

## Electronic Supplementary Information

# **A label-free electrochemical aptasensor for the detection of kanamycin in milk**

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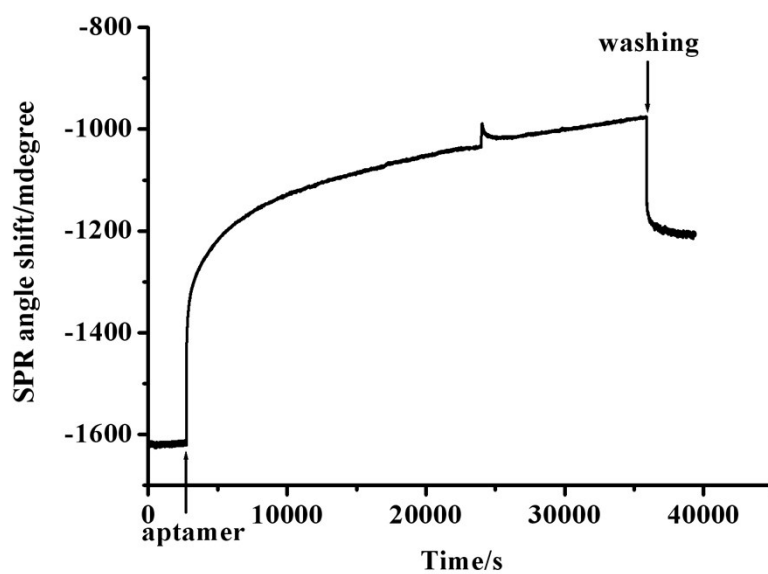
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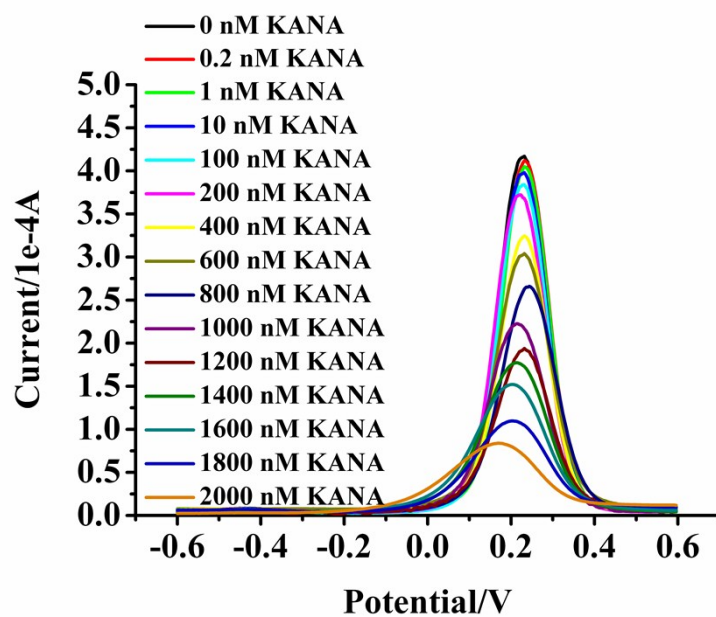
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## **Experimental**

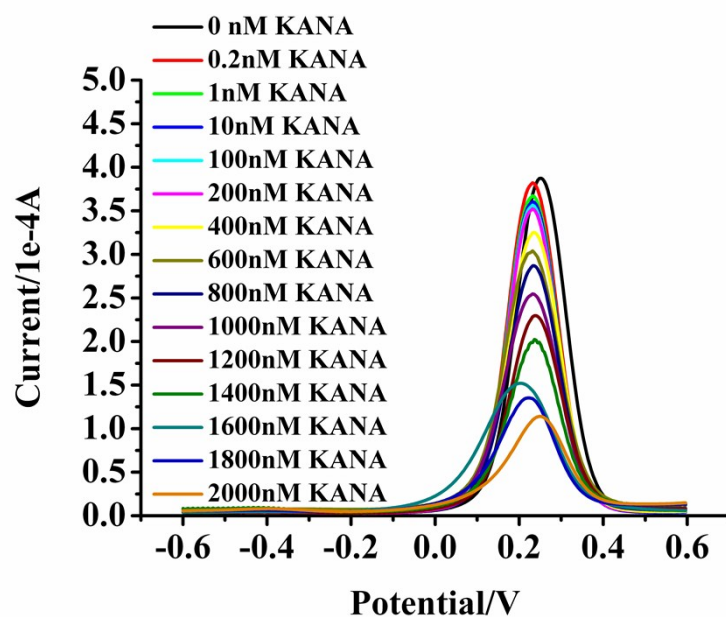
The modification of the aptamer on gold surface was monitored by surface plasmon resonance (SPR) measurement. The gold disk was prepared by soaking in piranha solution (98% H<sub>2</sub>SO<sub>4</sub>:30% H<sub>2</sub>O<sub>2</sub>=3:1) for 5 min to remove all adsorbed substance. After rinsing with ultrapure water, the gold disk was fixed on an Autolab ESPRIT system (Echo Chemie B.V., Netherlands). Then the modification of kanamycin-specific aptamer was carried out by incubation with 1.0 μM aptamer. The immobilization of the aptamer was real-time monitored by SPR spectroscopy.



**Fig. S1.** SPR angle shift during the modification of the aptamer .



**Fig. S2.** Square wave voltammograms obtained in 10 mM  $[\text{Fe}(\text{CN})_6]^{3-/4-}$  after the aptamer functionalized electrode incubated with different concentrations of standard kanamycin solution.



**Fig. S3.** Square wave voltammograms obtained in 10 mM  $[\text{Fe}(\text{CN})_6]^{3-/4-}$  after aptamer functionalized electrode incubated with diluted milk samples containing different concentrations of kanamycin.