

Task-specific ionic liquid based in situ dispersive liquid-liquid microextraction for the sequential extraction and determination of chromium species: Optimization by experimental design

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Table S1

Design of matrix and responses for BBD.

Run	Sample pH	Amount of functionalized IL (% w/v)	Amount of KPF ₆ (% w/v)	EE (%) of Cr(III)	EE (%) of Cr(VI)
1	0	-1	+1	68.4	57.5
2	0	0	0	97.1	101.0
3	0	0	0	97.8	98
4	-1	0	+1	77.5	90.3
5	0	0	0	97.0	100.1
6	-1	0	-1	62.5	74.7
7	+1	-1	0	74.7	53.3
8	+1	+1	0	100.4	88.6
9	0	0	0	94.0	98.8
10	-1	+1	0	84.0	98.1
11	0	+1	-1	88.1	81.9
12	-1	-1	0	58.0	60.8
13	+1	0	-1	80.3	66.9
14	0	-1	-1	50.5	46.6
15	0	+1	+1	97.5	102.1
16	0	0	0	95.8	97.6
17	+1	0	+1	92.6	84.3

Fig S1. ^{13}C NMR of (a) [8-HQ- $\text{C}_2\text{C}_1\text{Im}$][Br] and (b) PDC- $\text{C}_2\text{C}_1\text{Im}$][Br].

