer when exposed to commonly used infusion drugs is a well-established fact as elastomeric pumps have long history of existence. The data provided below was compiled through review of various medical publications and manufacturers' product information, using testing performed by independent laboratories. The pharmacist or medical personnel dispensing the drug is responsible for ensuring proper preparation using validated aseptic techniques to prevent microbiological contamination.

THE DRUGS LISTED IN THE TABLE BELOW HAVE BEEN TESTED BY INDEPENDENT LABORATORIES TO VERIFY CHEMICAL STABILITY OF ELASTOMERIC PUMPS, INCLUDING INFULIFE® PREDICATES.

Chemical Stability of Drugs Using Elastomeric Pumps

Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
ACYCLOVIR Na	10 mg/ml	NS	10 days	30 days *	--	1
AMIKACIN SO ₄	10 mg/ml	NS	24 hrs	14 days	--	20
AMIKACIN SO ₄	10 mg/ml	NS	24 hrs	10 days	30 days	1
	10-20 mg/ml	NS	24 hrs	28 days	--	16
AMINOPHYLLINE	5-20 mg/ml	NS	24 hrs	28 days	--	16
AMPHOTERICIN B **	0.2 mg/ml	D5W	24 hrs	10 days	--	1
AMPICILLIN Na	20 mg/ml	NS	8 hrs	3 days	--	1
AMPICILLIN Na-SULBACTAM Na	30+15 mg/ml	NS	--	3 days	--	2
AZITHROMYCIN	1-2 mg/ml	NS/D5W	24 hrs	7 days	--	8
AZLOCILLIN	50 mg/ml	NS	24 hrs	7 days	--	2
AZTREONAM	13.3-26.7 mg/ml	NS	7 days	7 days	--	3
	20-30 mg/ml	NS	--	14 days	--	2
	5-20 mg/ml	NS	--	28 days	--	15
	60 mg/ml	NS	24 hrs	28 days	--	15
CARBENICILLIN	2 gm/50cc	D5W	24 hrs	3 days	4 wks	22,24,26
CEFAZOLIN Na	20 mg/ml	NS	24 hrs	7 days	--	1
CEFEPIME	20 mg/ml	NS	24 hrs	14 days	--	2
CEFONOCID	1 gm/50cc	D5W	24 hrs	3 days	8 wks	21,22,24
CEFOPERAZONE Na	2-50 mg/ml	NS/D5W	24 hrs	5 days	3 wks	8,9
CEFOTAXIME	20 mg/ml	NS	24 hrs	14 days	--	20
CEFOTAXIME Na	16.66 mg/ml	NS	24 hrs	--	--	1
CEFOTETAN Disodium	10-40 mg/ml	NS/D5W	24 hrs	4 days	1 wk	8
CEFOXITIN Na	10 mg/ml	NS/D5W	24 hrs	7 days	--	8,9
CEFPIROME SO ₄	20 mg/ml	NS	--	3 days	--	2
CEFTAZIDIME	40 mg/ml	NS	24 hrs	14 days	--	20
CEFTAZIDIME	20 mg/ml	NS	18 hrs	7 days	84 days	1
	5-30 mg/ml	NS	--	28 days	--	15
	5-40 mg/ml	NS	24 hrs	14 days	--	2
	60 mg/ml	NS	--	14 days	14 days	18
	60 mg/ml	NS	--	14 days	--	15
CEFTIZOXIME Na	20-40 mg/ml	NS/D5W	48 hrs	7 days	--	8
CEFTRIAXONE Na	20 mg/ml	NS	72 hrs	--	--	1
	10-100 mg/ml	NS	72 hrs	10 days	--	8
	10-40 mg/ml	NS/D5W	--	--	26 wks	8
CEFUROXIME Na	1-30 mg/ml	NS/D5W	24 hrs	7 days	6 mths	8,9
CEPHALOTHIN Na	1 gm/50cc	D5W	12 hrs	4 days	6 wks	21,22,25
CEPHAPIRIN Na	1 gm/50cc	D5W	24 hrs	10 days	8 wks	21,22,24

Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
CEPHRADINE	500 mg/50cc	D5W	10 hrs	2 days	6 wks	22,25
CHLORAMPHENICOL	1 gm/50cc	D5W	30 days	30 days	6 mths	21,22,23,25
CIMETIDINE HCL	300 mg/50cc	D5W	48 hrs	8 days	4 wks	21,22,25
CIPROFLOXACIN	2 mg/ml	None	24 hrs	28 days	--	16
CISPLATIN	0.2 mg/ml	NS	24 hrs	14 days	--	20
CISPLATIN *	0.2 mg/ml	NS	14 days	--	--	8
CLINDAMYCIN PO ₄	10 mg/ml	NS	24 hrs	10 days	--	1
	6,9,12 mg/ml	NS/D5W	16 days	32 days	8 wks	8
CLOXACILLIN	50 mg/ml	NS	24 hrs	7 days	--	20
CYCLOPHOSPHAMIDE	4.5 mg/ml	NS	7 days	7 days	--	3
DAPTOMYCIN	5 mg/ml	NS	24 hrs	24 hrs	--	20
	5mg/ml	NS	7 days	7 days	--	20
DEFEROXAMINE	0.1 mg/ml	NS	48 hrs	14 days	--	20
DEFEROXAMINE MESYLATE	5 mg/ml	NS	12 days	--	--	2
	5-160 mg/ml	NS	--	28 days	--	15
	73 mg/ml	NS	7 days	28 days	--	16
DEXAMETHASONE	40 mg/50cc	D5W	24 hrs			23,24
DOXORUBICIN	2 mg/ml	NS	24 hrs	14 days	--	20
DOXORUBICIN HCl	2 mg/ml	NS	--	48 hrs	--	1
DOXYCYCLINE	0.1 mg/ml – 1 mg/ml	NS/D5W	48 hrs	3 days	--	8
	1 mg/ml	D5W	--	--	8 wks	8
ERTAPENEM	10 mg/ml	NS	24 hrs	7 days	--	20
ERYTHROMYCIN	500 mg/ 100cc	D5W	8 hrs	1 day	4 wks	21,22,24
ETOPOSIDE	0.1-0.4 mg/ml	NS	9 days	--	--	4
FLUCLOXACILLIN	10 mg/ml	NS	24 hrs	21 days	--	16
	20, 30 mg/ml	NS	24 hrs	14 days	--	16
	40, 50 mg/ml	NS	24 hrs	7 days	--	16
FLUCONAZOLE	2 mg/ml	RTU	24 hrs	14 days	--	2
FLUOROURACIL *	50 mg/ml	RTU	8 wks	--	--	1
	1-25 mg/ml	NS	45 days	45 days	--	14
	50 mg/ml	RTU	45 days	--	--	14
FOLINIC ACID	4 mg/ml	NS	48 hrs	14 days	--	20
FOLINIC ACID or LEUCOVORIN Ca	4 mg/ml	NS	7 days	7 days	--	3
FOSCARNET Na	12 mg/ml	NS	7 days	14 days	--	1
	24 mg/ml	RTU	7 days	14 days	--	1
FUROSEMIDE	0.5-10 mg/ml	NS	4 days	7 days	--	16
GANCICLOVIR	1 mg/ml	NS	24 hrs	14 days	--	20
GANCICLOVIR Na *	5 mg/ml	NS	24 hrs	15 days	--	1
	2-5 mg/ml	NS	7 days	--	--	3
GENTAMYCIN SO ₄	1 mg/ml	NS	24 hrs	14 days	--	20
GENTAMICIN SO ₄	0.8 mg/ml	NS	24 hrs	--	--	1
	4.8 mg/ml	NS	24 hrs	28 days	--	15
	1 mg/ml	NS/D5W	--	--	30 days	8
GRANISETRON HCl	0.02 mg/ml	NS	--	7 days	--	7
		D5W	--	14 days	--	7
IMIPENEM	5 mg/ml	NS	24 hrs	7 days	--	20
IMIPENEM-CILASTATIN Na	5 mg/ml	NS	--	1 day	--	1
	5 mg/ml	NS	10 hrs	2 days	--	8
LEVOFLOXACIN	5 mg/ml	NS/D5W	72 hrs	14 days	6 mths	8
LINCOMYCIN HCL	1 gm/100cc	D5W	24 hrs	1 day	--	21,22,24
MEROPENEM	5 mg/ml	NS	26 hrs	4 days	--	13
	5-10 mg/ml	NS	--	4 days	--	15
	10 mg/ml	NS	20 hrs	4 days	--	13
	20 mg/ml	NS	14 hrs	3 days	--	13
METHICILLIN Na	1 gm/50cc	D5W	24 hrs	4 days	4 wks	21,22,23
METHOTREXATE Na	0.03 mg/ml	D5W	7 days	--	--	8
	1.25-12.5 mg/ml	NS	7 days	105 days	--	8
METHYLPREDNISOLONE Na	10 mg/ml	NS	24 hrs	7 days	--	2
Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References

