

Supporting Information

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Quantification of Antileukemic Drug Dasatinib in Human Plasma: Application of a sensitive liquid chromatographic method

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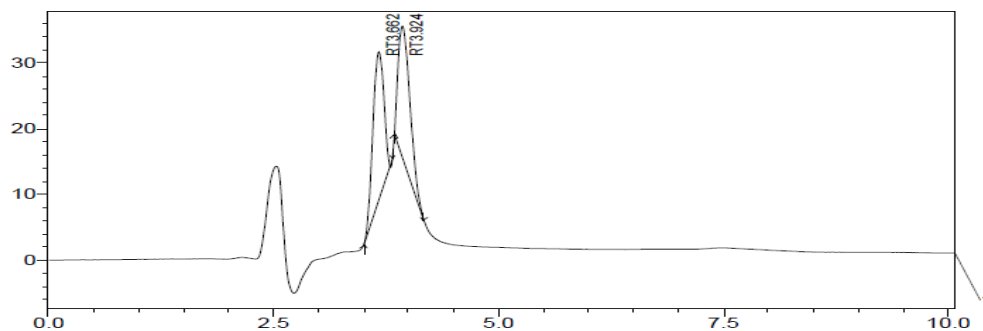


Figure S1: Trial 1 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	3.66	1542	0.62	194460	—	Merging of peak
Dasatinib	3.92	1742	0.57	180626	—	

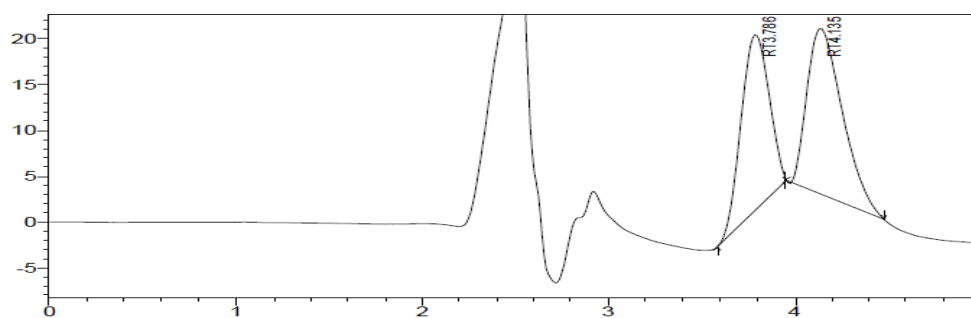


Figure S2: Trial 2 HPLC Chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	3.78	1835	1.14	202366	–	Merging of peak
Dasatinib	4.13	1722	1.24	237500	–	

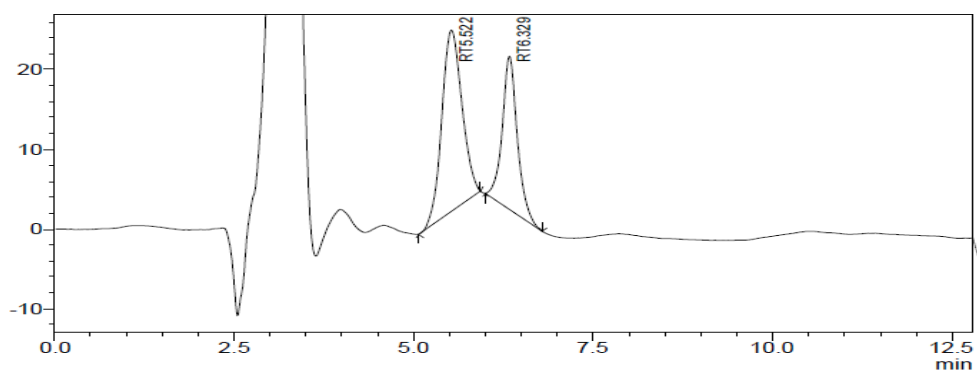


Figure S3: Trial 3 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	5.52	1865	0.94	449027	—	Merging of peak
Dasatinib	6.32	1948	1.14	280784	1.12	

