

Supplement to published version: Amir Khajavinia, Mehran Yarahmadi, Anas El-Aneed, and Azita Haddadi (2023). Development of a liquid chromatography-tandem mass spectrometry method for the analysis of docetaxel-loaded Poly(lactic-co-glycolic acid) nanoparticles. *Journal of Pharmaceutical and Biomedical Analysis*, Vol. 223, 115114. <https://doi.org/10.1016/j.jpba.2022.115114>.

Supplementary Data:

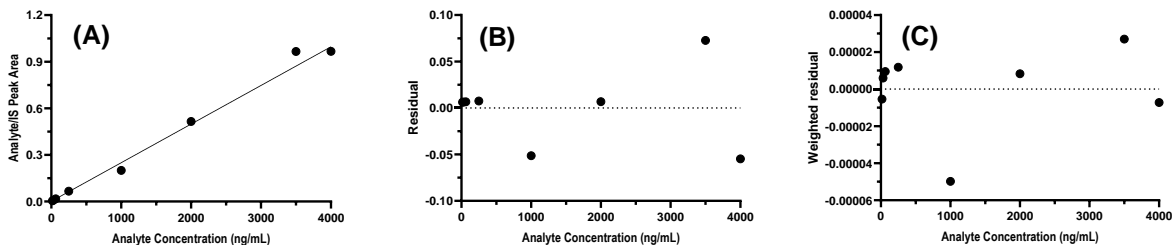


Figure S 1. Day one standard curve (A), residual plot (B) and $\frac{1}{x^2}$ weighted residual plot (C).

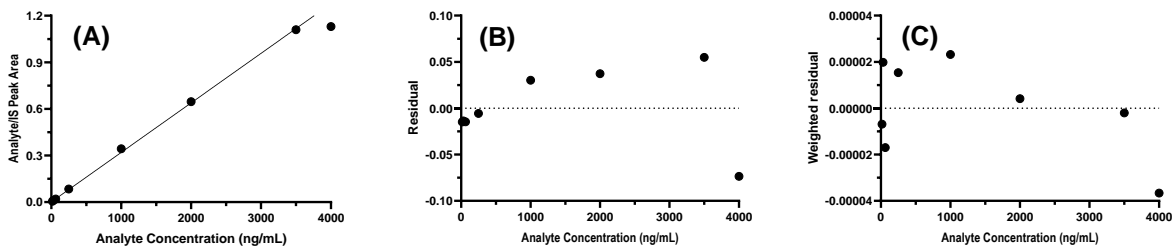


Figure S 2. Day two standard curve (A), residual plot (B) and $\frac{1}{x^2}$ weighted residual plot (C).

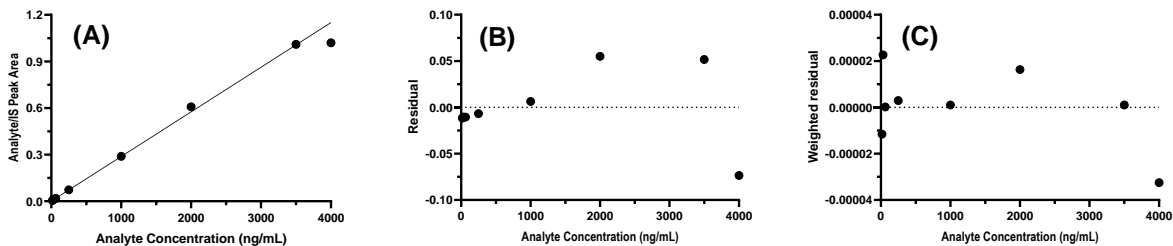


Figure S 3. Day three standard curve (A), residual plot (B) and $\frac{1}{x^2}$ weighted residual plot (C).

