Electronic Supplementary Material (ESI) for Analytical Methods.
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Supplementary Material

Highly sensitive and selective colorimetric determination of *Staphylococcus aureus* via chicken anti-protein A IgY antibody

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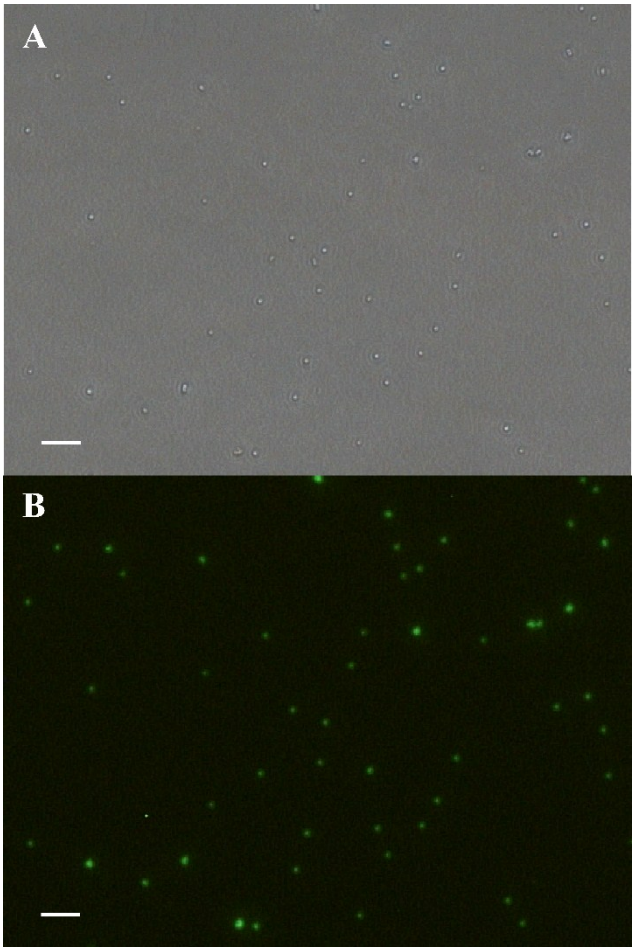

Fig. S1 Fluorescent micrographs of *S. aureus* stained with FITC. (A) Bright-field image of the stained *S. aureus*. (B) Image showing green fluorescence from FITC stained on *S. aureus*. Bar size: 50 μm

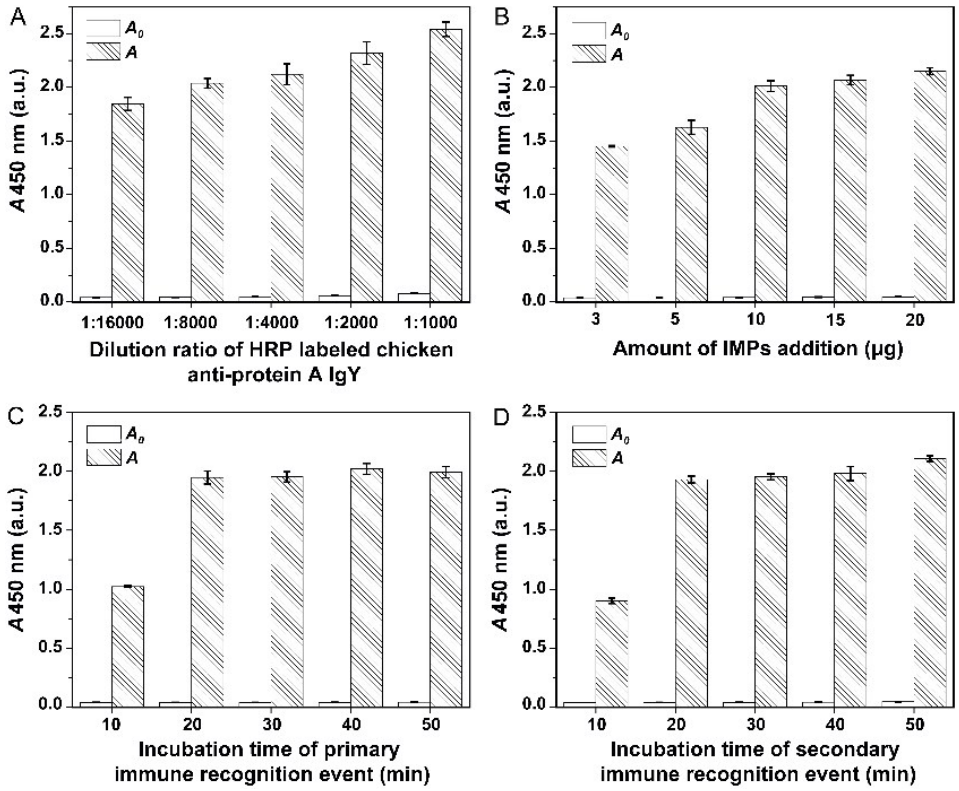

Fig. S2 Effects of experimental conditions on signals of the system. (A) Effects of the dilution ratio of HRP labelled chicken anti-protein A IgY on A and A_0. (B) Effects of the amount of IMPs addition on A and A_0. (C) Effects of incubation time of primary immune recognition event on A and A_0. (D) Effects of incubation time of secondary immune recognition event on A and A_0. Three independent measurements were taken from three individual preparations for each condition. Error bars indicated the standard deviations

