

Supporting Information

Portable Visual Quantitative Detection of Aflatoxin B₁ Using a Target-Responsive Hydrogel and Distance- Readout Microfluidic Chip

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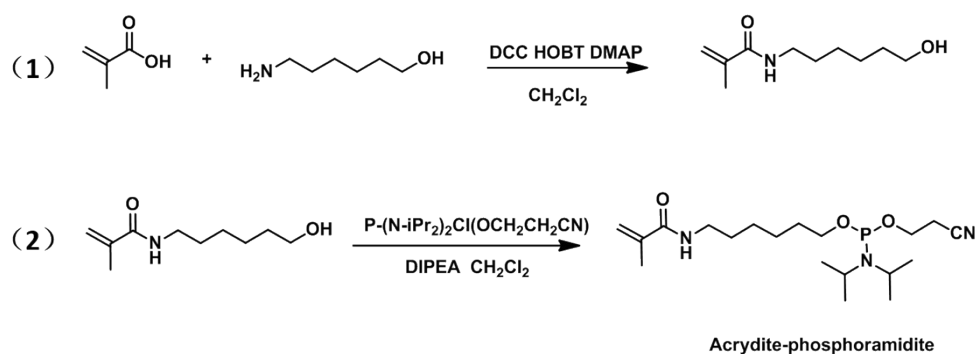


Fig. S1 Synthetic route of acrydite phosphoramidite.

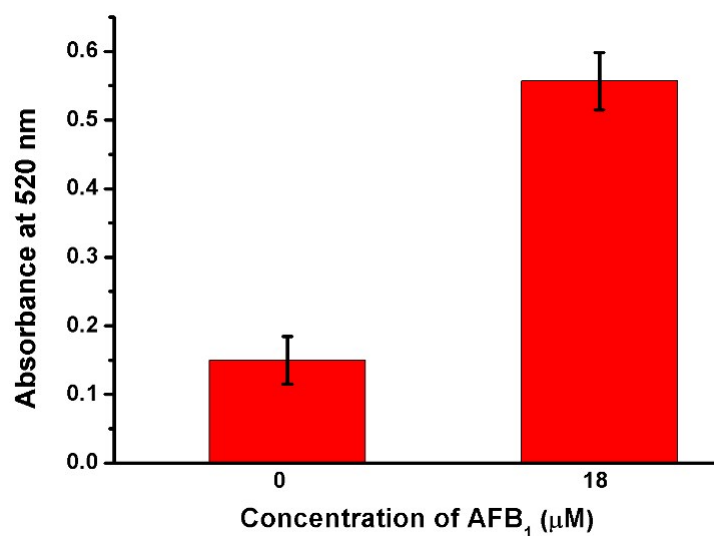


Fig. S2 Absorbance of supernatant at 520 nm for 0 μM and 18 μM AFB₁.

3'- CAACCCGTGCA -5' Strnad B -11 base
 3'- CAACCCGTGCAC -5' Strnad B -12 base
 3'- CAACCCGTGCACA -5' Strnad B -13 base
 5'- GTTGGGCACGTGT TGTCTCTCTGTGTCTCGTGCCCTTCGCTAGGCCCA -3' linker

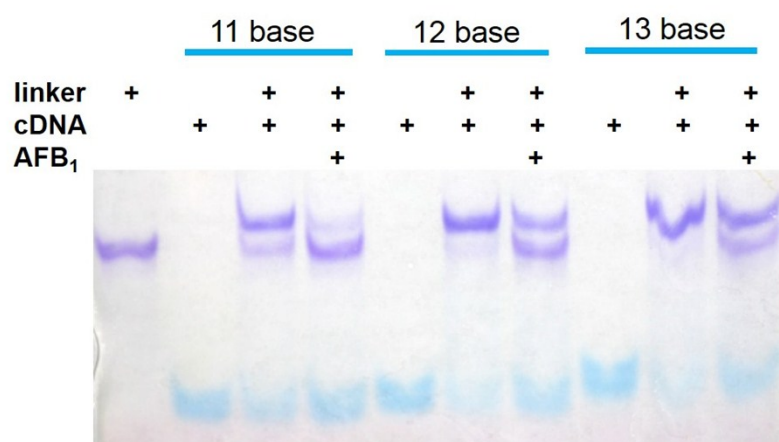


Fig. S3 Optimization of hybridization length of strand B for the hydrogel by 15% native PAGE. Strand B was one branch DNA in the hydrogel with the length of 11, 12 and 13 bases hybridized with aptamer linker. Comparing the results with and without AFB₁, strand B with 13 bases hybridized with aptamer linker was the best.