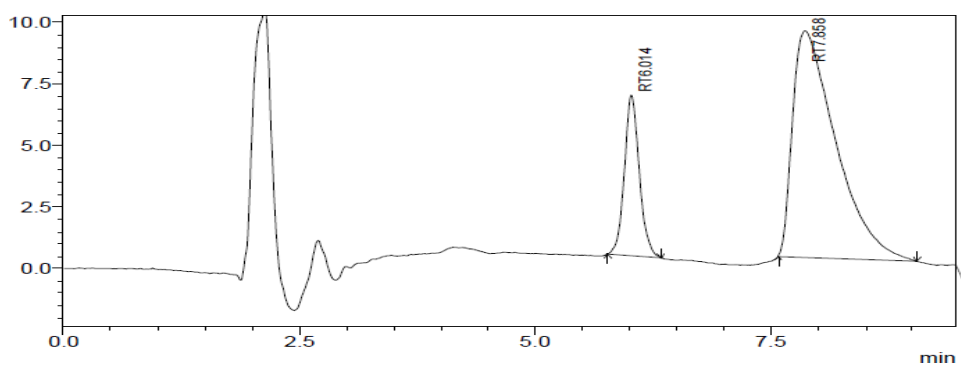


Figure S4: Trial 4 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	6.01	2015	1.18	71916	—	Asymmetry
Dasatinib	7.85	982	2.44	294004	3.19	more than 2

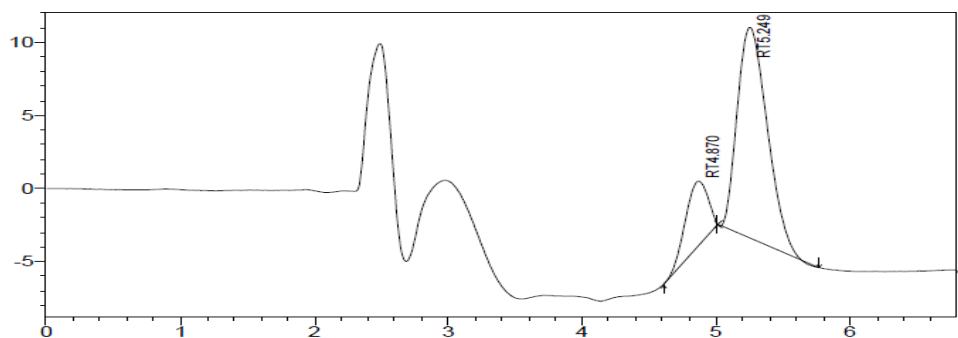


Figure S5: Trial 5 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	4.86	1254	0.71	52950	—	Merging of peak
Dasatinib	5.24	1984	1.25	223492	—	

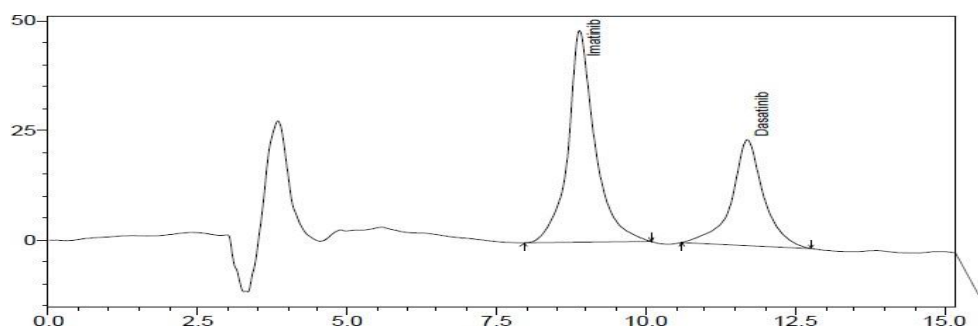


Figure S6: Trial 6 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	8.88	1625	2.24	1513532	–	Asymmetry
Dasatinib	11.69	1758	2.49	894005	1.92	more than 2

