



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 THE FLUID PATH MATERIALS USED IN ELASTOMERIC PUMPS, INCLUDING INFULIFE® AND ITS PREDICATE DEVICES EASYPUMP® AND SMARTeZ®.

Chemical Stability of Drugs Using Elastomeric Pumps

Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
5-FU + SODIUM FOLINATE	5 + 2 mg/ml ^	NS	7 days	--	--	27
	36 + 8.8 mg/ml ^	NS	7 days	--	--	27
ACYCLOVIR Na	10 mg/ml ^	NS	5 days	--	--	31
	10 mg/ml	NS	10 days	30 days *	--	1
AGALSIDASE BETA (Fabrazyme)	0.05, 0.7 mg/ml ^	NS	24 hrs	--	--	32
AMIKACIN	10, 20 mg/ml ^	NS	48 hrs	15 days	--	32
	10 mg/ml	NS	24 hrs	14 days	--	20
	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
AMOXICILLIN	1, 40 mg/ml #	NS	2 hrs	6 hrs	--	30
AMOXICILLIN + CLAVULANATE	10 + 2, 20 + 4 mg/ml ^	NS	--	6 hrs	--	31
AMPHOTERICIN B **	0.1, 0.5, 2 mg/ml #	D5W	24 hrs	4 days	--	27
	0.2 mg/ml	D5W	24 hrs	10 days	--	1
AMPICILLIN Na	12 mg/ml #	NS	6 hrs	4 days	--	33
	20 mg/ml ^	NS	24 hrs	3 days	--	30
	20 mg/ml	NS	8 hrs	3 days	--	1
AMPICILLIN Na-SULBACTAM Na	30 + 15 mg/ml ^	NS	6 hrs	2 days	--	30
	30+15 mg/ml	NS	--	3 days	--	2
AZITHROMYCIN	1, 2 mg/ml ^	NS	24 hrs	7 days	--	31
	1-2 mg/ml	NS/D5W	24 hrs	7 days	--	8
AZLOCILLIN	50 mg/ml	NS	24 hrs	7 days	--	2
AZTREONAM	10, 30 mg/ml #	NS	24 hrs	7 days	--	29
	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
BUMETANIDE	0.016, 0.16 mg/ml ^	D5W	24 hrs	--	--	30
BUPIVACAINE	5 mg/ml (HCl) #	RTU	2 days	15 days	--	27
	0.125%, 0.75% ^	NS	30 days	--	--	30
CARBENICILLIN	2 gm/50 cc	D5W	24 hrs	3 days	4 wks	22,24,26
CASPOFUNGIN ACETATE	0.2, 0.5 mg/ml ^	NS	60 hrs	14 days	--	30
CEFAZOLIN Na	16.7 mg/ml #	NS	2 days	14 days	--	27
	20 mg/ml	NS	24 hrs	7 days	--	1
CEFEPIME	20 mg/ml ^	NS	24 hrs	14 days	--	31
	20 mg/ml	NS	24 hrs	14 days	--	2
CEFONICID	1 gm/50 cc	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



Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
CEFOTAXIME	10, 15 mg/ml ^	NS	24 hrs	14 days	--	33
	16.66 mg/ml (Na) ^	NS	24 hrs	3 days	--	31
	20 mg/ml	NS	24 hrs	14 days	--	20
	16.66 mg/ml (Na)	NS	24 hrs	--	--	1
CEFOTETAN Disodium	10-40 mg/ml	NS/D5W	24 hrs	4 days	1 wk	8
CEFOTIAM	20 mg/ml #	NS/D5W	6 hrs	24 hrs	--	30
CEFOXITIN Na	1, 10 mg/ml ^	NS	48 hrs	7 days	--	32
	10 mg/ml	NS/D5W	24 hrs	7 days	--	8,9
CEFPIROME SO4	20 mg/ml	NS	--	3 days	--	2
CEFTAZIDIME	1 mg/ml #	NS	24 hrs	2 days	--	30
	40 mg/ml #	NS	12 hrs	2 days	--	30
	40 mg/ml ^	NS	24 hrs	14 days	--	20
	9, 60 mg/ml ^ (incl. pyridine)	NS	--	7 / 5 days	--	33
	40 mg/ml	NS	24 hrs	14 days	--	20
	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
CEFTOLOZANE + TAZOBACTAM	1+0.5, 2+1, 30+15 mg/ml #	NS	24 hrs	14 days	--	32
CEFTRIAXONE Na	10, 50 mg/ml # **	NS	48 hrs	14 days	--	32
	10 mg/ml # **	D5W	24 hrs	6 days	--	27
	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	24 hrs	3 days	--	31
	1, 30 mg/ml	D5W	12 hrs	3 days	--	31
	1-30 mg/ml	NS/D5W	24 hrs	7 days	6 mths	8,9
CEPHALOTHIN Na	1 gm/50 cc	D5W	12 hrs	4 days	6 wks	21,22,25
CEPHAPIRIN Na	1 gm/50 cc	D5W	24 hrs	10 days	8 wks	21,22,24
CEPHRADINE	500 mg/50 cc	D5W	10 hrs	2 days	6 wks	22,25
CHLORAMPHENICOL	1 gm/50 cc	D5W	30 days	30 days	6 mths	21,22,23,25
CIMETIDINE HCl	1, 6 mg/ml	NS	7 days	--	--	30
	300 mg/50 cc	D5W	48 hrs	8 days	4 wks	21,22,25
CIPROFLOXACIN	2 mg/ml	D5W	10 days	30 days	--	31
	2 mg/ml	None	24 hrs	28 days	--	16
CISPLATIN *	0.1, 0.5 mg/ml	NS	14 days	--	--	30
	0.2 mg/ml	NS	24 hrs	7 days	--	20
	0.2 mg/ml	NS	24 hrs	14 days	--	20
	0.2 mg/ml	NS	14 days	--	--	8
CLINDAMYCIN PO4	6, 12 mg/ml	NS	3 days	30 days	--	31
	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
	50 mg/ml	NS	24 hrs	7 days	--	20
COLISTIMETHATE Na	3 mg/ml	NS	2 hrs	24 hrs	--	30
CYCLOPHOSPHAMIDE	2 mg/ml	NS	2 days	14 days	--	30
	20 mg/ml	NS	2 days	7 days	--	30
	4.5 mg/ml	NS	7 days	7 days	--	3
DAPTOMYCIN	1, 5 mg/ml	NS	1 day	10 days	--	32
	20 mg/ml	NS	1 day	10 days	--	27
	5 mg/ml	NS	24 hrs	24 hrs	--	20
	5 mg/ml	NS	7 days	7 days	--	20



Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
DEFEROXAMINE MESYLATE	0.022 mg/ml	NS	2 days	14 days	--	20
	5, 100 mg/ml	NS	2 days	14 days	--	27
	0.1 mg/ml	NS	48 hrs	14 days	--	20
	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/50 cc	D5W	24 hrs	--	--	23,24
DOXORUBICIN HCl	2 mg/ml	NS	14 days	22 days	--	27
	2 mg/ml	NS	24 hrs	14 days	--	20
	2 mg/ml	NS	--	48 hrs	--	1
DOXYCYCLINE	1, 1.5 mg/ml	NS/D5W	12 hrs	3 days	--	28
	0.1-1 mg/ml	NS/D5W	48 hrs	3 days	--	8
	1 mg/ml	D5W	--	--	8 wks	8
ERTAPENEM	5 mg/ml ^	NS	--	7 days	--	27
	10 mg/ml ^	NS	24 hrs	7 days	--	30
	20 mg/ml ^	NS	24 hrs	5 days	--	30
	10 mg/ml	NS	24 hrs	7 days	--	20
ERYTHROMYCIN	500 mg/100 cc	D5W	8 hrs	1 day	4 wks	21,22,24
ETOPOSIDE	0.2 mg/ml	NS	4 days	--	--	30
	0.4 mg/ml	NS	24 hrs	--	--	30
	0.1-0.4 mg/ml	NS	9 days	--	--	4
FERINJECT (Iron (III) sucrose complex)	2, 5 mg/ml	NS	3 days	--	--	27
FLOXURIDINE	10 mg/ml	NS	1 day	14 days	--	34
FLUCLOXACILLIN	10, 70 mg/ml	NS	24 hrs	2 days	--	30
	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	2 days	7 days	--	27
	2 mg/ml	RTU	24 hrs	14 days	--	2
FLUOROURACIL *	5 mg/ml ^	D5W/NS	45 days	--	--	27
	50 mg/ml ^	RTU	45 days	--	--	27
	50 mg/ml	WFI	7 days	7 days	--	38
	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	2 days	14 days	--	20
	4 mg/ml	NS	48 hrs	14 days	--	20
	4 mg/ml (leucovorin Ca)	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
	12 mg/ml	NS	7 days	14 days	--	1
	24 mg/ml	RTU	7 days	14 days	--	1
FOSFOMYCIN	16.6, 40 mg/ml (disodium) ^	D5W	2 days	--	--	27
	20 mg/ml (sodium) ^	NS	24 hrs (1 hr at 37 °C)	--	--	27
FUROSEMIDE	10 mg/ml #	NS	4 days	7 days	--	28
	0.5-10 mg/ml	NS	4 days	7 days	--	16
GANCICLOVIR *	1, 10 mg/ml #	NS	2 days	14 days	--	27
	1, 10 mg/ml #	D5W	2 days	14 days	--	30
	1 mg/ml	NS	24 hrs	14 days	--	20
	5 mg/ml	NS	24 hrs	15 days	--	1
	2-5 mg/ml	NS	7 days	--	--	3



Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
GENTAMICIN SO4	0.5 mg/ml #	NS	7 days	7 days	--	27
	5 mg/ml #	NS	7 days	14 days	--	27
	1 mg/ml	NS	24 hrs	14 days	--	20
	10 mg/ml	NS	48 hrs	28 days	--	36
	1 mg/ml	NS	24 hrs	14 days	--	20
	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, 0.5 mg/ml #	NS	2 days	7 days	--	30
	0.02, 0.5 mg/ml #	D5W	6 hrs	3 days	--	30
	0.02 mg/ml	NS	--	7 days	--	7
	0.02 mg/ml	D5W	--	14 days	--	7
HUMAN IMMUNOGLOBULIN SC (Hizentra) ***	200 mg/ml ^	RTU	7 days	--	--	27
IFOSFAMIDE	0.6, 40 mg/ml #	NS/D5W	24 hrs	3 days	--	31
	0.6 / 40 mg/ml ^	D5W	7 / 3 days	--	--	27
IMIPENEM	5 mg/ml	NS	24 hrs	7 days	--	20
IMIPENEM-CILASTATIN Na	5 + 5 mg/ml ^	NS	24 hrs	3 days	--	30
	5 mg/ml	NS	--	1 day	--	1
	5 mg/ml	NS	10 hrs	2 days	--	8
KETAMINE	1, 2 mg/ml ^	NS	2 days	--	--	30
LEVOBUPIVACAINE	0.125%, 0.75% ^	NS	30 days	--	--	30
LEVOFLOXACIN	0.5, 5 mg/ml #	NS/D5W	7 days	14 days	--	31
	5 mg/ml	NS/D5W	72 hrs	14 days	6 mths	8
LIDOCAINE	0.5%, 2% ^	NS	30 days	--	--	30
LINCOMYCIN HCl	1.2 mg/ml #	NS	1 day	1 day	--	27
	10 mg/ml #	NS/D5W	1 day	1 day	--	27
	1 gm/100 cc	D5W	24 hrs	1 day	--	21,22,24
LINEZOLID	0.15, 2 mg/ml #	NS	24 hrs	13 days	--	27
MAGNESIUM SULFATE	20 mg/ml #	NS	24 hrs	29 days	--	30
MEROPENEM	5 mg/ml ^	NS	24 hrs	10 days	--	30
	20 mg/ml ^	NS	24 hrs	4 days	--	30,31
	2.5, 20 mg/ml #	NS	6 hrs	24 hrs	--	31
	10 mg/ml	NS	21 hrs	5 days	--	36
	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/50 cc	D5W	24 hrs	4 days	4 wks	21,22,23
METHOTREXATE	0.3, 25 mg/ml #	NS	7 days	7 days	--	31
	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	2 hrs	7 days	--	28
	10 mg/ml	NS	24 hrs	7 days	--	2
METOCLOPRAMIDE	5 mg/ml #	NS	2 days	2 days	--	33
METRONIDAZOLE	5 mg/ml #	RTU	24 hrs	10 days	--	28
	5 mg/ml	RTU	24 hrs	10 days **	--	2
MEZLOCILLIN Na	1 gm/50 cc	D5W	48 hrs	7 days	4 wks	21,22
MICAfungin	0.5, 2 mg/ml #	NS	24 hrs	4 days	--	27
	1.5 mg/ml	NS	--	9 days	--	35
MINOCYCLINE	100 mg/500 cc	D5W	24 hrs	1 day	--	21,22,24
MORPHINE HCl	10-40 mg/ml	RTU	6 wks	6 wks	--	5
MORPHINE SO4	1, 20 mg/ml ^	NS	7 days	--	--	27
	20 mg/ml	NS	7 days	--	--	3
MOXALACTAM Na	1 gm/50 cc	D5W	24 hrs	4 days	6 mths	21,22,24



Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
NAFCILLIN Na	5, 50 mg/ml ^	NS	30 hrs	14 days	--	32
	50 mg/ml	NS	48 hrs	14 days	--	36
	10 mg/ml	NS	24 hrs	3 days	--	1
NEFOPAM	10 mg/ml #	NS	1 day	1 day	--	30
NETILMICIN	100 mg/100 cc	D5W	72 hrs	3 days	--	22,24
NORMAL SALINE	0.9% NaCl #	--	15 days	15 days	--	30
	0.9% NaCl	NS	15 days	15 days	--	19
OFLOXACIN	0.4, 2 mg/ml #	NS	7 days	14 days	--	30
	0.4-4 mg/ml	NS/D5W	72 hrs	14 days	6 mths	9
ONDANSETRON HCl	0.03 mg/ml #	NS/D5W	7 days	21 days	--	31
	0.7 mg/ml #	NS/D5W	4 days	10 days	--	31
	0.03-0.3 mg/ml	NS/D5W	--	14 days	--	6
OXACILLIN	10, 100 mg/ml ^	NS	4 days	8 days	--	31
	10-100 mg/ml	NS	7 days	8 days	30 days	17
	10-100 mg/ml	D5W	2 days	8 days	30 days	17
PACLITAXEL	0.3, 1.2 mg/ml #	NS/D5W	24 hrs	7 days	--	27
	6 mg/ml	NS	7 days	7 days	--	38
PAMIDRONIC ACID Na	0.4 mg/ml	NS	2 days	27 days	--	27
	30 µg/ml #	NS	--	27 days	--	27
	30 µg/ml ^	NS	29 days	--	--	27
	30 µg/ml	D5W	2 days	27 days	--	27
PENICILLIN G - K	20,000 U/ml ^	NS	24 hrs	4 days	--	30
	20,000, 100,000 U/ml	NS	24 hrs	14 days	--	37
	10,000 U/ml	D5W	24 hrs	24 hrs	30 days	8
	2,000 U/ml	NS	24 hrs	4 days	--	8
PENICILLIN G - Na	2,000 U/ml #	NS	2 hrs	3 days	--	31
	100,000 U/ml #	NS	2 hrs	1 day	--	31
	100,000 U/ml ^	NS	6 hrs	--	--	30
PIPERACILLIN Na	10 mg/ml #	NS	3 days	14 days	--	30
	80 mg/ml #	NS	24 hrs	5 days	--	30
	0.8 mg/ml	NS	24 hrs	7 days	--	20
	30 mg/ml	NS	24 hrs	14 days	30 days	1,2
	10-80 mg/ml	NS	24 hrs	14 days	--	2
PIPERACILLIN-TAZOBACTAM	10+1.25 - 80+10 mg/ml #	NS	48 hrs	21 days	--	32
	10+1.25 - 80+10 mg/ml ^	NS	--	28 days	--	30
	40 mg/ml	NS	24 hrs	24 hrs	--	20
	40 mg/ml	NS	7 days	7 days	--	20
	18 + 2.3 mg/ml	D5W	7 days	--	--	3
	10+1.25 - 80+10 mg/ml	NS	24 hrs	28 days	--	16
QUINUPRISTIN-DALFOPRISTIN	2 mg/ml	D5W	5 hrs	54 hrs	--	10
RANITIDINE HCl	0.5 mg/ml	NS/D5W	2 days	21 days	--	27
	2 mg/ml	NS/D5W	7 days	21 days	--	27
	0.5-2 mg/ml	NS/D5W	7 days	30 days	30 days	8,11
RIFAMPIN	0.5, 3 mg/ml	NS	24 hrs	6 days	--	27
	0.75 mg/ml	NS	24 hrs	14 days	--	20
	0.75 mg/ml	D5W	7 days	--	--	3
ROPIVACAINE	0.2, 5 mg/ml	NS	24 hrs	14 days	--	27
	0.1%, 0.75%	NS	30 days	--	--	30
TEICoplanin	1, 20 mg/ml	NS	24 hrs	7 days	--	30
	1-4 mg/ml	NS	24 hrs	28 days	--	16
TEMOCILLIN	10, 20 mg/ml #	NS	24 hrs	14 days	--	30
	80 mg/ml ^	NS	24 hrs	--	--	27
TERBUTALINE SO4	4, 150, 300, 500 µg/ml	D5W	7 days	28 days	--	16
TICARCILLIN Disodium-CLAVULANATE K	31 mg/ml	NS	1 day	7 days	--	2
	31 mg/ml	NS	24 hrs	7 days	--	2
TIGECYCLINE	0.5, 1 mg/ml	NS	24 hrs	2 days	--	27