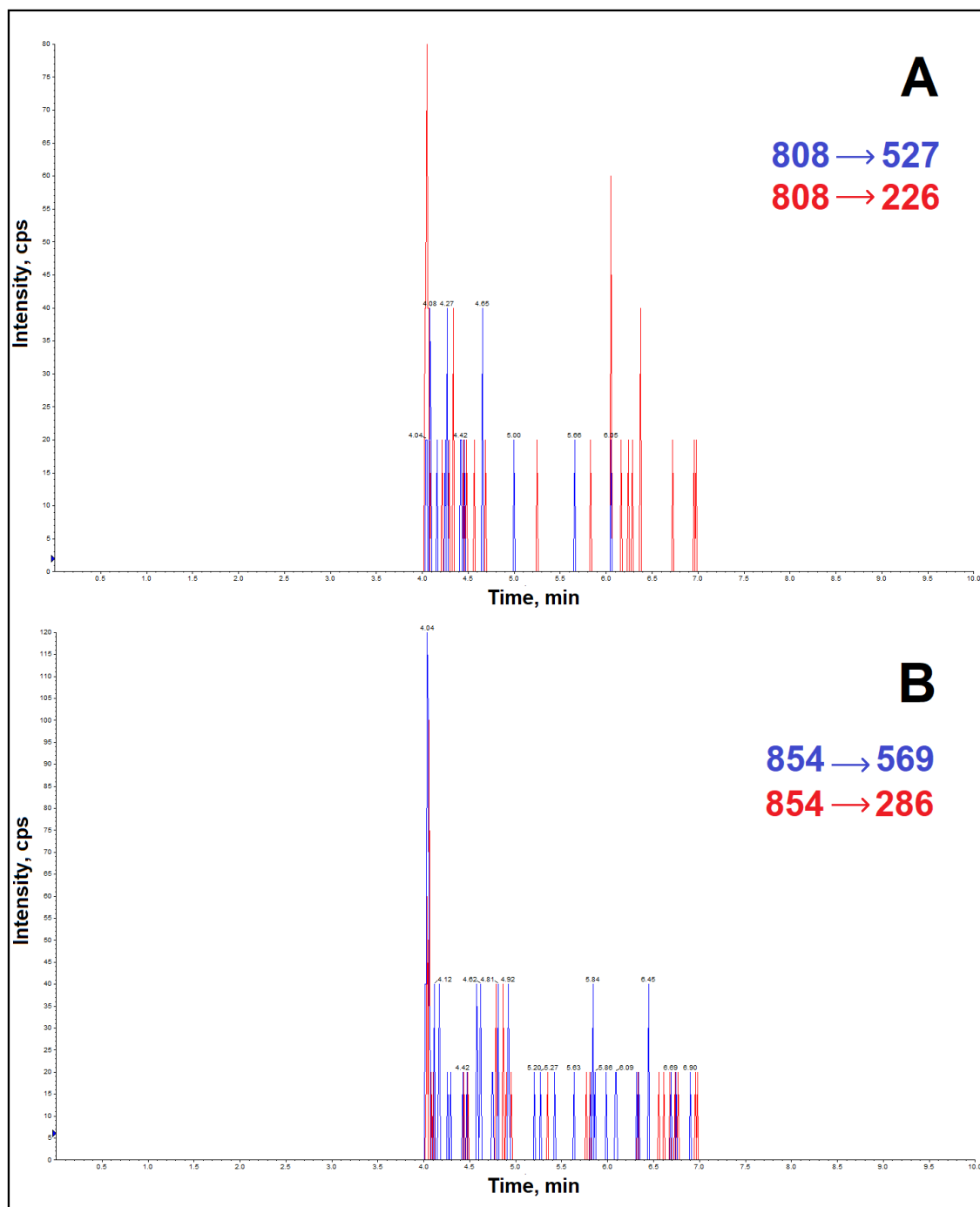


Figure S 4. LC-MS/MS chromatogram of a double blank sample while monitoring the transitions of analyte (A) and internal standard (B). No interference from the co-eluting compounds was observed at the channels of analyte or IS.

