

Electronic Supplementary Material

Copper ion-Selective Fluorescent Sensor Using Salicyl Fluorone

Immobilized on Glutaraldehyde-Coated Eggshell Membrane

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1. Chemicals and reagents section

The preparation of copper standard stock solution

Copper standard stock solution was prepared by dissolving 0.380 g of copper nitrate ($\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$) in water, and then diluting with water to a constant volume of 1000 mL. The concentration of standard stock solution was 1 $\mu\text{g}/\text{mL}$, which could be diluted to proper concentrations of standard solution for further use.

The preparation of CPB solution

CPB solution was prepared by weighing 0.01 g of reagent to put in water, and dissolving under water bath heating at about 333 K, then diluting with water to a constant volume of 100 mL to make the concentration of 1 g/L.

The preparation of SAF solution

SAF solution was prepared by dissolving 0.336 g of SAF with absolute ethyl alcohol to a constant volume of 100 mL, and then storing away from light at 277 K for later use.

2. results and discussion section

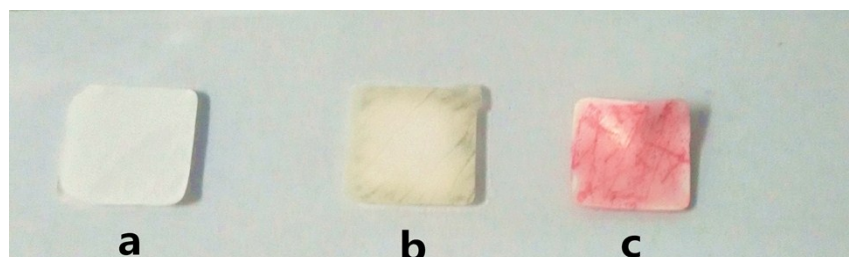


Fig. S1 The photo images of ESM (a), GA-ESM (b) and FSA/CPB-GA-ESM (c).

Table S1. Comparison between the developed method and previously reported ones

Detection system	Reaction medium	Linear range	Detection limit	Real samples	Refs
g-C ₃ N ₄	Aqueous solution	0~10 ⁴ nM	0.5 nM	Water	(Tian et al, 2013)
Coumarin derivative molecular	Aqueous solution	—	87 nM	Water	(Carter et al, 2014)
rhodamine-based colorimetric chemosensor	Aqueous solution	0.05–5.00 μM	10 nM	Water	(Xiang et al, 2008)
Spiropyran Derivative	Solid matrix	0.75-36 nM	0.15 nM	Water	(Shao et al, 2005)
SAF/CPB-GA-ESM	Solid matrix	5 ng/mL~500 μg/mL	0.5 ng/mL	Water	This work

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