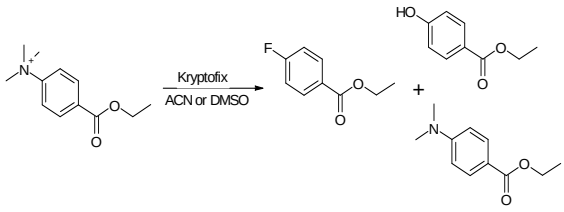
PURIFICATION OF FLUOROUS RADIOTRACERS

APPLICATION

AFFINIMIP® SPE ^{18}F - Aromatic Nucleophilic Substitution is a selective SPE cartridge used to purify rapidly and perfectly a ^{18}F radiotracer synthesized from an aromatic nucleophilic substitution. The cartridge retains the ammonium-based precursor as well as the phenol- and dialkylamino-based impurities.



PROTOCOL OF PURIFICATION

Sample preparation

A mixture of Ethyl 4-hydroxybenzoate (99 µg), Ethyl 4-dimethylaminobenzoate (928 µg), Ethyl 4-fluorobenzoate (10 µg) and Ethyl 4-trimethylammoniumbenzoate iodide (102 µg) in 80-20 Water-Acetonitrile (5 mL) is prepared as the loading solution.

Purification with a reversible AFFINIMIP® SPE 18F Aromatic Nucleophilic Substitution cartridge

Equilibration
- 5mL Acetonitrile
- 2mL Water

Loading
- 5mL of loading solution

Washing of interferents
- 5mL Water- Acetonitrile (80/20)

Drying 30 seconds

Elution (E)
- Elution of Ethyl 4-fluorobenzoate with 3mL of ACN (E1)
- Extra-elution of 1mL until dryness (E2)

HPLC Method with UV detection

Column: Hypersil Gold C18 column 50mm x 2.1mm

Mobile phase: gradient profile

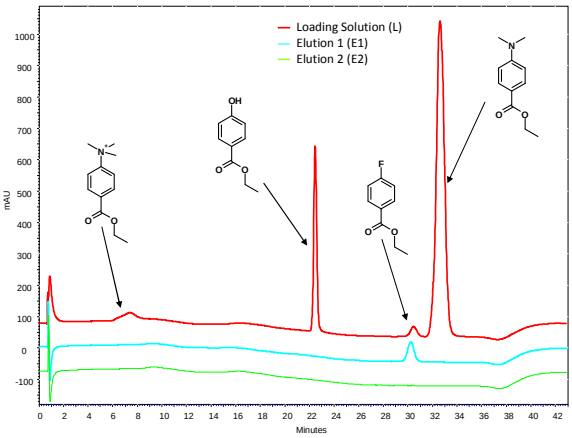
Time (min)	% water	% ACN
0	100	0
3	400	0
15	70	30
32	70	30
33	100	0
43	100	0

Flow rate: 0.2mL/min

UV detection: 235nm

Injection volume: 10µL.

RESULTS



Chromatograms obtained before (red) and after (E1 : blue, E2 : green) AFFINIMIP® SPE ^{18}F Aromatic Nucleophilic Substitution Clean-up.

Recovery of more than 95 % of the fluorous radiotracer was obtained without any contamination of the other compounds.

Catalog number:

RP100-01 for 10 cartridges compatible with automates