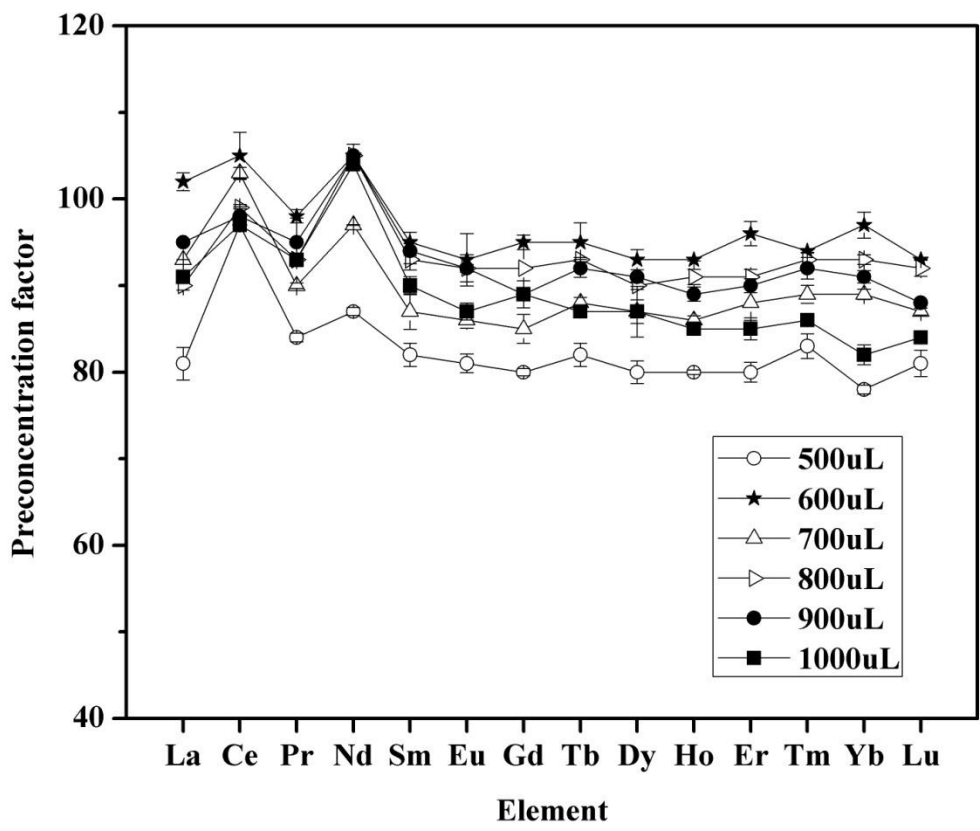**Fig. 1** Effect of disperser solvent (MeOH) volume (in mL) on the preconcentration factor of REEs obtained from DLLME. Extraction conditions: water sample volume = 50mL; extractant solvent (CHCl$_3$) volume = 600µL; [2, 6-PDCA] = 0.5 x 10$^{-3}$mol L$^{-1}$; [aliquat$^{®}$ 336] = 8% (v/v) in CHCl$_3$; pH = 4; concentration of REEs = 10 ng L$^{-1}$. (Error bars correspond to n = 3 replicates).

**Fig. 2** Effect of extractant solvent ($CHCl_3$) volume (in µL) on the preconcentration factor of REEs obtained from DLLME. Extraction conditions: water sample volume = 50mL; disperser solvent (MeOH) volume = 1.5mL; [2, 6-PDCA] = 0.5 x $10^{-3}$ mol $L^{-1}$; [aliquat® 336] = 8% (v/v) in $CHCl_3$; pH = 4; concentration of REEs = 10 ng $L^{-1}$. (Error bars correspond to n = 3 replicates).

**Table 2** Volume of buffer reagents to be mixed for 50mL solution, for the pH range 3-8.

| pH | Vol. of 10mol $L^{-1}$ Acetic acid,  mL | Vol. of 1mol $L^{-1}$ Sodium acetate,  mL |
|----|----|----|
| 3 | 0.491 | 0.090 |
| 4 | 0.424 | 0.765 |
| 5 | 0.179 | 3.215 |
| 6 | 0.026 | 4.740 |
| pH | Vol. of 10mol $L^{-1}$ Phosphate,  mL | Vol. of 1mol $L^{-1}$ HCl,  mL |
| 7 | 0.378 | 1.220 |
| 8 | 0.478 | 0.225 |

Note: The above volumes were pipetted using a 1000µL eppendorf® micropipette of 1µL volume increment.