METRONIDAZOLE	5 mg/ml	RTU	24 hrs	10 days**	--	2
MEZLOCILLIN Na	1 gm/50cc	D5W	48 hrs	7 days	4 wks	21,22
MINOCYCLINE	100 mg/500cc	D5W	24 hrs	1 day	--	21,22,24
MORPHINE HCL	10-40 mg/ml	RTU	6 wks	6 wks	--	5
MORPHINE SO ₄	20 mg/ml	NS	7 days	--	--	3
MOXALACTAM Na	1 gm/50cc	D5W	24 hrs	4 days	6 mths	21,22,24
NAFCILLIN Na	10 mg/ml	NS	24 hrs	3 days	--	1
NETILMICIN	100 mg/100cc	D5W	72 hrs	3 days	--	22,24
NORMAL SALINE	0.9% NaCl	NS	15 days	15 days	--	19
OFLOXACIN	0.4-4 mg/ml	NS/D5W	72 hrs	14 days	6 mths	9
ONDANSETRON HCL	0.03-0.3 mg/ml	NS/D5W	--	14 days	--	6
OXACILLIN	10-100 mg/ml	NS	7 days	8 days	30 days	17
	10-100 mg/ml	D5W	2 days	8 days	30 days	17
PENICILLIN G – K	10,000 U/ml	D5W	24 hrs	24 hrs	30 days	8
	2,000 U/ml	NS	24 hrs	4 days	--	8
PIPERACILLIN	0.8 mg/ml	NS	24 hrs	7 days	--	20
PIPERACILLIN Na	30 mg/ ml	NS	24 hrs	14 days	30 days	1,2
	10-80 mg/ml	NS	24 hrs	14 days	--	2
PIPERACILLIN-TAZOBACTAM	40 mg/ml	NS	24 hrs	24 hrs	--	20
	40 mg/ml	NS	7 days	7 days	--	20
PIPERACILLIN Na / TAZOBACTAM Na	18 mg/ml + 2.3 mg/ml	D5W	7 days	--	--	3
	10-80 mg/ml (10+1.25-80 mg/ml)	NS	24 hrs	28 days	--	16
QUINUPRISTIN / DALFOPRISTIN	2 mg/ml	D5W	5 hrs	54 hrs	--	10
RANITIDINE HCl	0.5-2 mg/ml	NS/D5W	7 days	30 days	30 days	8,11
RIFAMPIN	0.75 mg/ml	NS	24 hrs	14 days	--	20
RIFAMPIN	0.75 mg/ml	D5W	7 days	--	--	3
TEICoplanin	1-4 mg/ml	NS	24 hrs	28 days	--	16
TERBUTALINE SO ₄	4 ug/ml	D5W	7 days	28 days	--	16
	150, 300 ug/ml	D5W	7 days	28 days	--	16
	500 ug/ml	D5W	7 days	28 days	--	16
TICARCILLIN Disodium CLAVULANATE K	31 mg/ml	NS	24 hrs	7 days	--	2
TOBRAMYCIN	0.75 mg/ml	NS	24 hrs	14 days	--	20
TOBRAMYCIN SO ₄	0.8 mg/ml	NS	24 hrs	14 days	--	1,2
	0.2 mg/ml	NS	24 hrs	7 days	--	2
VANCOMYCIN	5 mg/ml	NS	24 hrs	14 days	--	20
VANCOMYCIN HCL	5 mg/ml	NS	24 hrs	14 days	--	1
	5,10,15 mg/ml	NS	24 hrs	28 days	--	16
	5 mg/ml	D5W	17 days	63 days	--	12

NS: Normal Saline

D5W: Glucose 5% Dextrose in Water RTU: Ready to Use

NOTES

The storage times reflect the times selected by the manufacturer and do not necessarily represent the limits of acceptable stability.

* Stability attention must be paid to the drug's potential for precipitation which may occur depending on preparation, storage conditions, concentration, pH and diluent.

** Susceptible to crystallization when refrigerated

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