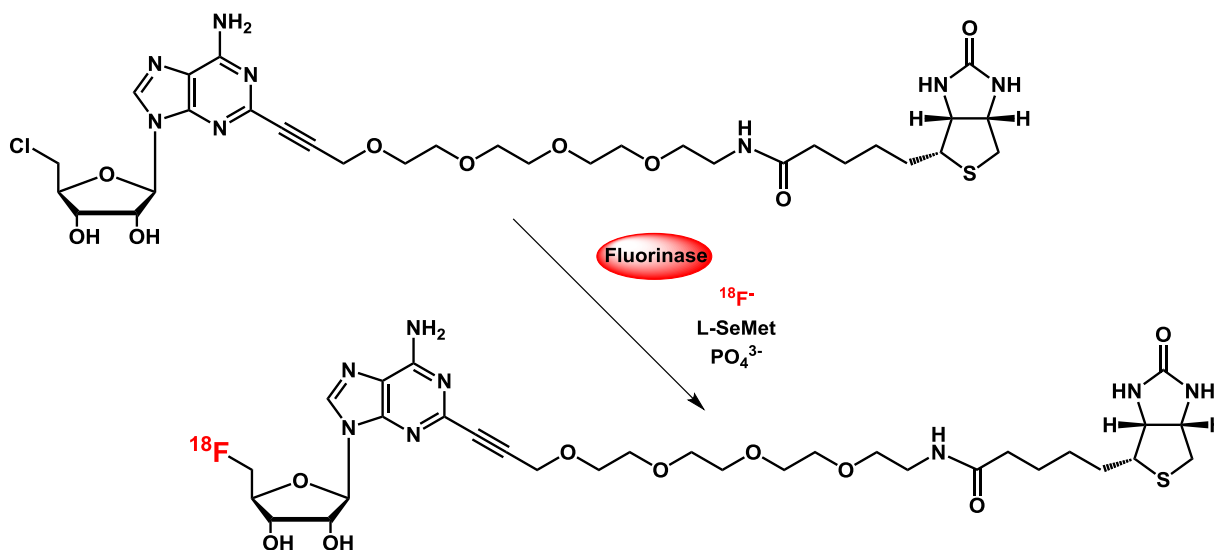


19-01-2017

ZSJPL003



Compound	Amount	Final conc.
Fluorinase enzyme	5 mg in 110 μL water (PO_4^{3-} buffer, 50 mM), 174 nmol	
L-SeMet (2mM in water)	40 μL , 80 nmol	
Biotin-CIDA	0.4 mg in 50 μL , 540 nmol	
^{18}F in O18 Water	50 μL	461 MBq @10:50

10min bombardment on T4, no rinse, final activity 165 approx. 7.1 GBq

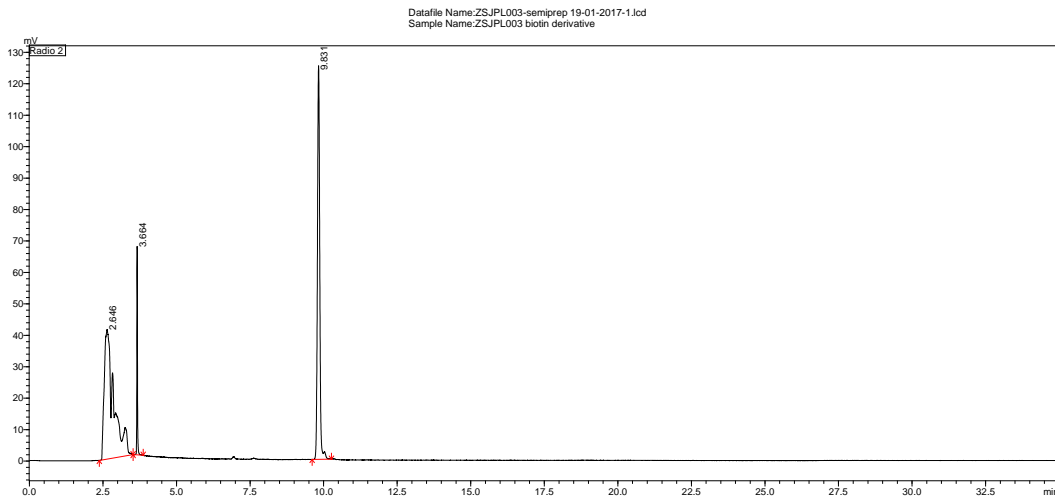
10:50 start incubation 37 °C (461 MBq)

