

ESM Table 1. The composition of the studied DES

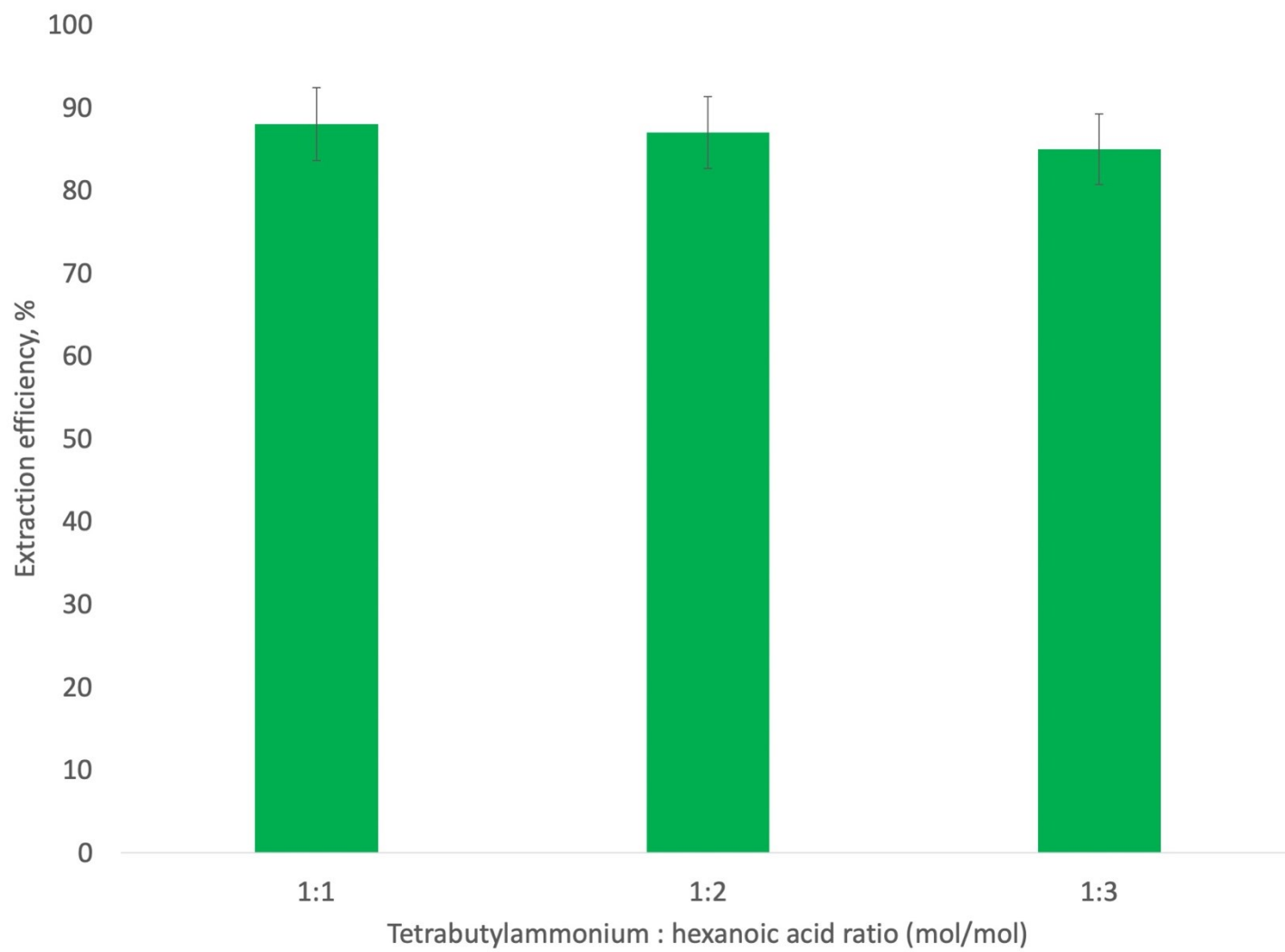
DES number	Hydrogen bond acceptor	Hydrogen bond donor	Ratio (mol/mol)
1		hexanoic acid	1/1
2		heptanoic acid	1/1
3		octanoic acid	1/1
4		nonanoic acid	1/1
5	Tetrabutylammonium bromide	1-hexanol	1/1
6		1-heptanol	1/1
7		1-octanol	1/1
8		1-nonanol	1/1

