



SMOFLipid® & Drug Compatibility Guidelines (Y-site)

The decision to Y-site a medication with SMOFLipid® 20% should be considered carefully.

In some instances, medications may be visually compatible with SMOFLipid® 20% but there is insufficient data to indicate whether or not the drug is chemically stable or, as in the case of antibiotics, the antimicrobial activity is retained.

Physical compatibilities with medications at a Y-site are not consistent between different fat emulsion products. (i.e. If compatible with Intralipid®, one cannot assume compatible with SMOFLipid®)

SMOFLIPID 20% COMPATIBILITIES (Y-site)

NOTE: If concentration listed, only compatible at that concentration or less. Do NOT assume compatible at higher concentrations.

Ciprofloxacin	HYDROmorphone	Morphine
Dexmedetomidine	Insulin REGULAR	Nitroglycerin
DOPamine	Ketamine	Nitroprusside 0.15 mg/mL
Erythromycin lactobionate	Levocarnitine 8 mg/mL and when added to TPN	Norepinephrine 0.008 mg/mL
Famotidine when added to TPN	Meropenem	Primene PN* Solutions
fentaNYL 2 and 10 micrograms/mL	Metoclopramide (continuous infusion)	Propofol
Furosemide	metronIDAZOLE	Travasol PN* Solutions
Heparin when added to IV solutions or TPN	Midazolam	Vancomycin

*PN = Parenteral Nutrition

- If a medication is not listed as compatible, the prescriber is responsible to make the decision to run (or not to run) a drug concurrently with SMOFLipid. The prescriber must document this decision on an order sheet.
ex. Drug X may be run concurrently with SMOFLipid® 20% during infusion.
- Observe IV SMOFLipid® 20% for oiling out and discontinue immediately if this occurs.
- For compatibility on any other drugs please contact pharmacy.

SMOFLIPID 20% INCOMPATIBILITIES – MUST NOT be run concurrently

Alprostadil	Famotidine 4 mg/mL	Milrinone
Amiodarone	Fluconazole	Rocuronium
ceftAZIDime	Gentamicin	Tobramycin
Cisatracurium	Heparin 50 unit/mL	
fentaNYL 50 micrograms/mL	Hydrocortisone	

If a medication is incompatible with SMOFLipid® 20% and a separate site is not possible:

- Stop the SMOFLipid® 20% temporarily.
- Adequately flush tubing with compatible solution before and after drug administration.

SMOFLIPID 20% NOT RECOMMENDED DUE TO INSUFFICIENT DATA

(Medications studied to be compatible but only at concentrations less than those used at the IWK, therefore clinical judgment must be used if extrapolating data)

Medication	Concentration studied	IWK Standard Concentrations
Ampicillin	20 mg/mL; 30 mg/mL	100 mg/mL
DOBUTamine	1 mg/mL	NICU – 2 & 5 mg/mL Pediatric/Adult – 5 mg/mL
cefoTAXime	20 mg/mL	100 mg/mL
cefOXitin	20 mg/mL	100 mg/mL
cefTRIAxone	20 mg/mL	40 mg/mL
cefUROXime	30 mg/mL	100 mg/mL
Clindamycin	0.2 mg/mL	NICU - 12 mg/mL; Pediatric 18 mg/mL
EPINEPHrine	0.004 mg/mL	Patients 20 kg and less - 0.05 mg/mL Patients over 20 kg - 0.2 mg/mL
Levocarnitine IV direct	50 mg/mL	200 mg/mL
Morphine IV direct	1 mg/mL	NICU – IV direct – 0.4 & 2 mg/mL Pediatric – IV direct 2 mg/mL Adult – IV direct 10 mg/mL
Nitroprusside (over 2 kg)	0.4 mg/mL	Patients greater than 2 kg - 1 mg/mL
Norepinephrine (other than 0.008 mg/mL)	0.032 mg/mL	Patients 2 kg to 20 kg - 0.04 mg/mL Patients greater than 20 kg - 0.16 mg/mL
Octreotide	2 micrograms/mL	5 micrograms/mL
Penicillin G	40,000 units/mL	100,000 units/mL (0.1 million units/mL)
Piperacillin/tazobactam	40 mg/mL	80 mg/mL

References:

1. Fresenius Kabi Medical Information May 2013. Y-site compatibility with 3 in 1 PN or 3 chamber bags. Y-site infusion of drugs administered in parallel to three chamber bags containing Intralipid or SMOFlipid.
2. Fresenius Kabi Medical Information August 2014. Summary Stability Statement: Compatibility study of standard SMOFlipid admixture with Y-sited drugs (Study RD13048).
3. Micromedex online. Accessed Oct 21 2020. Dexmedetomidine IV Compatibility Results TPN (3-in-1).
4. Compatibility of medications with intravenous lipid emulsions: Effects of simulated Y-site mixing. AM J Health-Syst Pharm 2020;77:1980-1985.