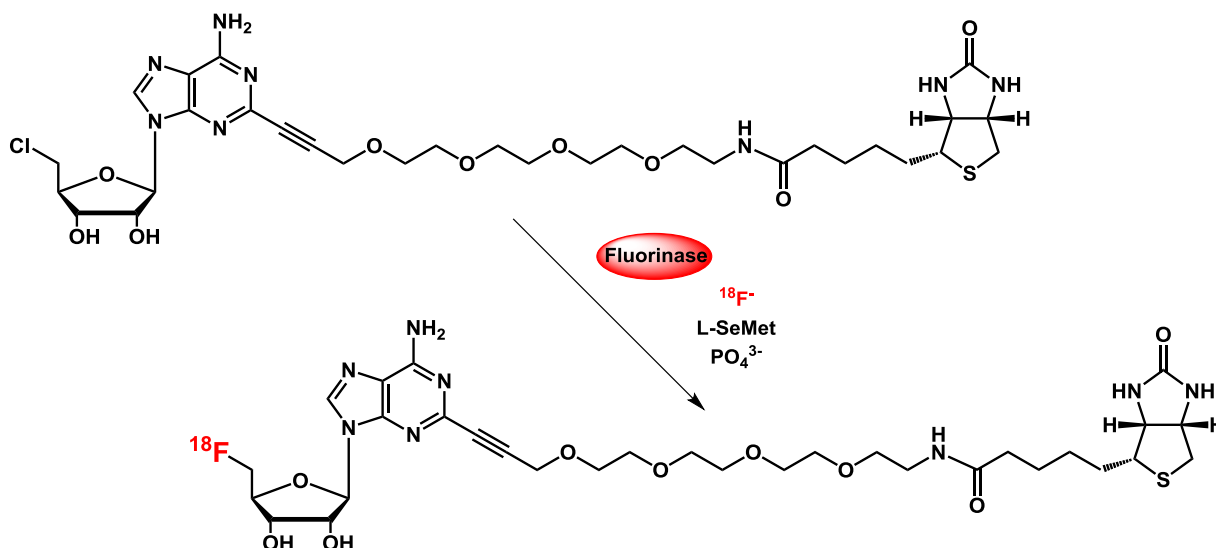


13-03-2017

ZSJPL005



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	457 MBq @ 13:01

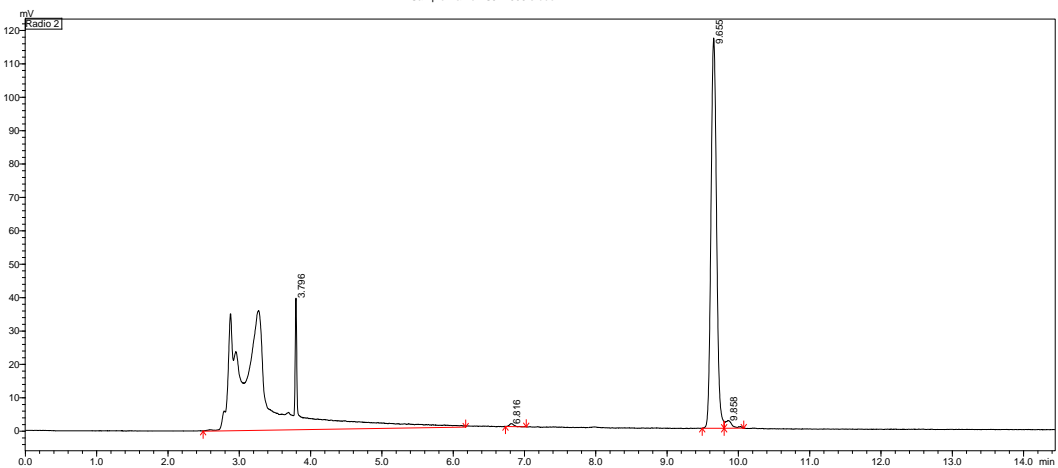
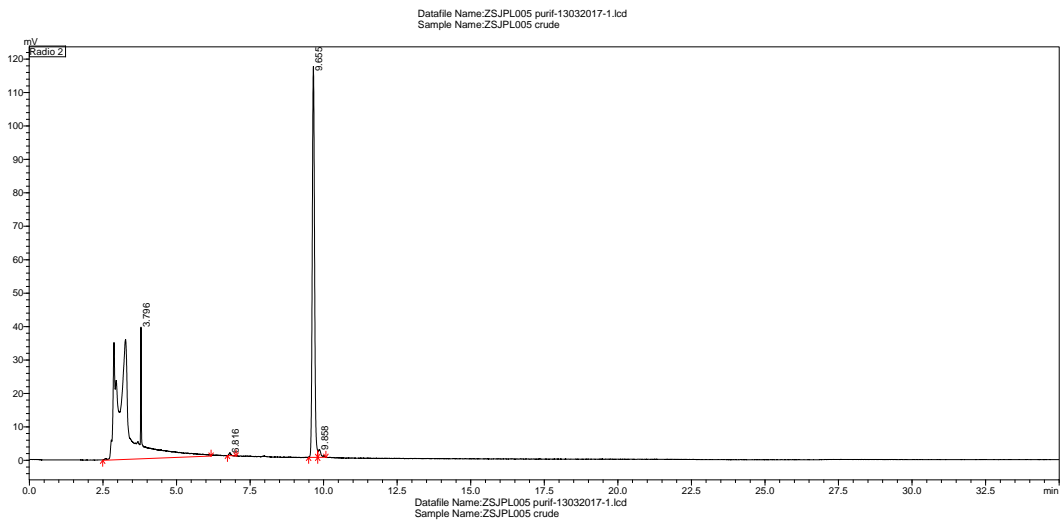
12 mins bombardment on T4, no rinse, final activity 186 approx. 8.1 GBq