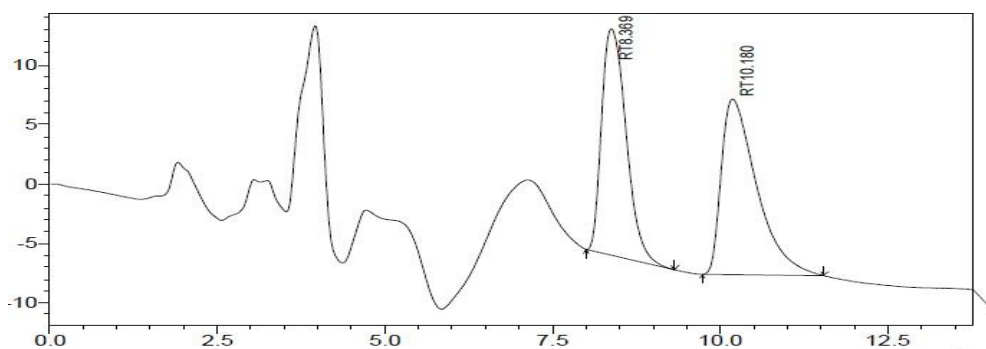


Figure S7: Trial 7 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	8.36	1426	1.89	486272	—	Tailing more than 2
Dasatinib	10.18	1284	2.31	544643	2.41	

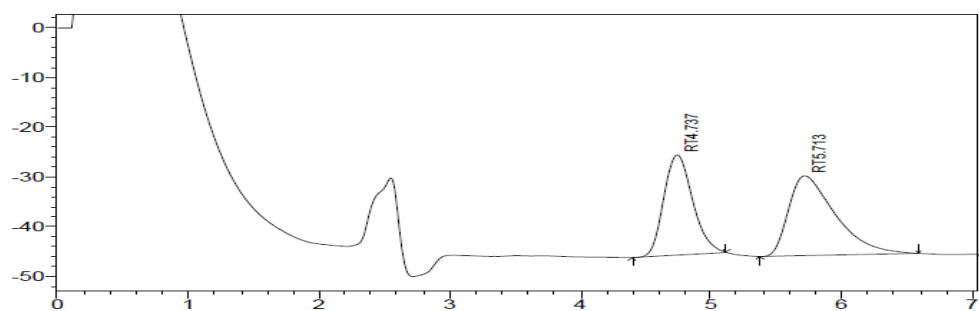


Figure S8: Trial 8 HPLC chromatogram

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observation
Imatinib	4.73	1149	2.13	310880	–	Tailing more than 2
Dasatinib	5.71	924	2.91	399682	2.11	

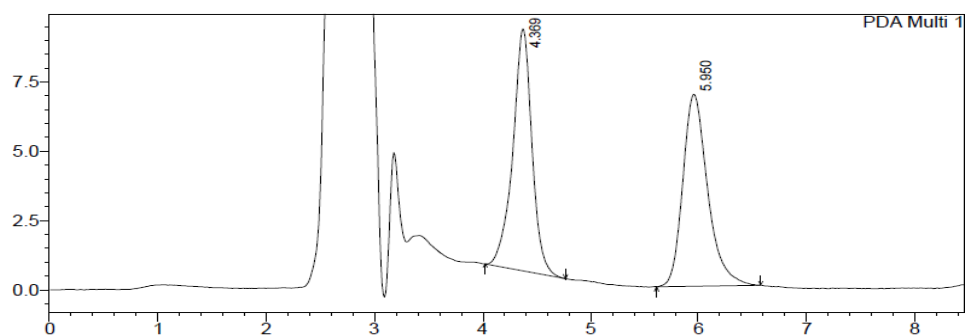


Figure S9: Optimized chromatographic Condition

Analyte	Rt (min)	Plates	Tailing	Area	Resolution	Observcation
Imatinib	3.66	2315	0.95	107784	–	Well resolved
Dasatinib	3.92	2415	1.34	111199	4.25	peak without asymmetry