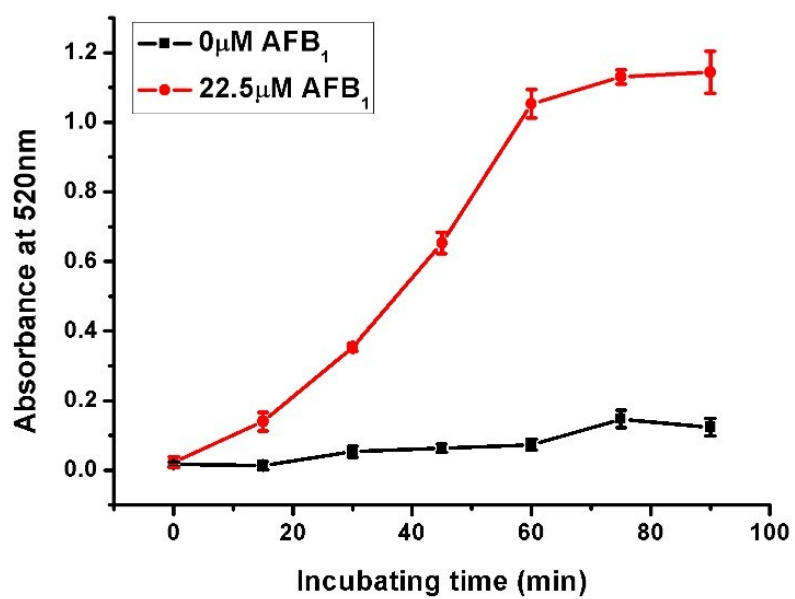


Fig. S4 Kinetics of hydrogel decomposition upon activation by 0 μM and 18 μM AFB₁.

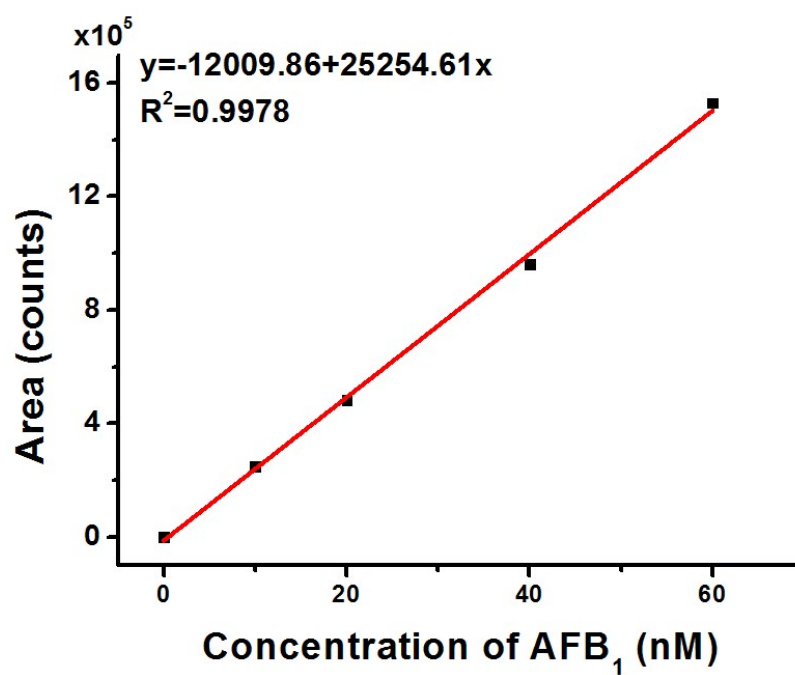


Fig. S5 The standard working curve of LC-MS/MS method.