ESM Table 2. Operating parameters for GFAAS

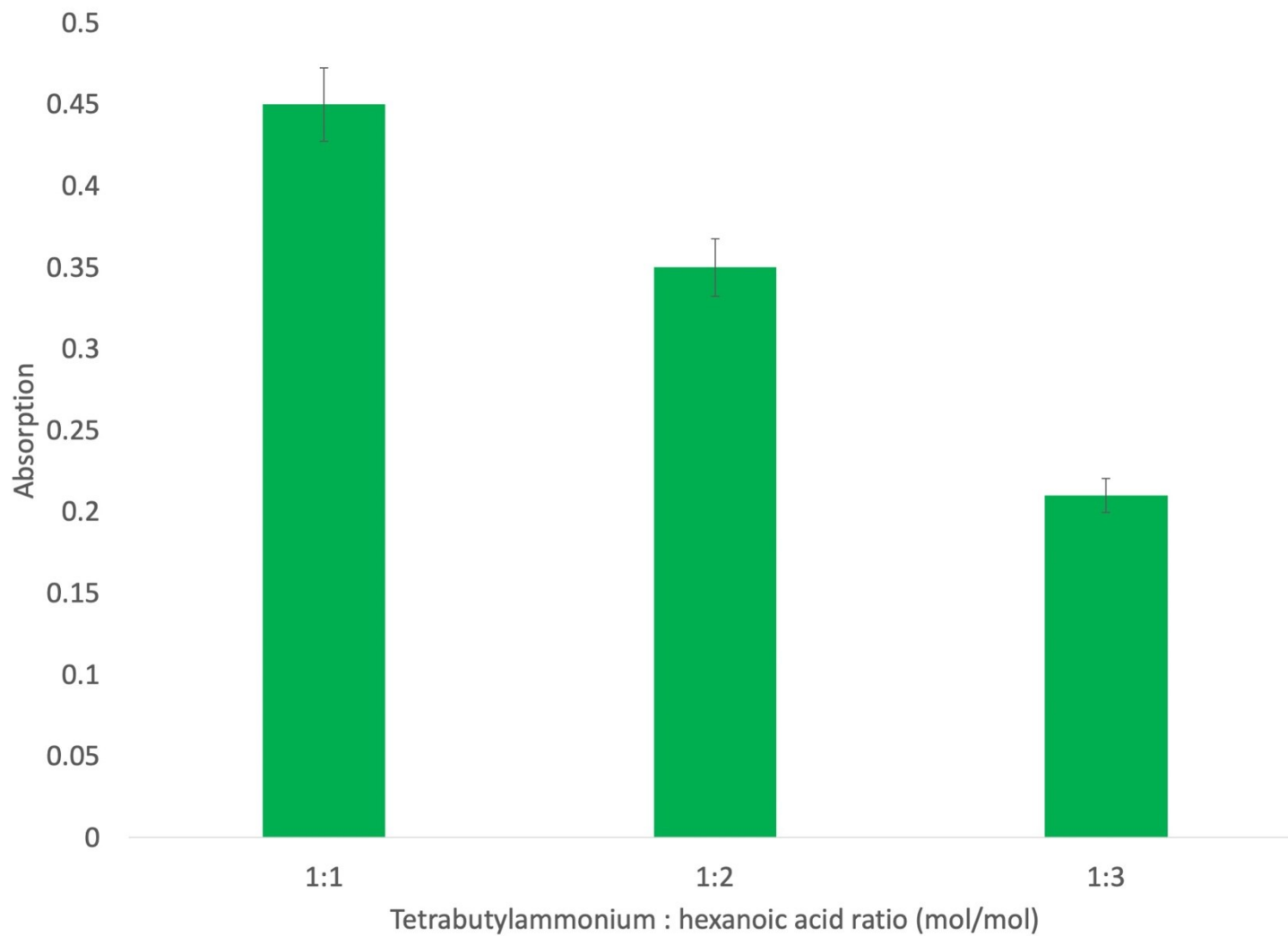
Parameter	Value
Lamp current (mA)	4.0
Wavelength (nm)	357.9
Slit (nm)	0.4
Sample volume (mL)	10