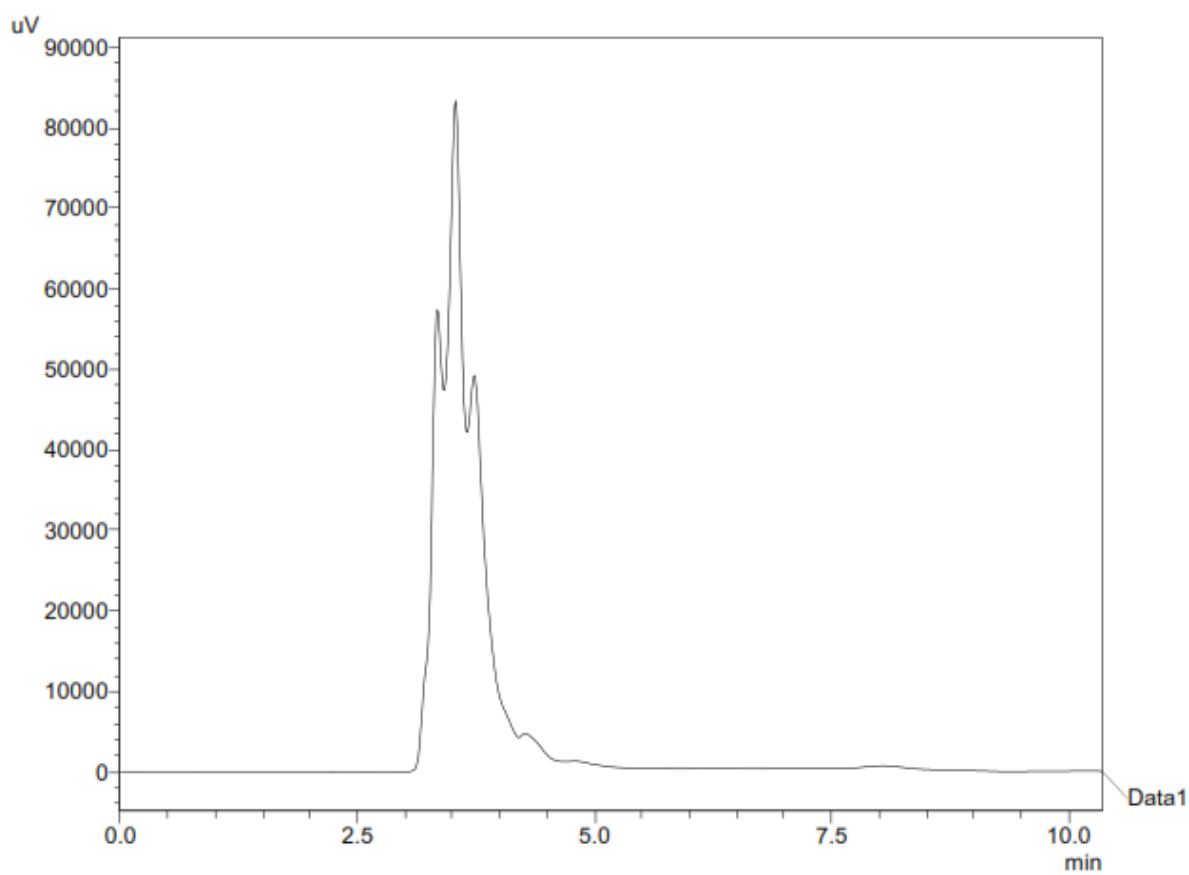


Figure S10: Chromatogram for blank plasma

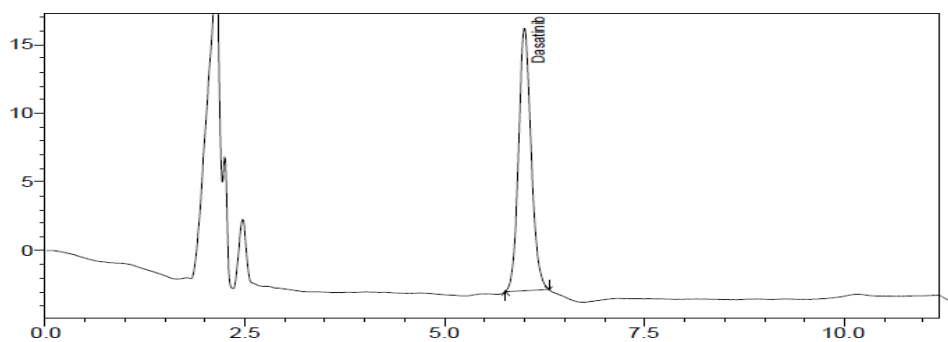