11:21 reaction mixture was boiled at 95°C for 5 min (370 Mbq @ 11.21). After that 250 μL of water were added and the eppendorf was spinned at 13500 rpm for 5 min.

Approx. 450 μL of the supernatant (265 MBq @ 11:37 were injected in the HPLC (13.2 residual in the syringe @ 11:41). Approx. 80 MBq left in the Eppendorf.

Collected 83.7 MBq @ 11:52, approx. 33-34% of injected activity

semiprep crude radio signal



Peak#	Ret. Time	Area	Height	Conc.	Area%
1	2.646	925288	41037	54.209	54.209
2	3.664	98468	63853	5.769	5.769
3	9.831	683129	124830	40.022	40.022
Total		1706884	229720	100.000	100.000

Solution in the collection vial (78 MBq @ 12:03) was diluted with 50 mL of water and content loaded on the OASIS HLB light cartridge

74.6 MBq trapped in the cartridge @ 12:09

0.5 MBq residue in the collection vial @ 12:10

1.0 MBq in the filtered solution @ 12:10

Cartridge was washed with 20 mL of water

73.1 Mbq trapped in the cartridge @12:14

0.5 MBq in the wash solution 12:15

Activity was eluted from the cartridge with 0.5 mL of Ethanol

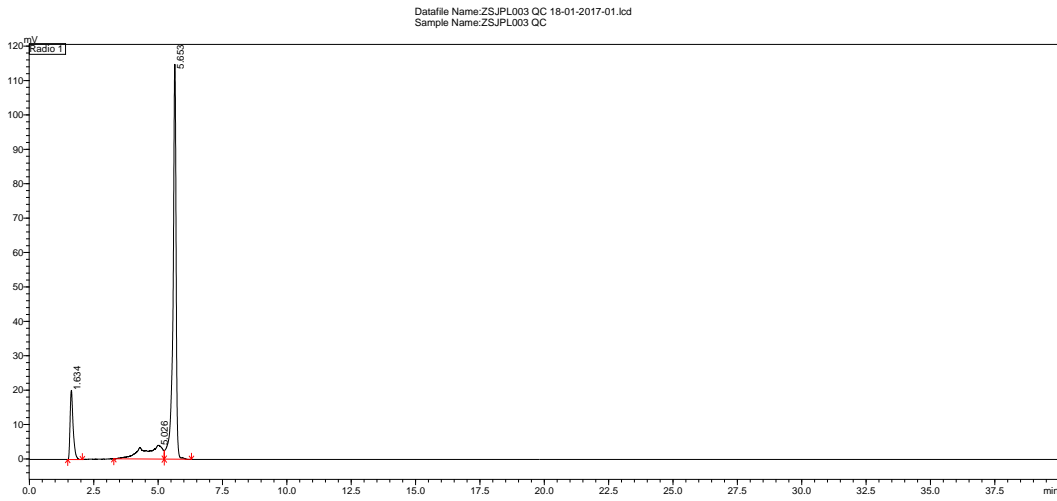
65.8 MBq eluted @12:20

4 MBq left in the cartridge @12:20

2.49 MBq @ 12:27 injected in HPLC analytical, 0.24 MBq left in the syringe.

Analytical peak collected 1.58 MBq @12:57

ZSJPL003 QC after purification radio signal

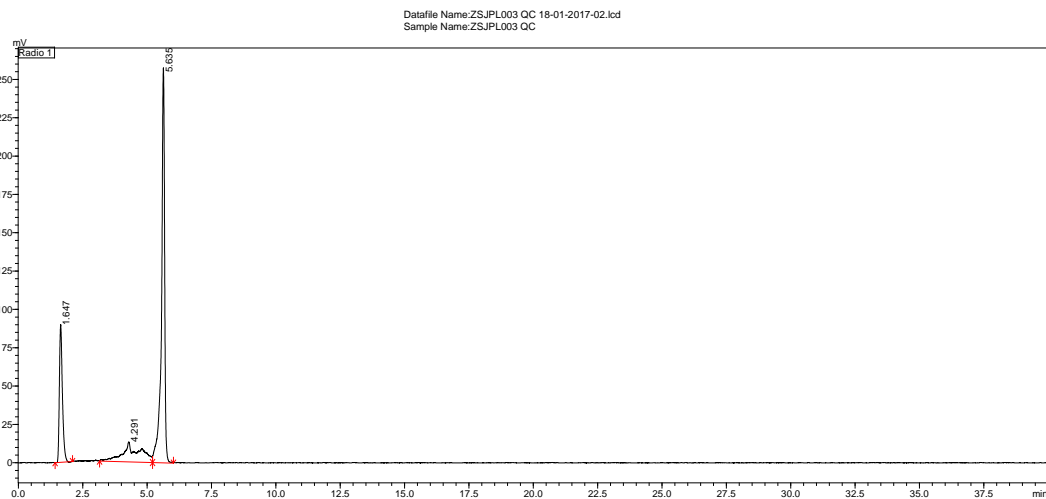


Peak#	Ret. Time	Area	Height	Conc.	Area%
1	1.634	164136	20055	12.239	12.239
2	5.026	209927	3960	15.653	15.653
3	5.653	967045	114577	72.108	72.108
Total		1341109	138593	100.000	100.000