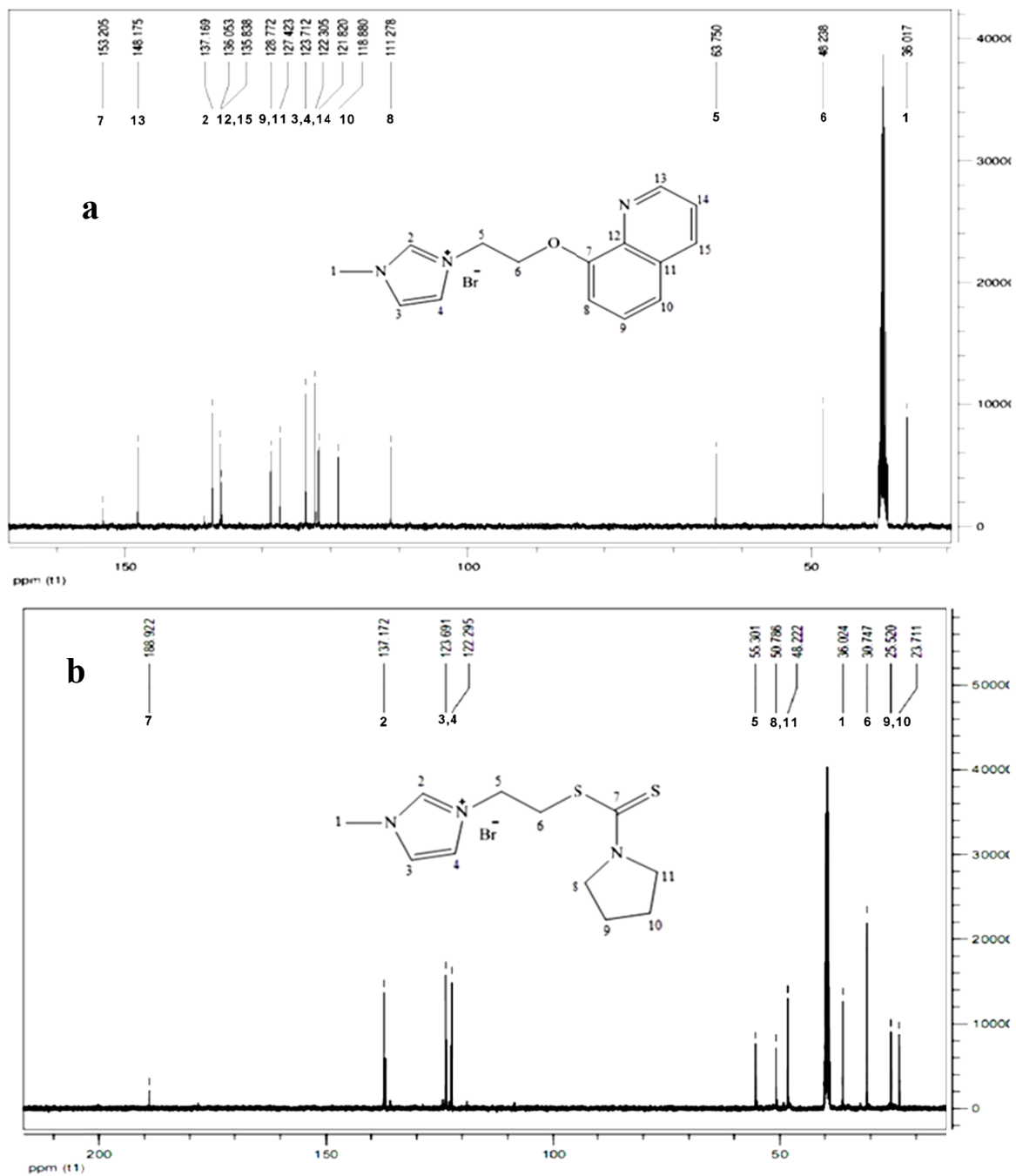


Fig. S2. FTIR spectra of (a) [8-HQ-C₂C₁Im][Br] and (b) PDC-C₂C₁Im][Br] in KBr plates.