Table S1 Standard deviation test data of negative control

No.	Absorbance at 450 nm (a.u.)
1	0.044
2	0.045
3	0.043
4	0.043
5	0.043
6	0.044
7	0.044
8	0.044
9	0.043
10	0.043

Table S2 Relative standard deviation test data for reproducibility

No.	Absorbance at 450 nm (a.u.)
1	1.83
2	1.90
3	1.998
4	1.824
5	1.91
6	1.949
7	1.866
8	1.905
9	2.035
10	1.906
11	2.086

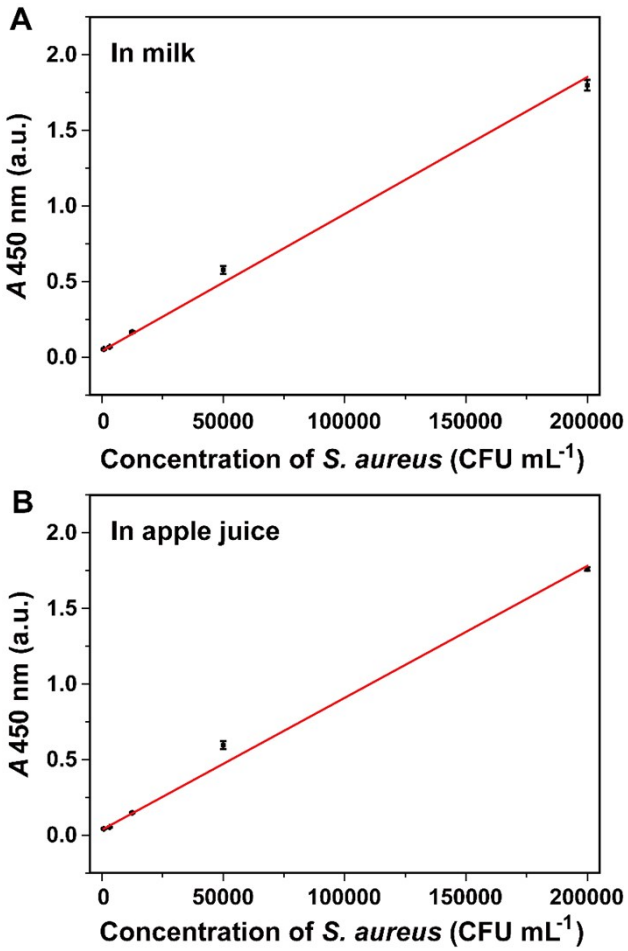

Fig. S3 Calibration curve of absorbance intensity (450 nm) along with *S. aureus* concentration under the optimal conditions in milk (A) and in apple juice (B), respectively. Three independent measurements were taken from three individual preparations for each condition. Error bars indicated the standard deviations

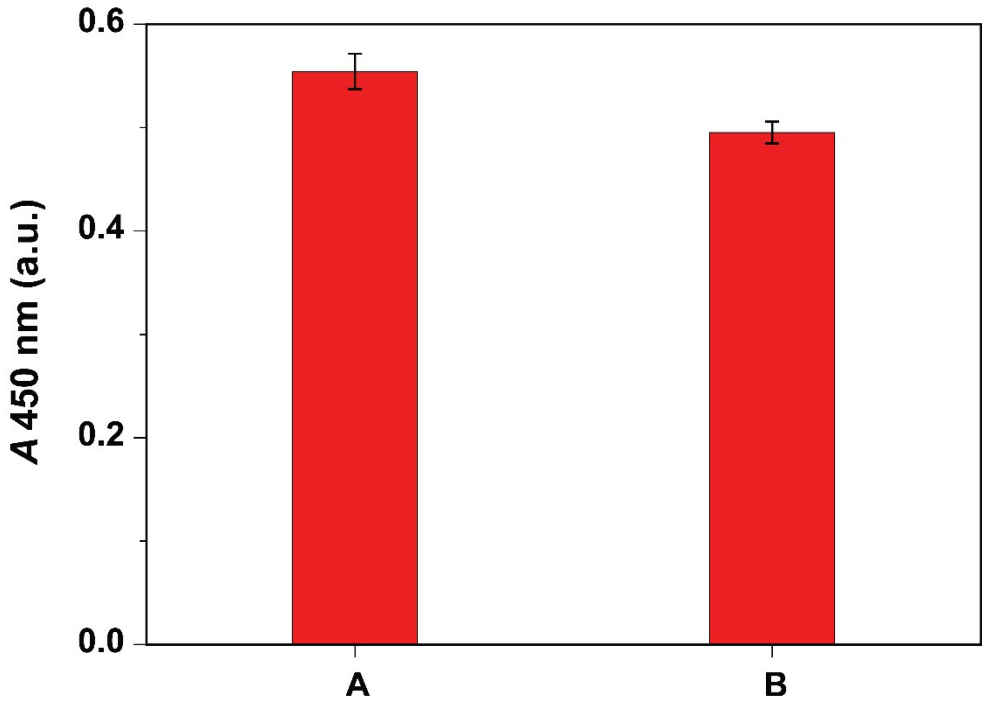

Fig. S4 Enrichment effect of IMPs for *S. aureus.* A was the result of 100 μL of 5.0×10^4 CFU mL^{-1} *S. aureus* and B was 1 mL of 5.0×10^3 CFU mL^{-1} *S. aureus*