

Indirect detection of lead (II), cadmium (II) and mercury (II) on microfluidic electrophoresis chip

Shuai Yuan ^{1,2,*}

¹ School of Health and Life Sciences, University of Health and Rehabilitation Sciences, Qingdao, Shandong 266113, China

² College of Mechanical and Electrical Engineering, Central South University, Changsha, Hunan 410083, China

*Correspondence: Shuai Yuan (yuanshuai1006@hotmail.com)

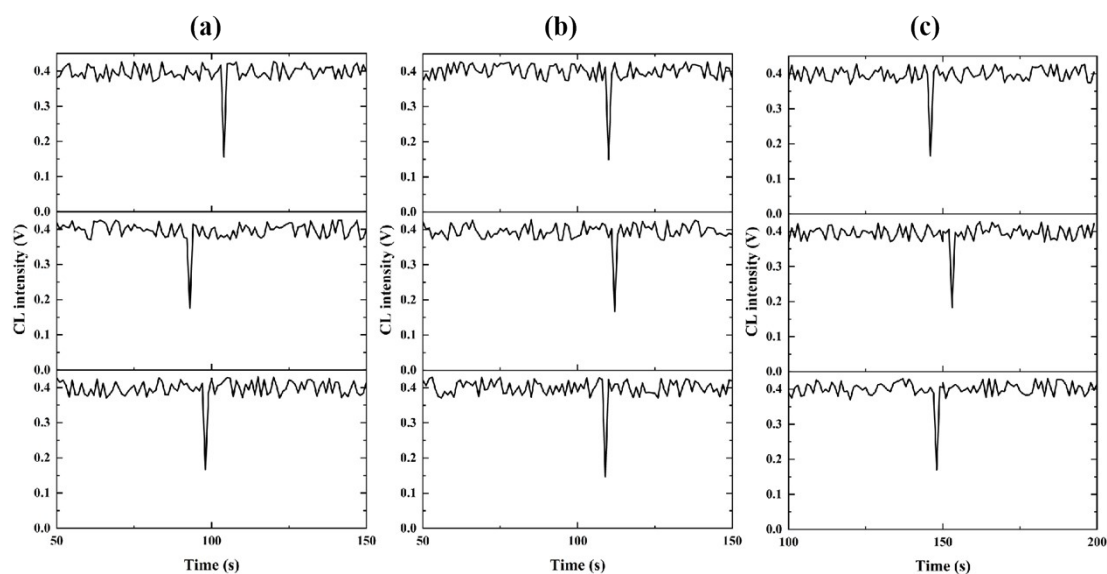


Fig. S1. The time taken by different heavy metal ions to reach the detection area under three detection experiments: (a) Cd (II), (b) Pb (II) and (c) Hg (II). After calculation, the average time for Cd (II), Pb (II) and Hg (II) ions to reach the detection area is 98 s, 109 s and 149 s, respectively.

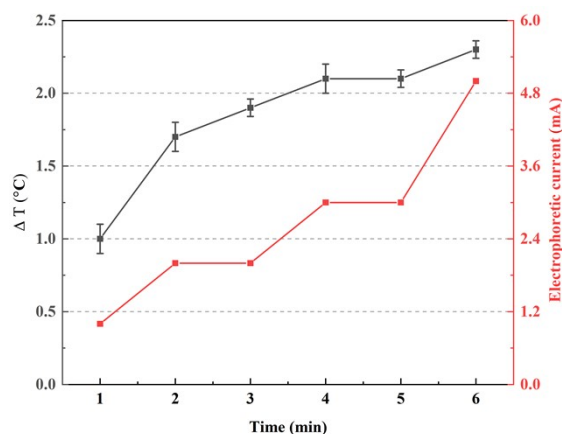


Fig. S2. Development of temperature and electrophoretic current over time in the electrophoretic separation channel. ΔT indicates the temperature difference.

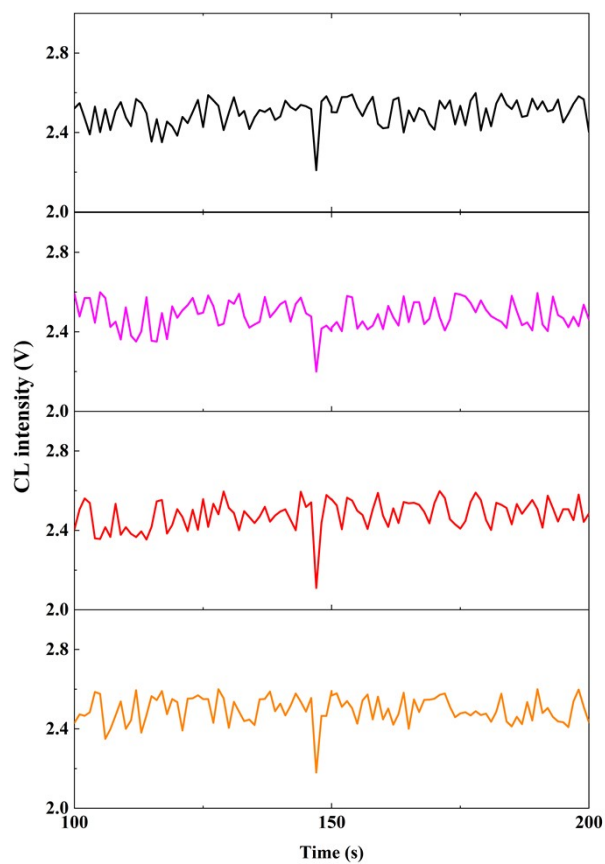


Fig. S3. Electropherograms: Hg (II) at a concentration of 1×10^{-5} M was injected four times.