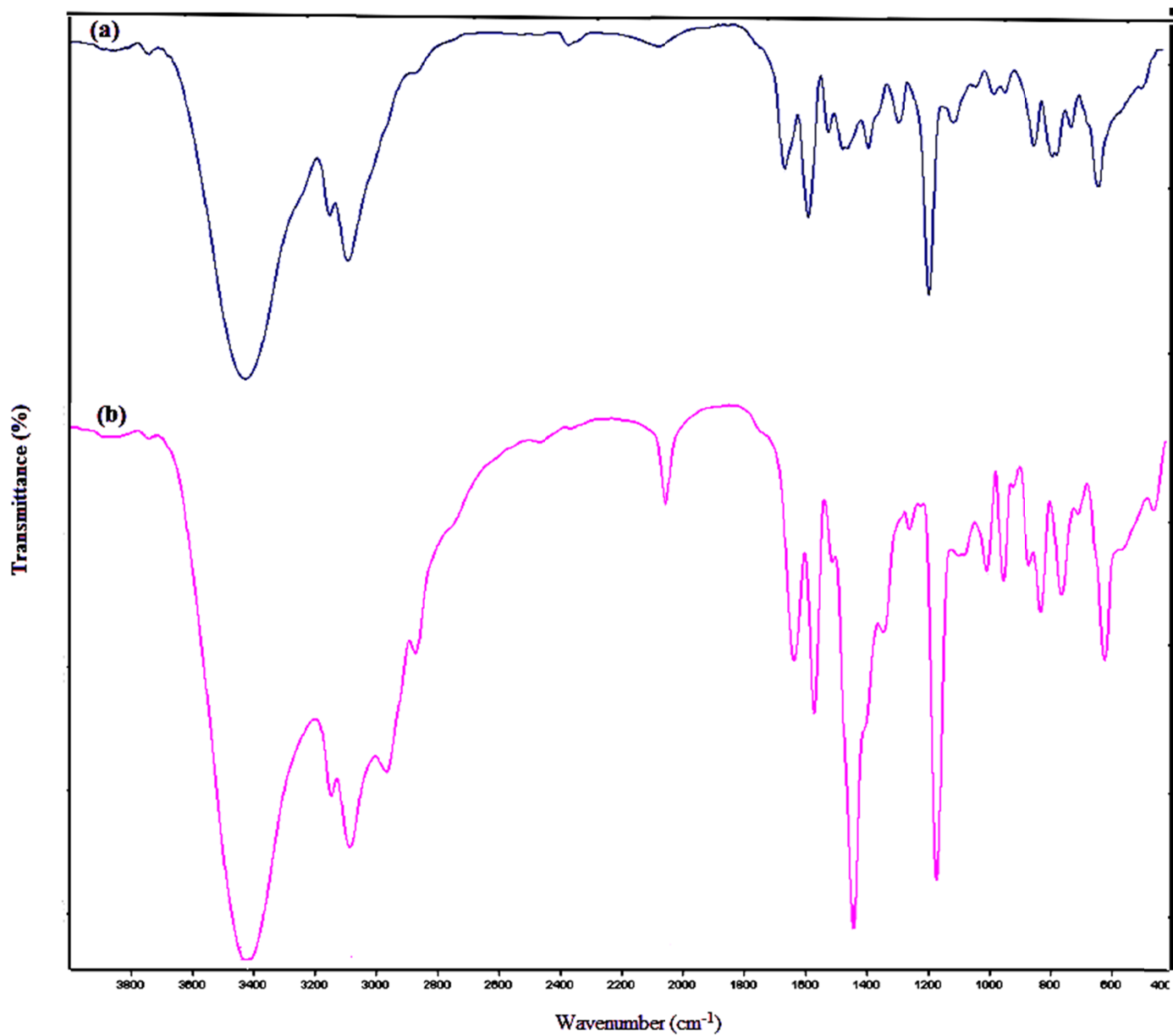
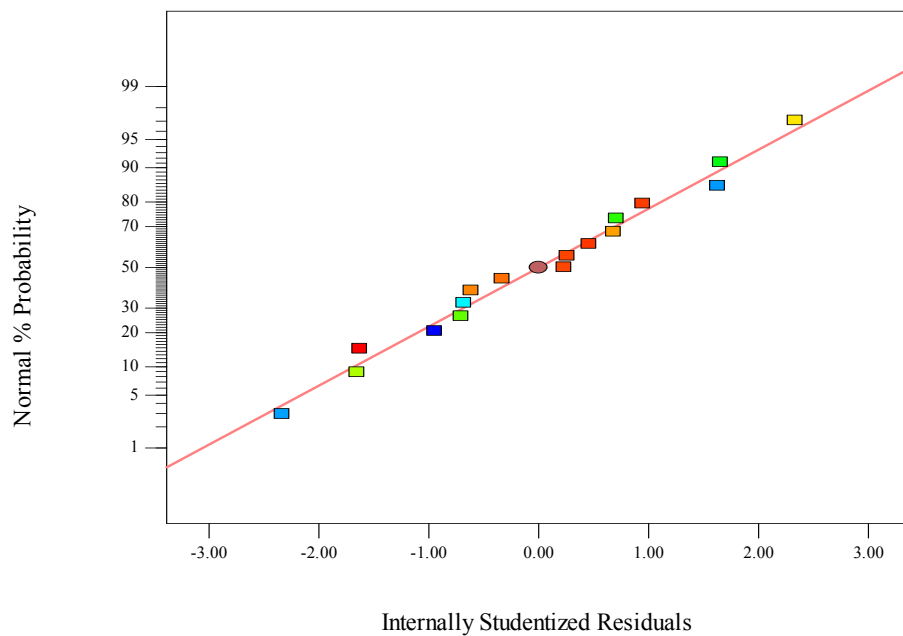
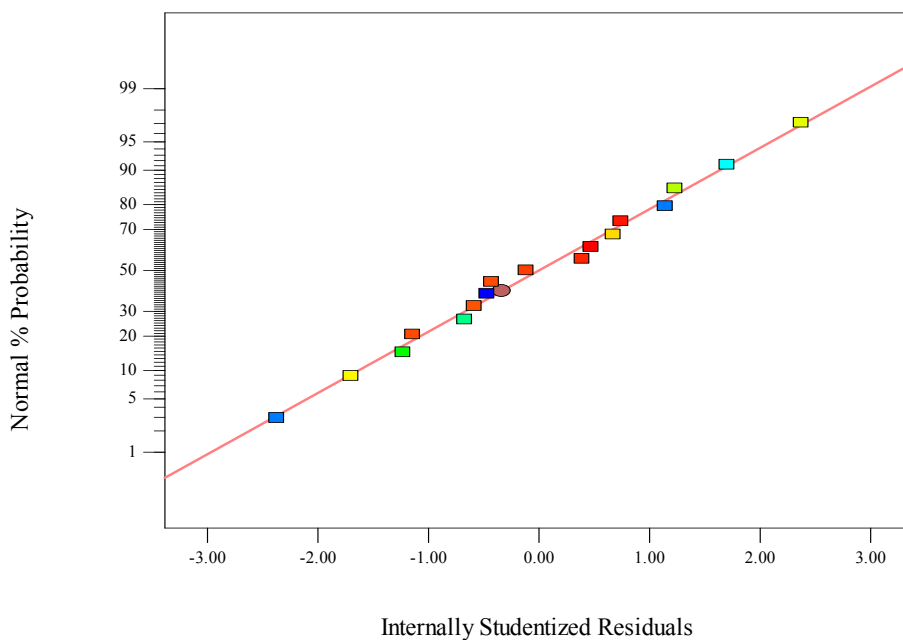


Fig. S3. Normal probability plots of studentized residuals for the refined quadratic models of extraction efficiency of Cr(III) (a) and extraction efficiency Cr(VI) (b).



(a)



(b)