Figure S11: Chromatogram of Dasatinib

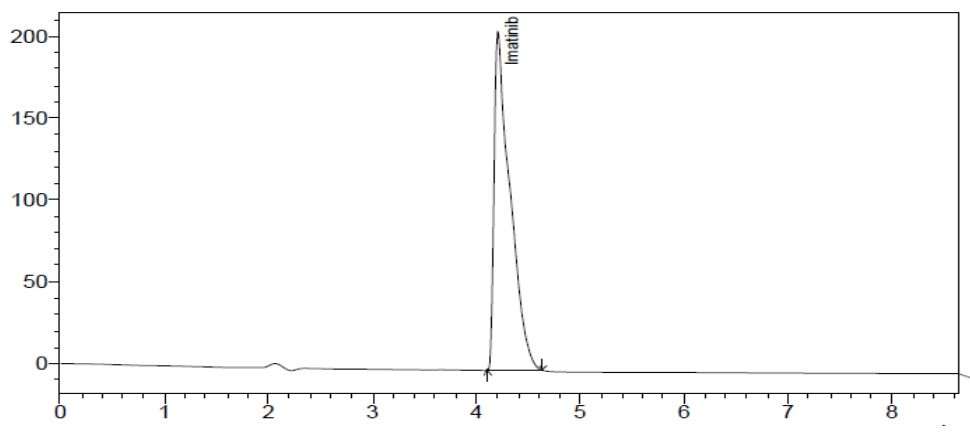


Figure S12: Chromatogram of Imatinib (Internal standard)

