**Supporting Information**

**A novel fluorescent sensor based on aptamer and qPCR for determination of glyphosate in tap water**

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**Table S1 Sequences of Oligonucleotides Used in This Work**

|  |  |
| --- | --- |
| Oligo | Sequence(5’-3’) |
| polyA | AAAAAAA-NH2 |
| polyT-Aptamer1 | TTTTTTTGCTAGACGATATTCGTCCATCCGAGCCCGTGGCGGGCTTTAGGACTCTGCGGGCTTCGCGGCGCTGTCAGACTGAATATGTC |
| complementary DNA | GACATATTCAGTCTGACAGCGCCGCGAAGCCCGCAGAGTACTAAAGCCCGCCACGGGCTCGGATGGACGAATATCGTCTAGC |
| upstream primer | GCTCGGATGGACGAATATCGTCTAG |
| downstream primer | TATTCGTCCATCCGAGCCCGTGGCG |

**Table S2 qPCR conditions**

95℃ 30 S

95℃ 5 S

60℃ 34 S 40 circles

95℃ 15 S

60℃ 1 min

**Table S3 Estimation of glyphosate recovery based on this method**

|  |  |  |  |
| --- | --- | --- | --- |
| Sample | Standard Addition Amount (ppm) | Recovery Rate(%) | RSD(%) |
| Tap water | 1.4 | 105.4 | 96.1 | 113.1 | 0.58 |
|  | 0.7 | 109 | 96.9 | 104.3 | 0.40 |
|  | 0.35 | 104.9 | 91.5 | 114.4 | 0.73 |

**References**

1. Chen, F.; Li, G.; Liu, H.; Leung, C.-H.; Ma, D.-L., G-quadruplex-based detection of glyphosate in complex biological systems by a time-resolved luminescent assay. *Sensors and Actuators B: Chemical* **2020,** *320*.