



Supporting information

## Supporting information: Fully automated GMP compliant synthesis of $^{18}\text{F}$ -FE-PE2I

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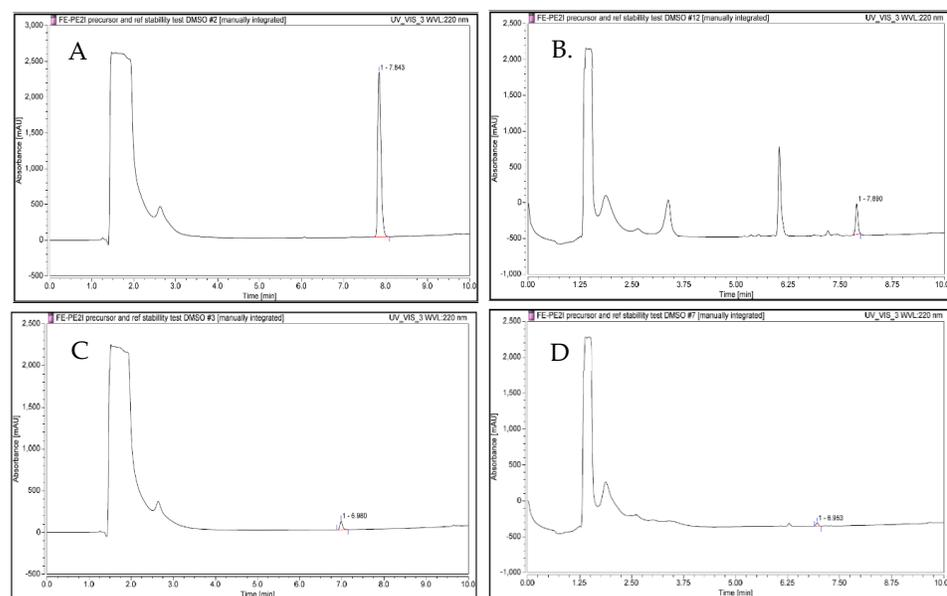
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### Chromatograms and data from stability studies of OTsE-PE2I

Stability studies were conducted on the precursor (OTsE-PE2I) and reference (FE-PE2I) by adding solutions of the respective compounds to dried eluates from the QMA. The same experiments were performed for elutions using  $\text{K}_2\text{CO}_3/\text{K}_{222}$ ,  $\text{Et}_4\text{NHCO}_3$  and  $\text{Bu}_4\text{NH}_2\text{PO}_4$ . Some examples of the analytical HPLC chromatograms can be seen in Figure S1.



**Figure S1.** Examples of analytical HPLC chromatograms to evaluate the stability of the tosylate precursor (OTsE-PE2I) and reference (FE-PE2I) dissolved in DMSO at 120 °C added to dried QMA eluates using  $\text{Bu}_4\text{NH}_2\text{PO}_4$  (20 mM, 1 mL) for elution. The integrated peaks correspond to the identified respective compound and remaining concentration at later time points (2–15 min) where calculated as a percentage of  $t = 0$  min. The chromatograms display OTsE-PE2I dissolved in DMSO at  $t = 0$  min (A.) and  $t = 10$  min (B.) as well as FE-PE2I at  $t = 0$  min (C.) and  $t = 2$  min (D.).

*Synthesis reports for synthesis using the  $\text{K}_2\text{CO}_3/\text{K}_{222}$  and  $\text{Bu}_4\text{NH}_2\text{PO}_4$ -elution methods starting from 45 GBq starting activity on Synthera® + synthesis module.*