

**Fluorescence biosensor for *Salmonella typhimurium* detection in food  
based on nano-self-assembly of alendronic acid modified  
upconversion and gold nanoparticles**

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Table 1S The comparison with other methods for selectivity of

Salmonella typhimurium

| Methods                   | Salmonella typhimurium(target) | Other food-borne pathogens (non tagert) | Times (non tagert/target) | Reference |
|---------------------------|--------------------------------|---|---------------------------|-----------|
| Fluorescence probe        | 10 <sup>3</sup> CFU/mL         | 10 <sup>3</sup> CFU/mL                  | 1                         | [1]       |
| Impedimetric immunosensor | 10 <sup>4</sup> CFU/mL         | 10 <sup>5</sup> CFU/mL                  | 10                        | [2]       |
| ELISA                     | 10 <sup>6</sup> CFU/mL         | 10 <sup>6</sup> CFU/mL                  | 1                         | [3]       |
| Our method                | 10 <sup>4</sup> CFU/mL         | 10 <sup>6</sup> CFU/mL                  | 100                       |           |

**References**

[1] R. wang, Y. Xu, T. Zhang, Y. Jiang, Rapid and sensitive detection of Salmonella typhimurium using aptamer-conjugated carbon dots as fluorescence probe, Anal Methods, 2015,7,1701-1706.

[2] M. Ruchi, J. Monu, P. Preeti, S .Arunima, S. D.K, S. Raman, Novel surface antigen based impedimetric immunosensor for detection of Salmonella typhimurium in water and juice samples, Biosens Bioelectron, 2016, 85, 707-713.

[3] W. Wang, L. Liu, S. Song, L. Tang, H. Kuang C. Xu, A highly sensitive ELISA and immunochromatographic strip for the detection of Salmonella typhimurium in milk samples, Sensors, 2015, 15(3), 5281-5292.