Radiochemical purity is only 72%, other impurities to be evaluated.

Second injection 3 h after 1st injection

ZSJPL003 QC after purification radio signal 3h post 1st injection



Peak#	Ret. Time	Area	Height	Conc.	Area%
1	1.647	729264	89120	20.635	20.635
2	4.291	585972	12964	16.580	16.580
3	5.635	2218889	256937	62.785	62.785
Total		3534125	359022	100.000	100.000

Avidin binding TEST 1

Vial A 0.3 mg Avidin diluted in 240 µL PBS buffer + 10 µL of ZSJPL003 pure (1.05 MBq @13:08)

Vial B 240 µL PBS buffer + 10 µL of ZSJPL003 pure (95 MBq @13:09)

Both incubated for 30 min at 37 °C

Vial A 0.80 MBq @13:41

Vial B 0.68 MBq @13:42

Transferred in a Amicon Ultra 0.5 mL centrifugal filter ultracel 30 K

Vial A 0.78 MBq @13:45

Vial B 0.66 MBq @13:51

Spinned for 20 min @ 13400 rpm

	Membrane	Collect vial
Vial A	0.56 MBq @14:16	0.02 MBq @14:16
Vial B	0.44 MBq @14:17	0.06 MBq @14:18

Washed with 400 µL PBS and Spinned for 30 min @ 13400 rpm

	Membrane	Collect vial
Vial A	0.43 MBq @14:55	0.02 MBq @14:55
Vial B	0.36 MBq @14:56	0.05 MBq @14:57

Avidin binding TEST 2

Vial A 0.5 mg Avidin diluted in 400 µL PBS buffer + 25 µL of ZSJPL003 pure (1.28 MBq @15:25)

Vial B 400 µL PBS buffer + 25 µL of ZSJPL003 pure (1.08 MBq @15:26)

Both incubated for 30 min at 37 °C, then transferred in two Thomson SINGLE STEP Filter Vials 0.2 µm PVDF

Vial A 0.90 MBq @16:11

Vial B 0.70 MBq @16:15

Solution filtered and removed from the vial

	Solution	Left in the vial
Vial A	0.76 MBq @16:12	0.12 MBq @16:12
Vial B	0.56 MBq @16:16	0.14 MBq @16:16