ESM Table 3. Temperature program for GFAAS

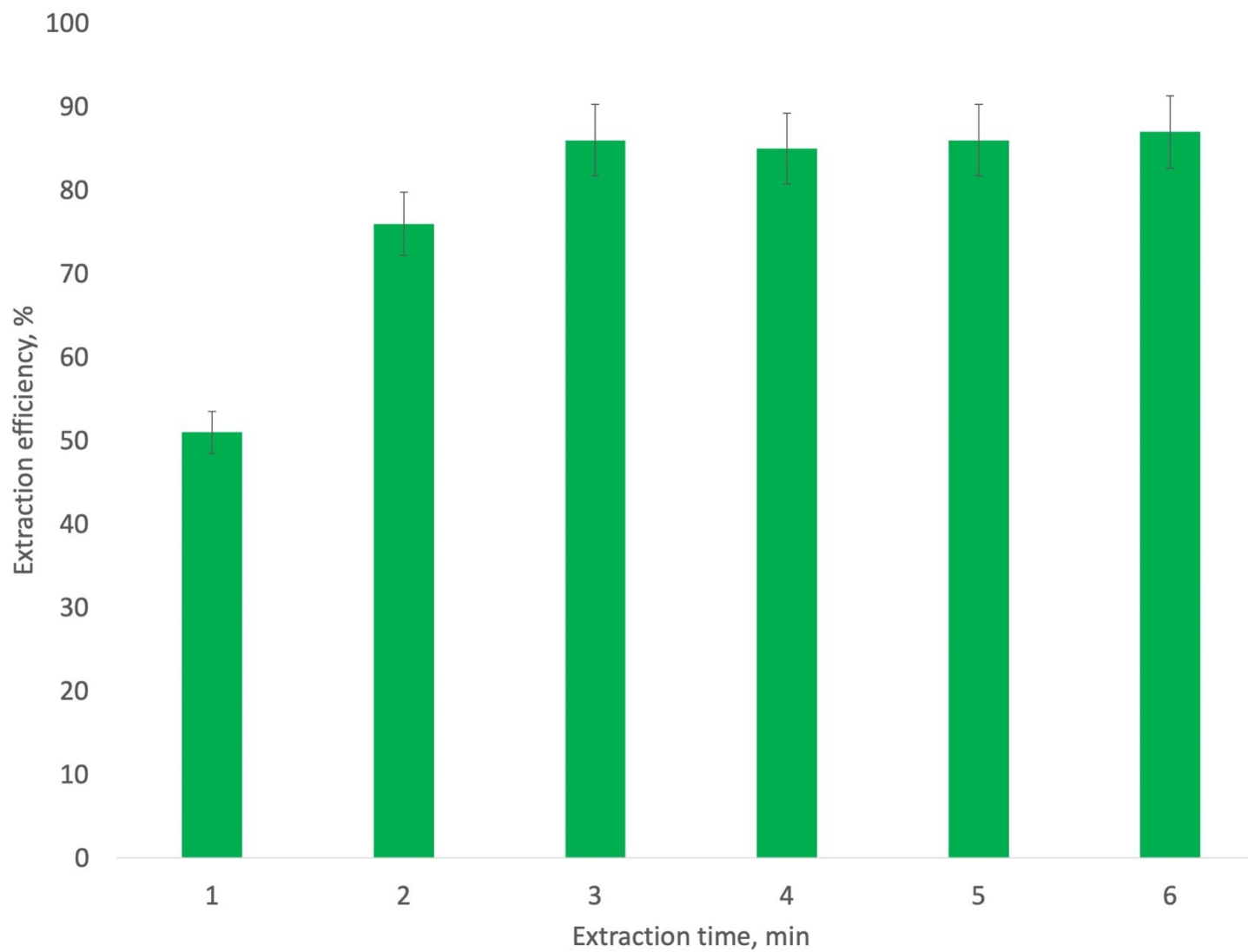
Step	Temperature °C	Time, sec	Heating mode	Gas rate, ml / min
1	60	3	Ramp	0.1
2	120	20	Ramp	0.1
3	250	10	Ramp	0.1
4	800	10	Ramp	1
5	800	10	Step	1
6	800	3	Step	0
7	2300	3	Step	0
8	2500	2	Step	1



