

Table S1. The greenness report sheet of the developed assay containing individual score by following GAC criteria.

Criteria	Score	Weight
1. Direct analytical techniques should be applied to avoid sample treatment.	0.3	3
2. Minimal sample size and minimal number of samples are goals.	0.92	4
3. If possible, measurements should be performed in situ.	0.66	2
4. Integration of analytical processes and operations saves energy and reduces the use of reagents.	1.0	3
5. Automated and miniaturized methods should be selected.	0.75	2
6. Derivatization should be avoided.	1.0	3
7. Generation of a large volume of analytical waste should be avoided, and proper management of analytical waste should be provided.	0.95	2
8. Multi-analyte or multi-parameter methods are preferred versus methods using one analyte at a time.	1.0	2
9. The use of energy should be minimized.	0.0	2
10. Reagents obtained from renewable sources should be preferred.	0.5	2
11. Toxic reagents should be eliminated or replaced.	1.0	4
12. Operator's safety should be increased.	0.8	3

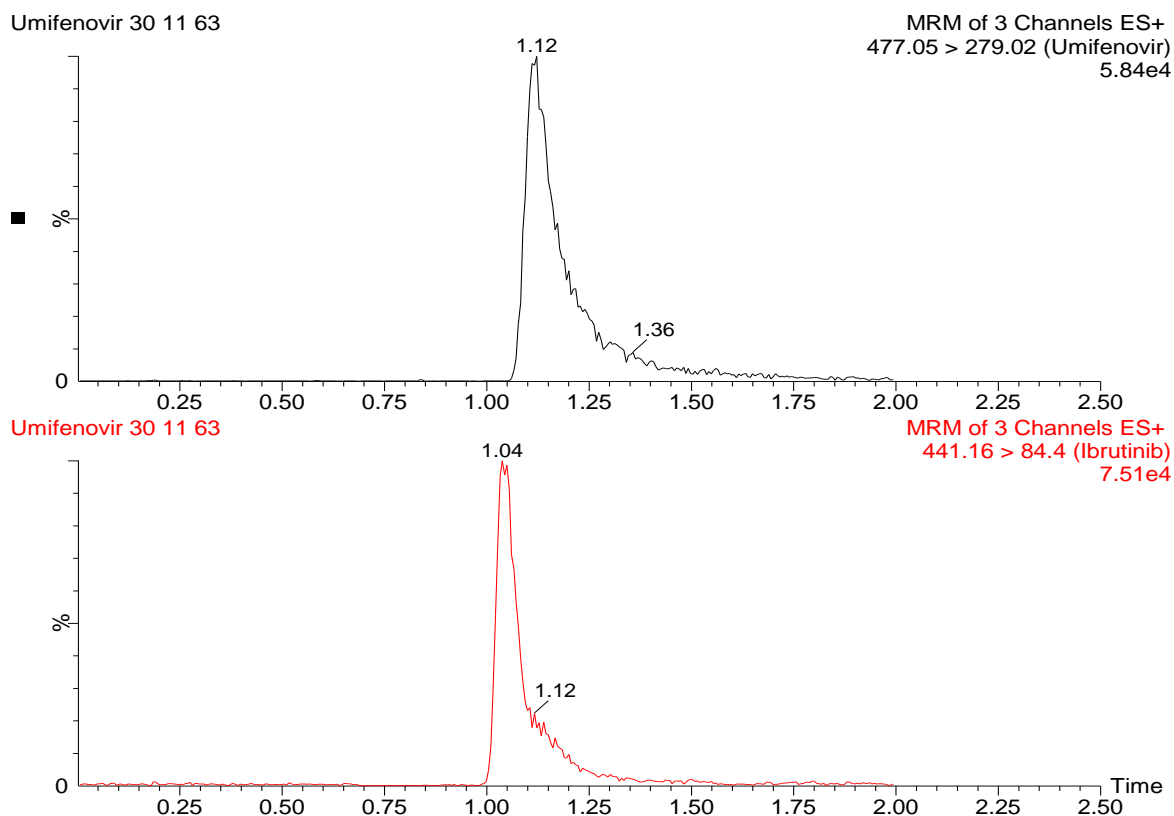


Figure S1: The representative chromatogram of umifenovir and IS (ibrutinib) obtained with Acquity BEH column of 2.1x150 ;1.7 μ m