13:01 start incubation 37 °C (457 MBq)

13:31 reaction mixture was boiled at 95°C for 5 min (371 Mbq @ 13:31). After that 250 μL of water were added and the eppendorf was spun at 13500 rpm for 5 min. 345 MBq @ 13:44. Approx. 450 μL of the supernatant (289 MBq @ 13:46) were injected in the HPLC (8.7 MBq residual in the syringe @ 13:48). Approx. 48.8 MBq @ 13:48 left in the Eppendorf.

Collected 73.4 MBq @ 14:00, approx. 26% of injected activity (Rt 9.66 min)

semiprep crude radio signal



Peak#	Ret. Time	Area	Height	Mark	Conc.	Area%
1	3.796	1170833	38346	M	64.165	64.165
2	6.816	3292	830	M	0.180	0.180
3	9.655	634761	116529	M	34.787	34.787
4	9.858	15823	2253	V M	0.867	0.867
Total		1824710	157958		100.000	100.000

Solution in the collection vial (73.4 MBq @ 14:00) was diluted with 50 mL of water and content loaded on the OASIS HLB light cartridge

66.6 MBq trapped in the cartridge @ 14:07

1.2 MBq residue in the collection vial @ 14:08

1.8 MBq in the filtered solution @ 14:09

Cartridge was washed with 20 mL of water

65.0 Mbq trapped in the cartridge @14:12

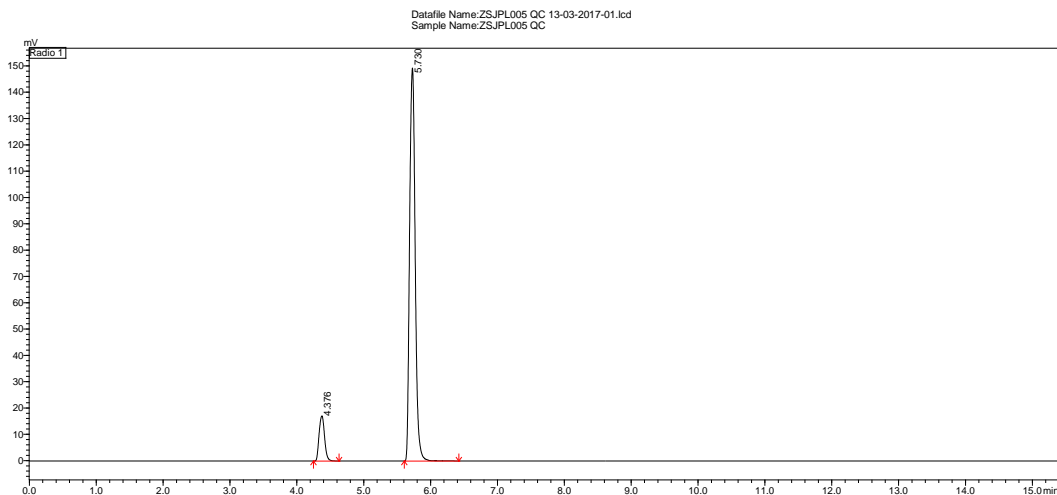
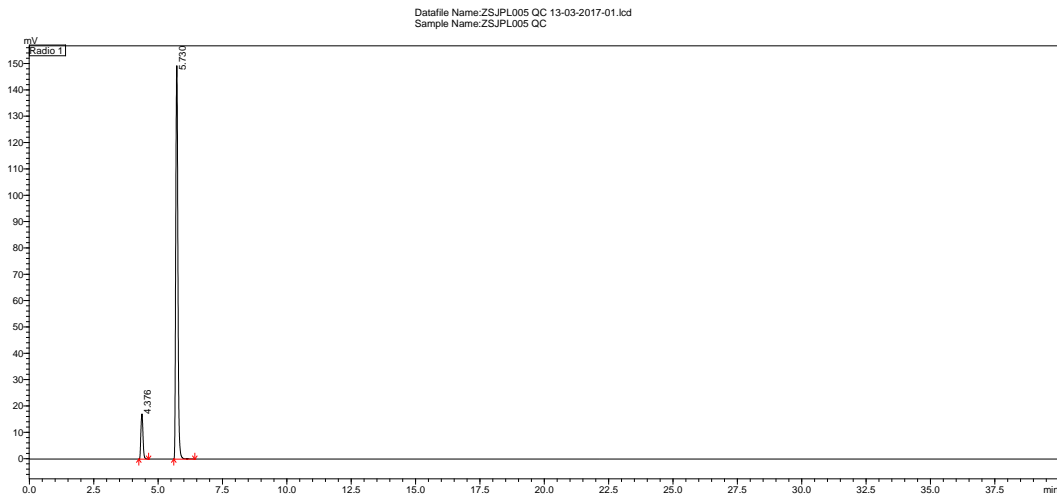
1.1 MBq in the wash solution @14:13

Activity was eluted from the cartridge with 0.4 mL of Ethanol
 52.3 MBq eluted @14:18
 10.4 MBq left in the cartridge @14:16

Activity was eluted again from the cartridge with 0.2 mL of Ethanol
 7.4 MBq eluted @14:19
 3.5 MBq left in the cartridge @14:17

100 µL of Ethanol solution were diluted with water to 500 µL, 100 µL of this solution, 1.66 MBq @ 14:23 were injected in HPLC analytical, 0.05 MBq @ 14:26 left in the syringe.
 Analytical peak collected 1.35 MBq @14:31