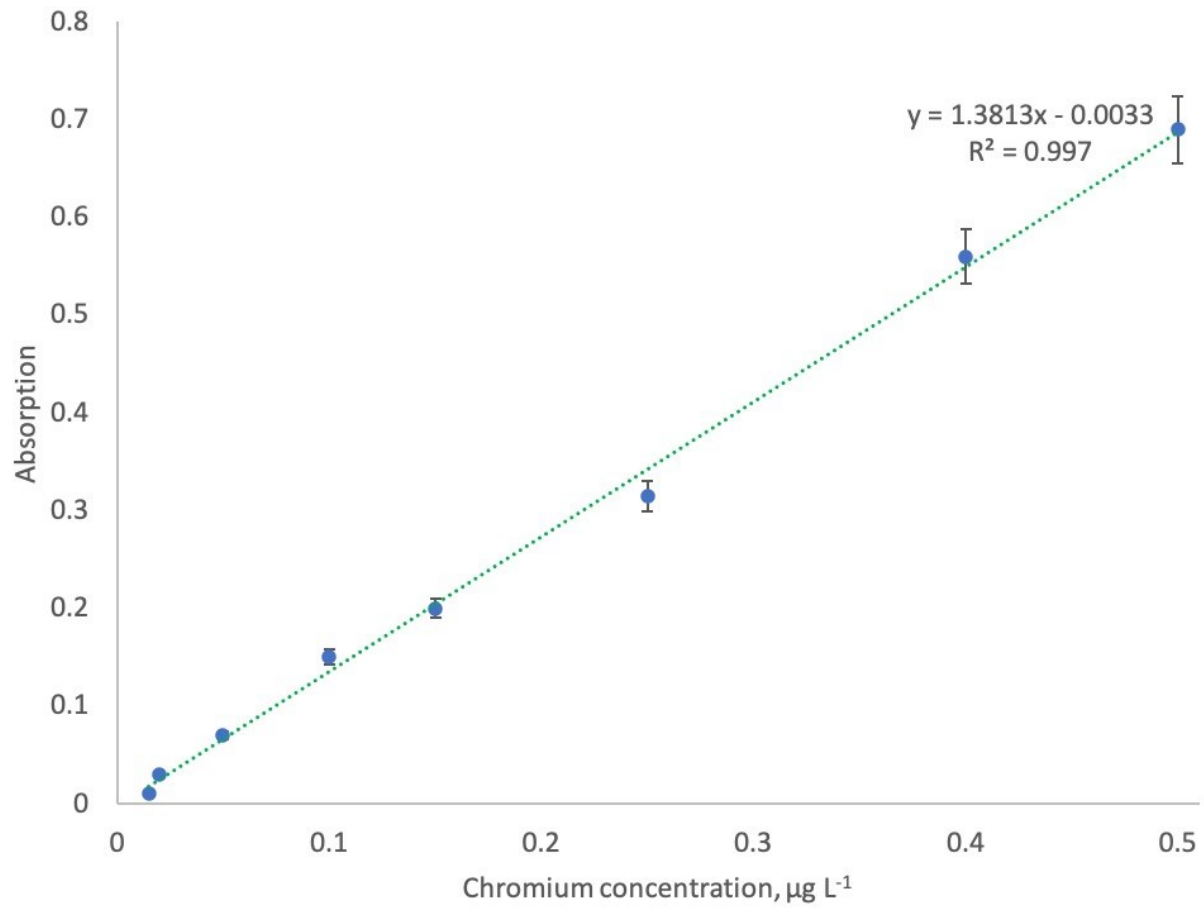
ESM Fig. 1. Effect of the DES composition on the extraction recovery ( $C(\text{Cr}) 2 \mu\text{g L}^{-1}$ ).



ESM Fig. 2. Effect of the DES composition on the absorption ( $C(\text{Cr}) 2 \mu\text{g L}^{-1}$ ).



ESM Fig. 3. Effect of the extraction time on the extraction recovery ( $C(\text{Cr}) 2 \mu\text{g L}^{-1}$ ).



ESM Fig. 4. Calibration curve.