

Materials List for:

Automation of a Positron-emission Tomography (PET) Radiotracer Synthesis Protocol for Clinical Production

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Materials

Name	Company	Catalog Number	Comments
ELIXYS FLEX/CHEM	Sofie (Culver City, CA, USA)	1010001	Radiosynthesizer
Radiosynthesizer cassette	Sofie (Culver City, CA, USA)	1861030400	Cassette for ELIXYS FLEX/CHEM
ELIXYS PURE/FORM	Sofie (Culver City, CA, USA)	1510001	Radiosynthesizer purification module
[O-18]H ₂ O	IBA RadioPharma Solutions (Reston, VA, USA)	IBA.SP.065	>90% isotopic purity
[F-18]fluoride in [O-18]H ₂ O	UCLA	N/A	Produced in a cyclotron (RDS-112; Siemens; Knoxville, TN, USA) by the (p,n) reaction of [O-18]H ₂ O. Bombardment at 11 MeV using a 1 mL tantalum target with havar foil.
Deionized water	UCLA	N/A	Purified to 18 MΩ and passed through 0.1 μm filter
Acetonitrile (MeCN)	Sigma-Aldrich (St. Louis, MO, USA)	271004	Anhydrous, 99.8%
Ethanol (EtOH)	Decon Laboratories, Inc. (King of Prussia, PA, USA)	2701	Anhydrous, 200 proof
Sodium hydroxide (NaOH) solution	Merck (Burlington, MA, USA)	1.09137.1000	1M solution
Hydrochloric acid (HCl) solution	Fisher Chemical (Hampton, NH, USA)	SA48-500	1M solution
Ethyl acetate (EtAc)	Fisher Chemical (Hampton, NH, USA)	E195SK-4	HPLC grade
Sodium chloride (NaCl)	Fisher Chemical (Hampton, NH, USA)	S-640-500	USP grade
Ammonium acetate	Fisher Chemical (Hampton, NH, USA)	A639-500	HPLC grade
Potassium carbonate (K ₂ CO ₃)	Fisher Chemical (Hampton, NH, USA)	P-208-500	Certified ACS
CFA precursor	CalChem Synthesis (San Diego, CA, USA)	N/A	Custom synthesis
Cryptand 222 (K222; Kryptofix 2.2.2)	ABX Advanced Biochemical Compounds (Radeberg, Germany)	800.1000	>99%
Sodium chloride (NaCl) solution (saline)	Hospira (Lake Forest, IL, USA)	0409-4888-02	0.9%, for injection, USP grade
Silica cartridge	Waters (Milford, MA, USA)	WAT051900	Sep-pak Classic
Quaternary methylammonium (QMA) cartridge	Waters (Milford, MA, USA)	WAT023525	Sep-pak Light Plus

Sterile syringe filter (0.22 μ m)	Millipore Sigma (Burlington, MA, USA)	SLGSV255F	Millex-GV
Glass V-vial (5 mL)	Wheaton (Millville, NJ)	W986259NG	Used for reaction vessels
Septa	Wheaton (Millville, NJ)	224100-072	Used for reagent vials
Crimp cap	Wheaton (Millville, NJ)	224177-01	Used for reagent vials
Amber serum vial (2 mL)	Voigt (Lawrence, KS, USA)	62413P-2	Used for reagent vials
Magnetic stir bar	Fisher Scientific (Hampton, NH, USA)	14-513-65	Used for reaction vessels