

Materials List for:

Evaluation of Drug Sorption to PVC- and Non-PVC-based Tubes in Administration Sets Using a Pump

Su-Eon Jin^{1,2,3}, Siwon You^{1,3}, Seungho Jeon⁴, Hyo-Jin Byon², Sung-Joo Hwang^{1,3}

¹College of Pharmacy, Yonsei University

²College of Medicine, Yonsei University

³Yonsei Institute of Pharmaceutical Sciences

⁴Polysciencetech Co. Ltd

Correspondence to: Sung-Joo Hwang at sjh11@yonsei.ac.kr

URL: <https://www.jove.com/video/55086>

DOI: [doi:10.3791/55086](https://doi.org/10.3791/55086)

Materials

Name	Company	Catalog Number	Comments
PVC IV sets	Becton Dickinson (BD) Co. Ltd. (Franklin Lakes, NJ, USA)		Internal diameter: 2.54 mm
PU IV sets	Tianjin Hanaco Medical (THM) Co.Ltd. (Tianjin, China)		Non-PVC Internal diameter: 2.54 mm
Non-PVC Polyolefin IV sets	Polysciencetech, Co. Ltd (Anseong, Korea)		Non-PVC [PE elastomer/PP elastomer/PB elastomer (25/50/25, weight ratio) blend] Internal diameter: 2.54 mm
Syringe	Korea Vaccine Co. Ltd. (Seoul, Korea)	KOVAX-SYRINGE 1 mL 26G 1/2"	
Daewon diazepam injection	Daewon Pharma. Co. Ltd. (Hwaseong, Gyunggi, Korea)		5 mg/mL, total 2 mL Batch No.: P003 Composition: diazepam, propylene glycol, ethanol, benzyl alcohol, sodium benzoate, benzoic acid, water for injection
Tacrolimus injection	Chong Keun Dang, Co. Ltd. (Seoul, Korea)		5 mg/mL, total 1 mL Batch No.: AG002 Composition: tacrolimus hydrate, polyoxyl 60 hydrogenated castor oil (HCO-60), dehydrated alcohol
5% Dextrose	JW Pharmaceutical (Seoul, Korea)	500 mL	
5% Dextrose	Daehan Pharmaceutical (Seoul, Korea)	200 mL	Bottle (glass)
Amber vials		20 mL	Glass
Terumo infusion pump	Terumo (Medical Corp., USA)	TE-135	
HPLC system with UV detector	Agilent (Santa Clara, CA, USA)	Agilent 1260	
CAPCELL PAK C ₁₈ column	Shiseido (Japan)	90404	1.5 mm x 250 mm, 5 µm
Diazepam			From Daewon Pharma. Co., Ltd.
Tacrolimus	Teva Czech industries (Czech Republic)		From Chong Keun Dang, Co. Ltd.
Acetonitrile	Burdick and Jackson Co., Ltd. (MI, USA)	3/1/9017	
Methanol	Burdick and Jackson Co. Ltd. (MI, USA)	AH230-4	
Water	Burdick and Jackson Co. Ltd. (MI, USA)	3/1/4218	

Sodium dihydrogen phosphate	Sigma (St. Louis, MO, USA)		
Phosphoric acid	Sigma (St. Louis, MO, USA)		