Medication	Concentration	Diluent	Room	Refrigerated	Frozen	References
TOBRAMYCIN	0.2, 10 mg/ml	NS	24 hrs	14 days	--	27
	0.75 mg/ml	NS	24 hrs	14 days	--	20
	0.8 mg/ml	NS	24 hrs	14 days	--	1,2
	0.2 mg/ml	NS	24 hrs	7 days	--	2
VANCOMYCIN HCl	4 mg/ml #	NS/D5W	4 days	21 days	--	31
	15 mg/ml #	NS/D5W	2 days	14 days	--	31
	15 mg/ml ^	NS	2 days	30 days	--	31
	5 mg/ml	NS	24 hrs	14 days	--	20
	5 mg/ml	NS	24 hrs	14 days	--	20
	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
VENOFER (Iron (III) hydroxide sucrose)	1 mg/ml	NS	24 hrs	24 hrs	--	27
VINCRIStINE	1 mg/ml	NS	21 days	--	--	30

NS: Normal Saline D5W: Glucose 5% Dextrose in Water RTU: Ready to Use WFI: Water for Injection

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.

*** Lower flow rate due to higher viscosity of the undiluted drug product.

Combined: tested refrigerated, followed by room temperature; the stated times apply in sequence.

^ Separate: tested refrigerated only and room temperature only; the times are not cumulative.

Room temperature is as defined by the testing laboratory. An elastomeric pump worn close to the body may reach 30–33 °C. For drugs with limited room-temperature stability (e.g., meropenem, ampicillin, amoxicillin, penicillin G), keep the filled pump refrigerated until use and limit the in-use period accordingly.

Where several entries are listed for the same drug and concentration, they reflect different studies and conditions. Select the entry that matches the actual preparation, diluent and storage conditions. Stability data relate to chemical stability of the drugs tested, not to sterility.

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29. Testing completed by Philips Innovation Services, Eindhoven, The Netherlands (Easypump® II).
30. Testing completed by Toxikon Europe NV, Leuven, Belgium (Easypump® II).
31. Testing completed by SGS Life Science Services, Lincolnshire, IL, USA (Easypump® II).
32. Testing completed by Nelson Labs, Leuven, Belgium (Easypump® II).
33. Testing completed by Selvita S.A., Kraków, Poland (Easypump® II).
34. Testing completed by TÜV SÜD PSB Pte. Ltd. Laboratory Services, Singapore, on SMARTeZ® pumps, 2015.
35. Testing completed by TÜV SÜD PSB Pte. Ltd. Laboratory Services, Singapore, on SMARTeZ® pumps, 2023.
36. Testing completed by TÜV SÜD PSB Pte. Ltd. Laboratory Services, Singapore, on SMARTeZ® pumps, 2017.
37. ASHP (American Society of Health-System Pharmacists), Extended Stability for Parenteral Drugs, 7th edition.
38. Testing completed by SGS, Thailand (SMARTeZ®).

Source documents

1. B. Braun Medical. Drug Stability List for Easypump® II. Effective June 2020. Document ID BB-GMS-MD-002663.
2. Epic Medical Pte. Ltd. Drug Stability Data for SMARTeZ® Elastomeric Infusion Pumps. AN-SM-24-04-001 Rev.01, effective 2025-12-12.

Easypump® is a trademark of B. Braun. SMARTeZ® is a trademark of Epic Medical Pte. Ltd. InfuLife® is a trademark of First Medical Source, LLC.

Revision history: Rev A – initial release. Rev B (October 2026) – added Easypump® II and SMARTeZ® drug stability data on the basis of fluid path material equivalence; added storage-condition and in-use temperature notes; references 27–38 added.

CONTACT US

First Medical Source
mshal@firstmedicalsourc.com