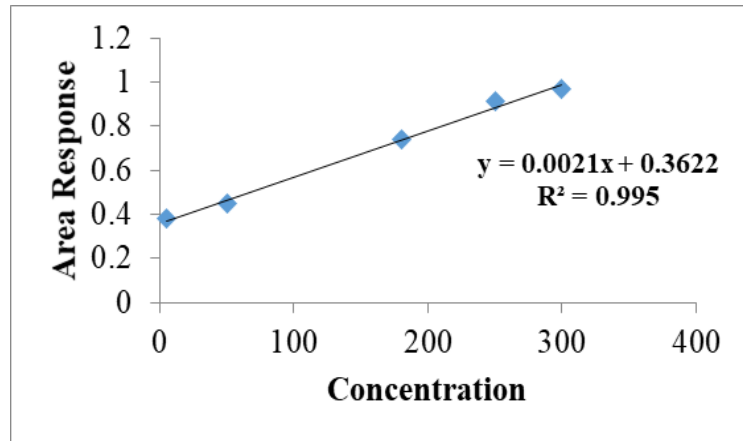


Figure S13: Calibration curve of Dasatinib

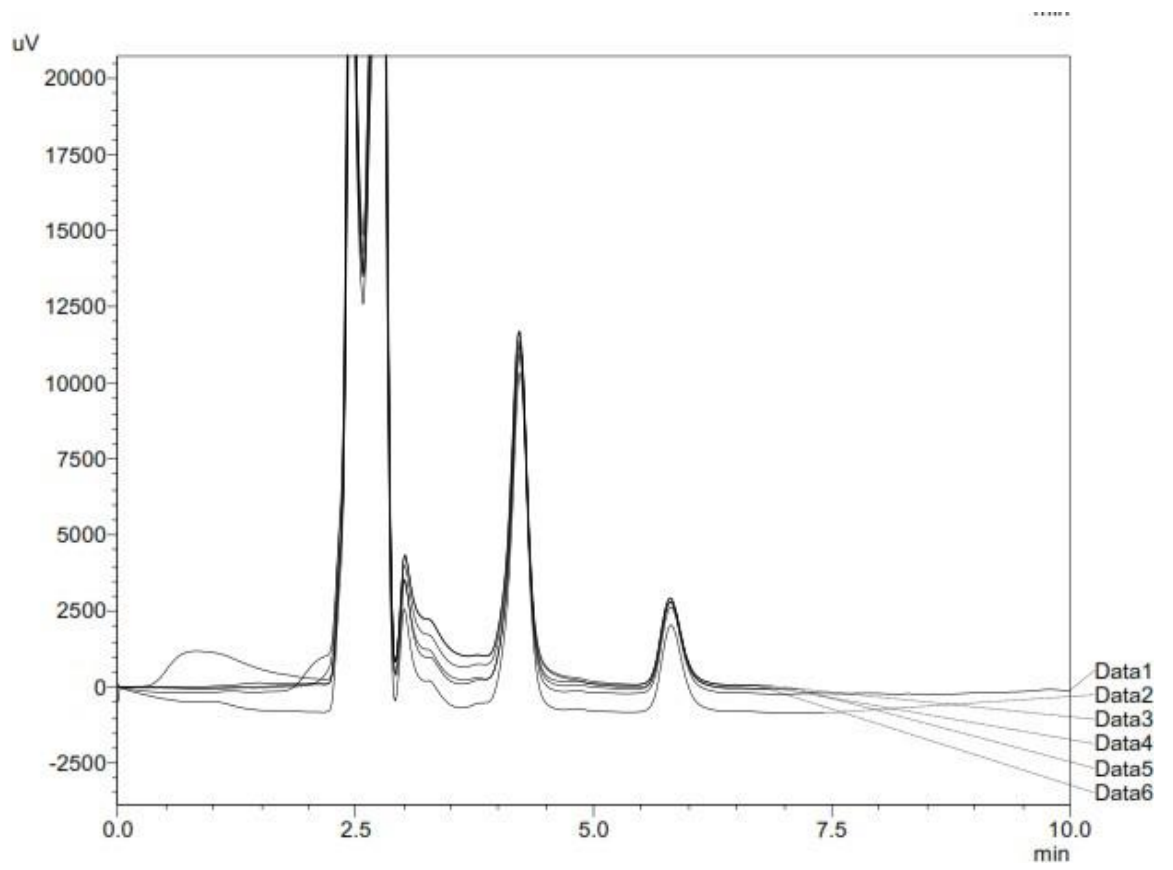


Figure S14: Overlay chromatogram at LLOQ

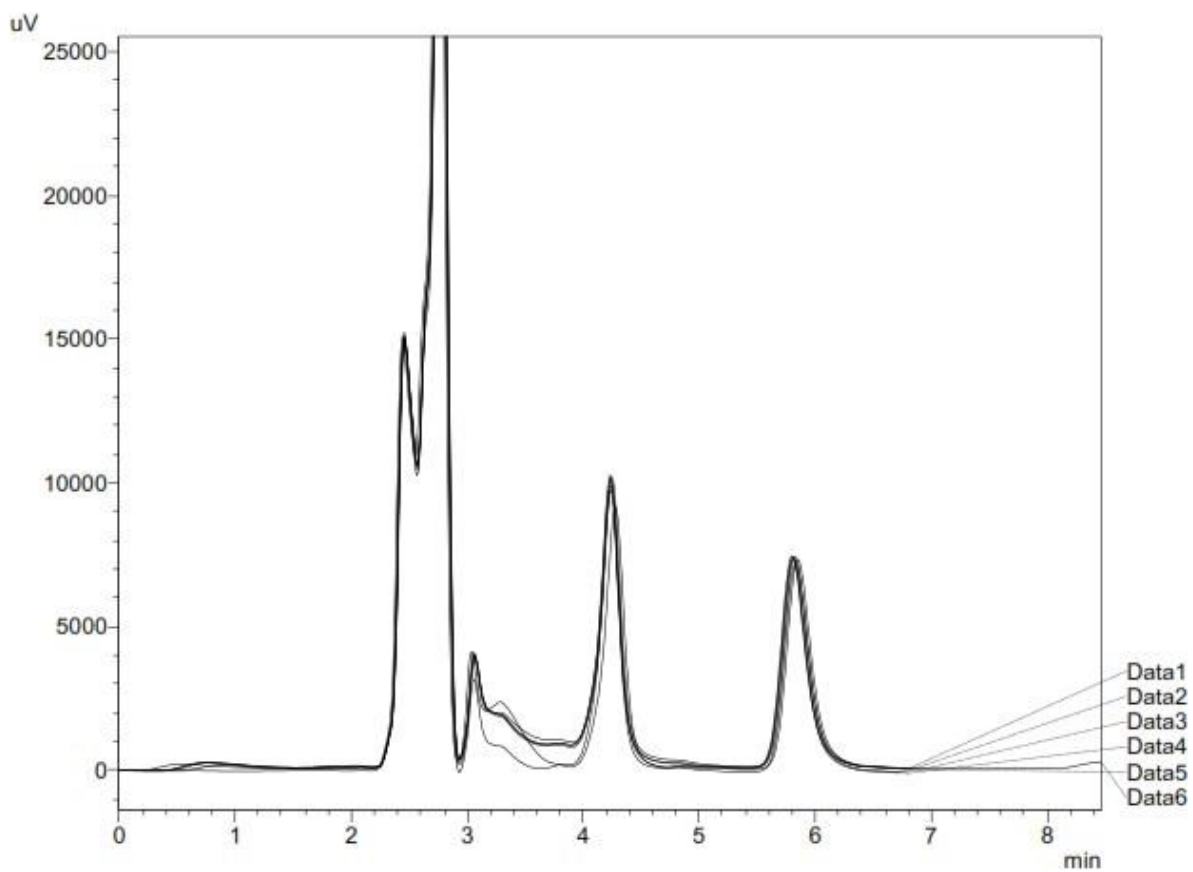
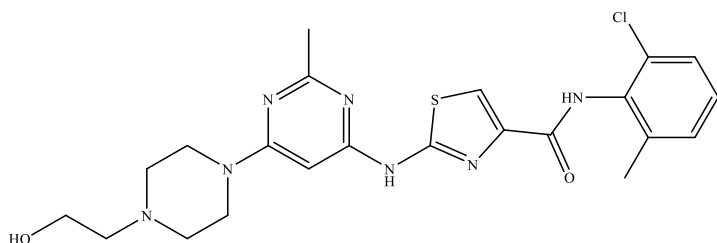


Figure S15: Overlay chromatogram at ULOQ



Molecular Formula: C₂₂H₂₆ClN₇O₂S

Molecular Weight: 488.01g/mol

Solubility: 0.0128 mg/mL in water and 14.3 mg mL⁻¹ in DMF

Melting Point: 280-286 °C

pka: 7.22 and 8.49

Figure S16: Chemical structure and physicochemical properties of Dasatinib