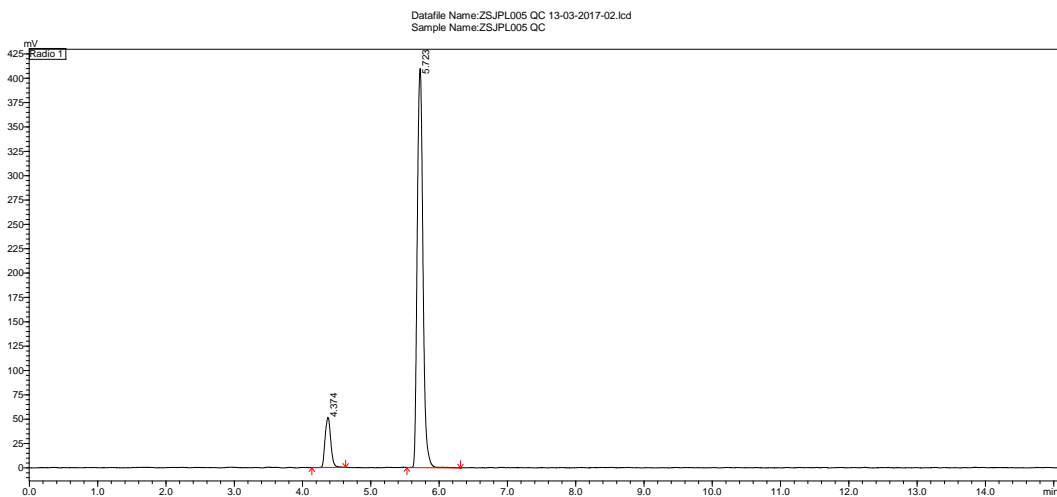
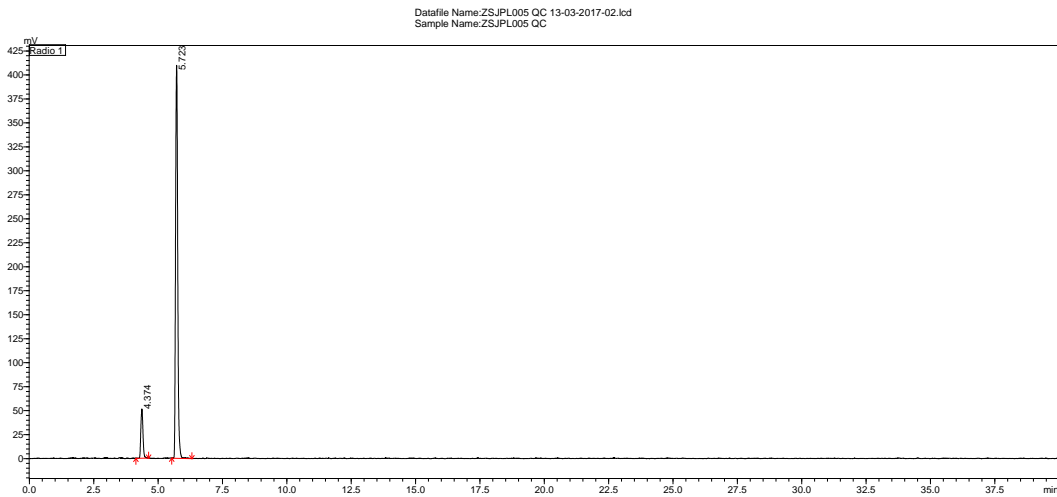
Radio HPLC Diluted 1:5 solution



Peak#	Ret. Time	Area	Height	Mark	Conc.	Area%
1	4.376	97087	17030		0.000	10.075
2	5.730	866596	148775	S	0.000	89.925
Total		963683	165805		0.000	100.000

100 μ L of 1:5 diluted solution were diluted with water to 500 μ L, 100 μ L of this solution was injected again in the HPLC.

Radio HPLC of 1:25 solution



Peak#	Ret. Time	Area	Height	Mark	Conc.	Unit	ID#	Name	Area%
1	4.374	293064	51119	M	10.948				10.948
2	5.723	2383893	408725	M	89.052				89.052