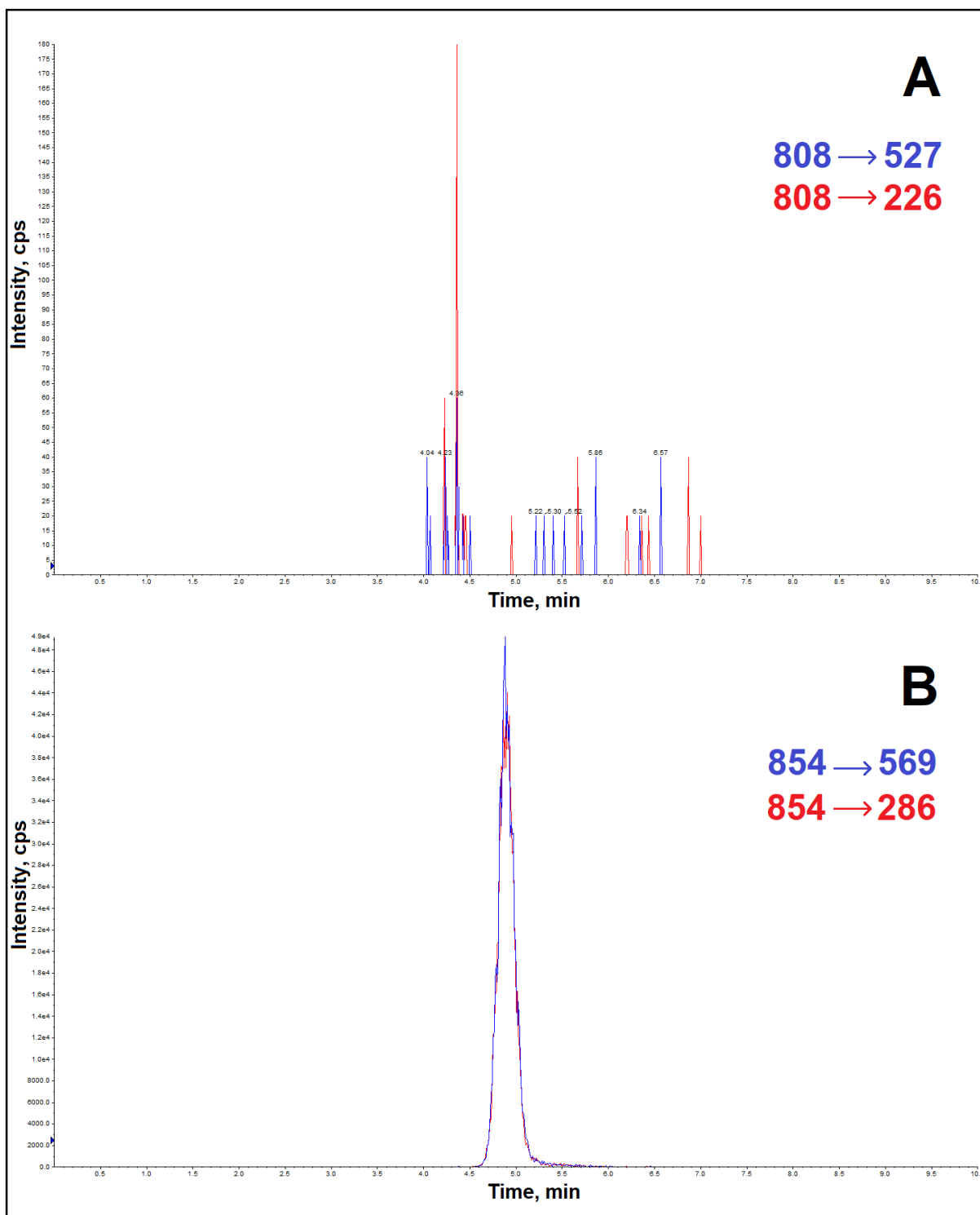


Figure S 5. LC-MS/MS chromatogram of a blank sample (a matrix containing IS) while monitoring the transitions of analyte (A) and internal standard (B). No interference was observed from IS at the channels of analyte.

