

*Electronic Supplementary Information*

**Aptamer and functionalized nanoparticles-based strip biosensor for on-site detection of kanamycin in food samples**

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## Experimental

### Detection of kanamycin in milk and milk powder samples

Pretreatment is required for detection of kanamycin in milk and milk powder samples. For milk samples, 20% trichloroacetic acid was added dropwise to adjusted pH to 4.6, and the samples were incubated at 45°C for 10 min, followed by centrifugation at 10,000 rpm for 25 min to remove coagulated proteins and fat. For milk powder samples, after dissolving with SSC, different concentration of kanamycin was added, then the fat layer was removed by centrifugation at 10,000 rpm for 20 min. The supernatant was diluted 10 folds with SSC. The detection was then carried out with the test strips same as standard kanamycin solution.

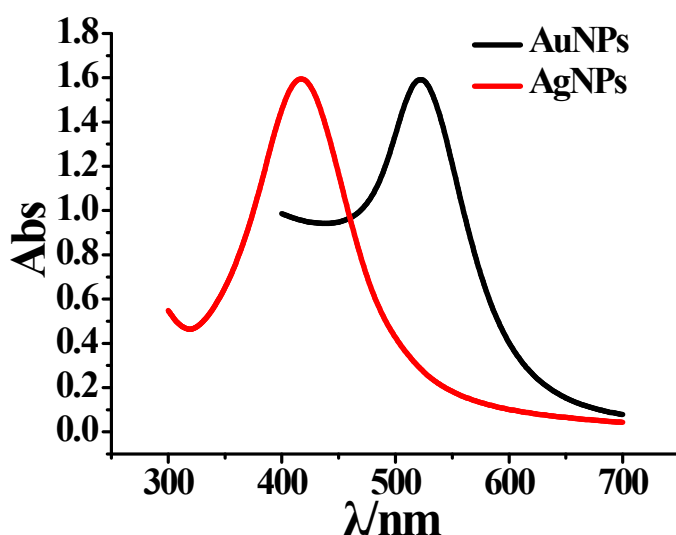


Fig. S1 UV-vis spectra of AuNPs and AgNPs.



**Fig. S2** Detection of kanamycin in milk samples.



**Fig. S3** Detection of kanamycin in milk powder samples.