26-08-2016

<table>
<thead>
<tr>
<th>Compound</th>
<th>Amount</th>
<th>Final conc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorinase enzyme</td>
<td>5 mg in 110 µL water (PO₄³⁻ buffer, 50 mM), 174 nmol</td>
<td>20 mg/mL 0.62 mM</td>
</tr>
<tr>
<td>L-SeMet (2mM in water)</td>
<td>40 µL, 80 nmol</td>
<td>0.32 mM</td>
</tr>
<tr>
<td>PSMA-CIDA</td>
<td>0.2 mg, 228 nmol</td>
<td>0.99 mM</td>
</tr>
<tr>
<td>^{18}F in O18 Water</td>
<td>80 µL</td>
<td>265 MBq, @10:15</td>
</tr>
</tbody>
</table>

6 min Cyclotron bombardment (T4), activity delivered to hotcell A (approx. 3.6-3.8 GBq @09.52 in approx. 2.2 mL)

10:16  start incubation 37°C (233 MBq)

10:46  10 µL sample diluted to 500 µL with water, boiled at 95°C for 5 min and spinned at 13500 rpm for 5 min. 20 µL of the supernatant (0.27 MBq) injected in the HPLC

11:26  reaction mixture was boiled at 95°C for 5 min (145 Mbq @ 12.25). After that 250 µL of water were added and the eppendorf was spinned at 13500 rpm for 5 min.

Approx. 450 µL of supernatant (108.9 MBq @11.36, residue in the syringe 2.30 MBq @11.43) were injected in the semiprep HPLC and 13.8 MBq of the desired product were collected.

Purification yield = 12.9%

Collected activity was concentrated using Oasis HLB cartridge:

11:51  13.8 MBq collection vial
Solution in the collection vial was diluted with 50 mL of water and content loaded on the cartridge
11.55 MBq trapped in the cartridge @ 12.04
0.05 MBq residue in the collection vial @ 12.01
1.57 MBq in the filtered solution @ 12.03

Cartridge was washed with 20 mL of water
10.85 Mbq trapped in the cartridge @12.06
0.07 MBq in the wash solution @12.07

Activity was eluted from the cartridge with 1 mL of Ethanol
7.7 MBq eluted @12.15
2.3 MBq left in the cartridge @12.15

5.42 MBq in 1 mL EtOH @ 13.02 were delivered to Ian Fleming for cell experiments