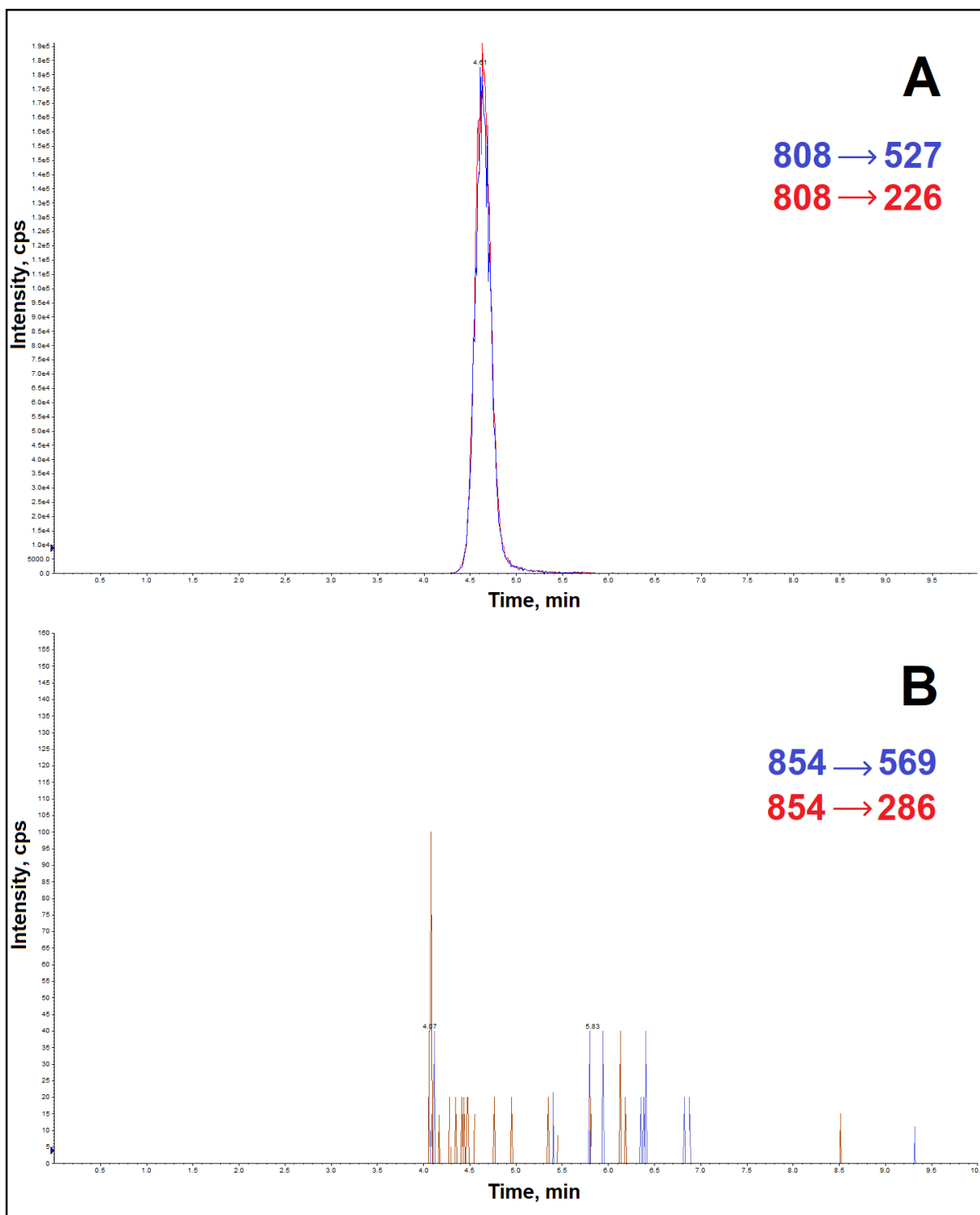


Figure S 6. LC-MS/MS chromatogram of a docetaxel solution (1000 ng/ml) without IS, while monitoring the transitions of the analyte (A) and internal standard (B). No interference was observed from the analyte at the channels of the IS.

Table S 1. Evaluation of the matrix effects (MF) and IS-normalized matrix effects in the developed HPLC-MS/MS method for the quantification of docetaxel in the nanoparticle matrix at two QC levels (LQC, HQC) and IS level.

	MF	IS-normalized MF	CV%
LQC (n=6)	0.613 ± 0.036	0.919 ± 0.054	5.9
HQC (n=6)	0.672 ± 0.029	1.007 ± 0.043	4.3
IS (n=6)	0.667 ± 0.026	—	—