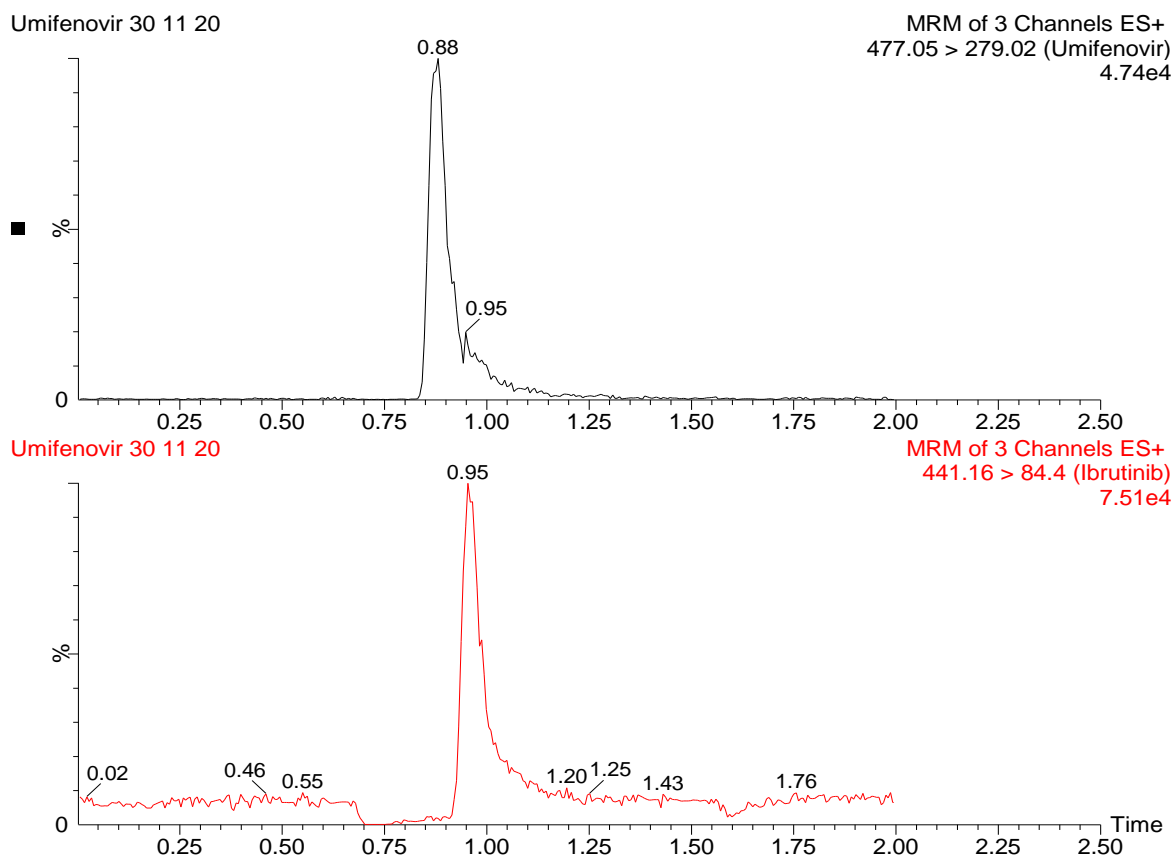


Figure S2: The representative chromatogram of umifenovir and IS (ibrutinib) obtained with Acquity CSH column of 2.1x100 ;1.7 μ m

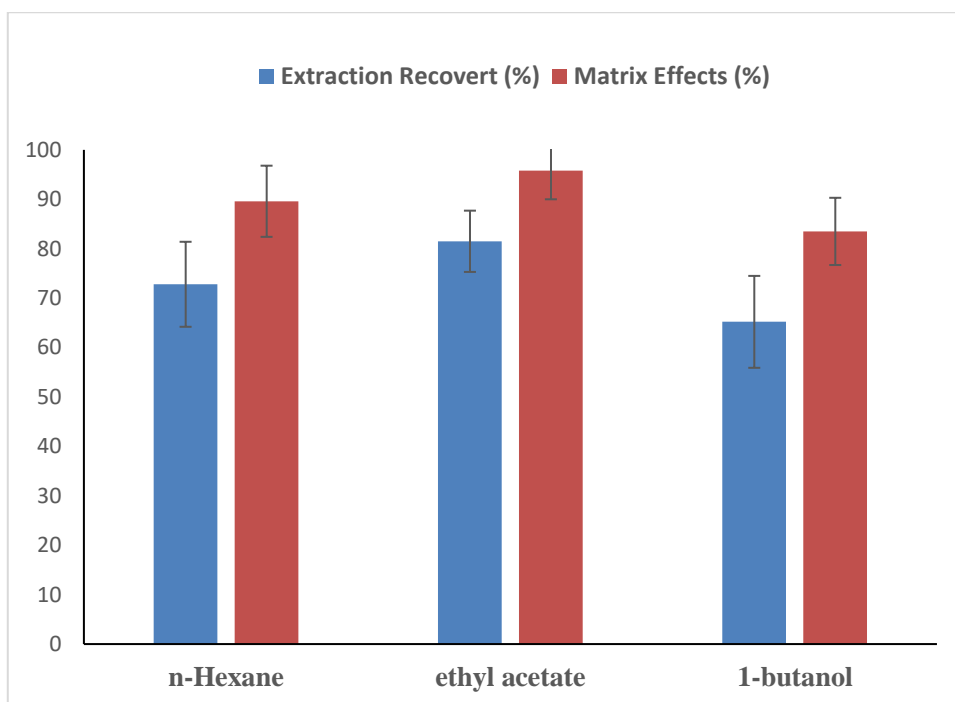


Figure S3: The comparative extraction recovery (%) and matrix effects (%) data of different extracting solvents obtained during sample preparation optimization.