

Supporting information

Table 1 Comparison of different methods for the determination of IO_4^- ions.

Methods	Probe	Linear range (mol L ⁻¹)	LOD (mol L ⁻¹)	Reference
spectrophotometric	Amodiaquine Dihydrochloride	$1.0 \times 10^{-5} \sim 1.0 \times 10^{-6}$	—	1
stopped-flow chemiluminescence	Luminol	$5.0 \times 10^{-6} \sim 5.0 \times 10^{-5}$	—	2
fluorescence method	CdTe/ZnS QDs	$4.00 \times 10^{-8} \sim 5.20 \times 10^{-7}$	5.80×10^{-8}	This work

Table 2 Comparison of different methods for the determination of Ni^{2+} ions.

Methods	Probe	Linear range (mol L ⁻¹)	LOD ^a (mol L ⁻¹)	Reference
colorimetric sensor	coumarin derivatives	—	5.0×10^{-5}	3
colorimetric sensor	silver nanoparticles	$1 \times 10^{-6} \sim 1 \times 10^{-4}$	7.5×10^{-5}	4
fluorescence method	poly(Ac-HMPC-co-AM)	$6.67 \times 10^{-6} \sim 5.33 \times 10^{-5}$	—	5
spectrophotometric	permeation liquid membrane	$4.00 \times 10^{-8} \sim 5.20 \times 10^{-7}$	1.0×10^{-7}	6
fluorescence method	CdTe/ZnS QDs	$5.0 \times 10^{-8} \sim 2.7 \times 10^{-6}$	3.6×10^{-9}	This work

^a LOD: limit of detection

Reference

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