

## Supporting Information

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### **RP-HPLC method combined with ultrafiltration for simultaneous analysis of Melphalan and Topotecan in human plasma samples**

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**Table S1:** The physicochemical properties of melphalan and topotecan

	<b>Melphalan</b>	<b>Topotecan</b>
Molecular Formula	C <sub>13</sub> H <sub>18</sub> Cl <sub>2</sub> N <sub>2</sub> O <sub>2</sub>	C <sub>23</sub> H <sub>23</sub> N <sub>3</sub> O <sub>5</sub>
Molecular Weight	305.20	421.4
Form	Crystals	Amorphous
Melting Point	180 °C	213-218 °C
Solubility	Water 1.7 - 2.3 (mg/mL) Methanol 2.8 - 5.6 (mg/mL)	In water, 2,350 mg/L at 25 °C (est)
Vapor Pressure	3.0X10 <sup>-10</sup> mm Hg at 25 °C (est)	3.52X10 <sup>-18</sup> mm Hg at 25 °C (est)
LogP	-0.52	0.8
Stability	Sensitive to light, heat, and moisture.	Stable under recommended storage conditions.
Dissociation Constants	pKa = 4.3 (carboxy), pKa = 6.5 (primary amine), pKa = 12.3 (tertiary amine) (est)	pKa1 = 1.74 (imine); pKa2 = 8.00 (benzyl alcohol); pKa3 = 9.83 (amine) (est)