Total		2676957	459844		100.000				100.000

Radiochemical purity is approx. 90%

Avidin binding TEST

Vial A 0.56mg Avidin diluted in 300 μ L PBS buffer + 50 μ L of solution of ZSJPL005 pure diluted 1:5 with water (0.8 MBq @15:03)

Vial B 300 μ L PBS buffer + 50 μ L of solution of ZSJPL005 pure diluted 1:5 with water (0.8 MBq @15:04)

Both incubated for 30 min at 37 °C.

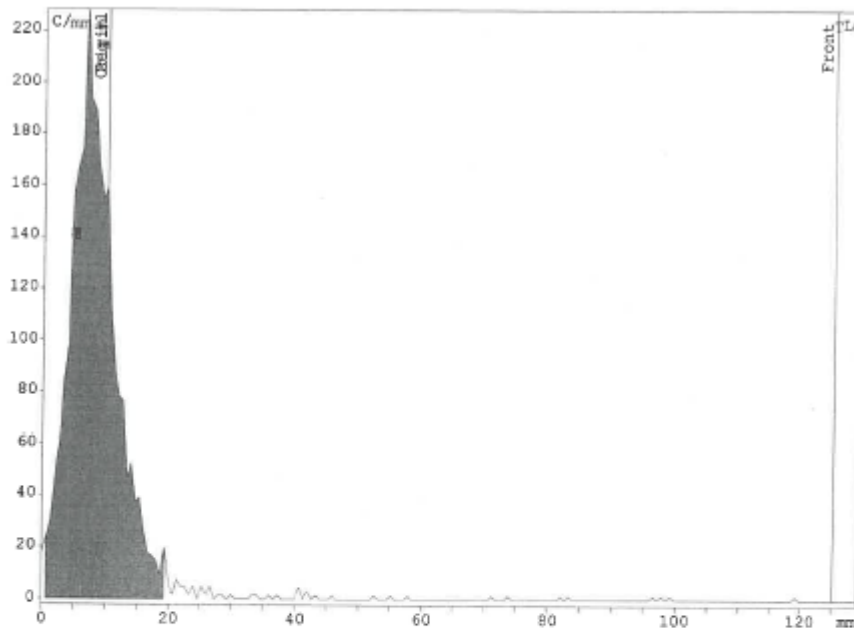
Vial A 0.55 MBq @15:37

Vial B 0.53 MBq @15:38

Then 50 μ L of solution were spotted on a TLC plate and TLC eluted with solution 75% ACN/25% MeOH/5% Water.

