

Table S4. Comparison of the M-D- μ SPE-DES method followed by HPLC-UV with other methods for extraction and determination of MEL

Methods	Real sample	LDR ($\mu\text{g L}^{-1}$)	LOD ($\mu\text{g L}^{-1}$)	RSD% (intra-day)	Extraction time (min)	ER (%)	Ref.
CPE-HPLC-UV ^a	Human serum	45-2000	10	<15.0	10	>92.0	[26]
SPE-HPLC-UV ^b	Human serum	10-10000	3	<5.0	-	>93.0	[27]
IL-UA-ISFME-HPLC-UV ^c	Human plasma	5-1500	1	3.6	4.5	>82.1	[28]
LLE-HPLC-UV ^d	Human plasma	10-2400	-	<4.3	-	>77.2	[29]
M-D- μ SPE-DES-HPLC-UV ^e	Human plasma and urine	10-500	1.5-3.0	<6.2	3	>92.0	Present study

^a Cloud point extraction- high performance liquid chromatography–ultra violet detection

^b Liquid-liquid extraction- high performance liquid chromatography–ultra violet detection

^c Solid phase extraction- high performance liquid chromatography–ultra violet detection

^d Ionic liquid based ultrasound assisted in situ solvent formation microextraction- high performance liquid chromatography–ultra violet detection

^e Magnetic dispersive micro solid phase extraction technique based on deep eutectic solvent- high performance liquid chromatography–ultra violet detection