

Supplementary Information

# A Sensitive Aptasensor Using Biotin-Streptavidin System for Patulin Detection in Apple Juice

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### Buffers and solutions:

The composition of different buffer were prepared as the follows:

Coating buffer: 0.01 mol/L phosphate buffer saline (PBS), pH 7.4; supplemental with 0.5 % w/v BSA

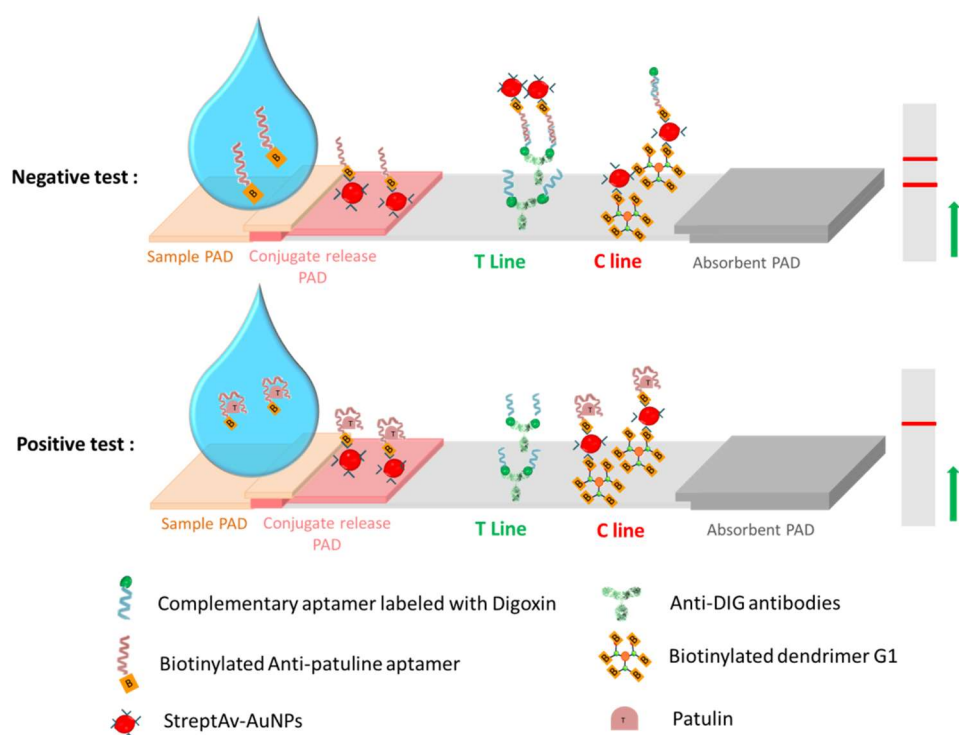
Conjugate diluting buffer: 0.002 mol/L borate pH 7.0; supplemental with 10% w/v sucrose.

Binding buffer: 0.1 mol/L phosphate buffer, pH 7.4, supplemental with 0.005 mol/L  $MgCl_2$ .

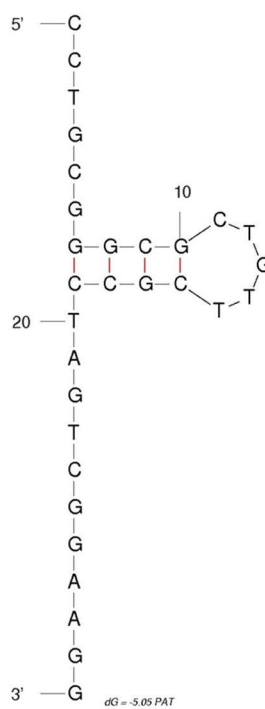
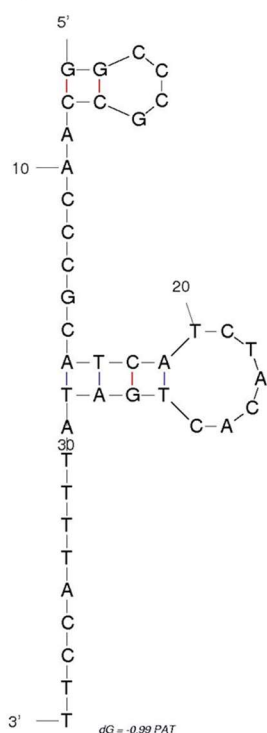
Running buffer: 0.1 mol/L binding buffer, pH 7.4; supplemental with 5% BSA (w/v), 0.05 % Tween 20 (v/v)

**Table S1.** Optimize different ratio of BIO-aptamer and DIG-aptamer.

Ratio (mol:mol)	BIO-Aptamer ( $\mu\text{mol/L}$ )	DIG-Aptamer ( $\mu\text{mol/L}$ )	Inhibition Value (%)
1:1	0.025	0.025	13
1:2	0.025	0.050	12.3
1:4	0.025	0.125	None
1:6	0.025	0.150	None



**Figure S1.** Schematic of the Method II, the different with Method I was the DIG-aptamer was fixed on the T line according the anti-DIG antibody.



**Figure S2.** The structure of aptamer-40 and aptamer-30.