TLC of solution A

Measurement ZSJPL005 TEST-A STREPTAVIDIN+.rta raytest Page 1/1
 C:\GINA_NT\FDGQC\ZSJPL005 TEST-A STREPTAVIDIN+.rta Print date: 13/03/2017



Sample description

Measurement: ZSJPL005 TEST-A STREPTAVIDIN+.rta, started: 13/03/201
 Method: FDGQC
 Origin: 10 mm Front 125 mm
 Meas. time: 3.0 min Resolution: 0.7 mm Energy: 2
 High voltage: 550.0 V
 Radio detector: raytest MiniGITA Serial Nr.: 2006156

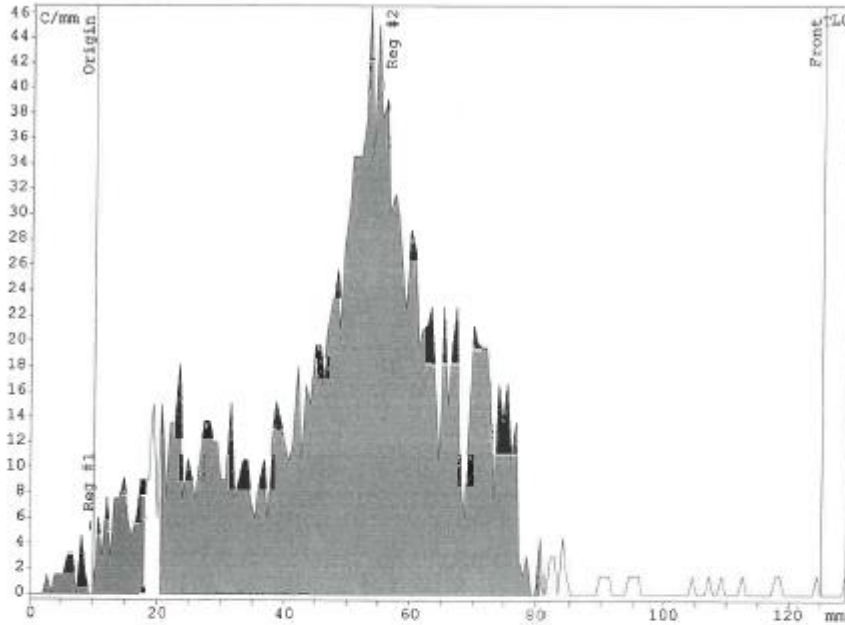
Integration TLC

Substance	R/F	%Total	Type	Area	tArea
		%		Counts	%
Reg #1	-0.023	95.67	DP	1700.000	100.00
Sum in ROI				1700.000	
Total area				1777.000	
Area RF				580.000	

96% of activity in region1 with Rf 0

TLC of solution B

Measurement ZSJPL005 TEST-B STREPTAVIDIN-BISLONG2.rta raytest Page 1/1
 C:\GINA_NT\FDGQC\ZSJPL005 TEST-B STREPTAVIDIN-BISLONG2.rta Print date: 13/03/2017



Sample description

Measurement: ZSJPL005 TEST-B STREPTAVIDIN-BISLONG2.rta, started:
 Method: FDGQC
 Origin: 10 mm Front 125 mm
 Meas. time: 6.1 min Resolution: 0.7 mm Energy: 2
 High voltage: 550.0 V
 Bad return value of command MT
 Radio detector: raytest MiniGITA Serial Nr.: 2006156

Integration TLC

Substance	R/F	%Total	Type	Area	%Area
		%		Counts	%
Reg #1	-0.012	5.08	DD	58.000	5.32
Reg #2	0.387	90.53	DD	1033.000	94.68
Sum in ROI				1091.000	
Total area				1141.000	
Area RF				1129.000	

90% of activity in region 2, only 5% under the area where the activity is located when streptavidin is present.