

The preparation of OTA aptasensor based on metal-organic frameworks

De-lei Li, Xi Zhang, Yuchan Ma, Yan Deng, Rong Hu*, Yunhui Yang*

College of Chemistry and Chemical Engineering, Yunnan Normal University, Yunnan, Kunming

650500, P.R. China

*To whom correspondence should be addressed.

E-mail: hudierong_168@163.com, yyhui2002@aliyun.com

Phone: 86-871-65941087

Table S1 The comparsion of the response features of the aptasensors using different substrate.

substrates	Linear range (ng.mL ⁻¹)	Detection limit (ng.mL ⁻¹)	Slope (sensitivity)
Au NPs	0.1-100	0.033	-21.997
Au NPs / MoS ₂	0.05-100	0.01	-24.738

Table S2 The Comparison of linear ranges and detection limits of various aptasensors related to OTA.

No	Method	Linear range (ng.mL ⁻¹)	Detection limit (ng.mL ⁻¹)	Reference
1	HPLC		0.06	Xie et al. 2018 ²⁶
2	fluorescent biosensor	1-100	0.8	Chen et al. 2012 ²⁷
3	Electrochemical aptasensor	1009.5-4030.8	1009.9	Yang et al. 2012 ²⁸
4	fluorescent biosensor	807.6-14133.4	767.2	Sheng et al. 2011 ¹³
5	Electrochemical aptasensor	0.1-20	0.03	Kuang et al. 2010 ²⁹
6	fluorescent biosensor	0-1	0.013	Guo et al. 2018 ³⁰
7	Electrochemical aptasensor	0.05-100	0.01	This work

13. L. Sheng, J. Ren, Y. Miao, J. Wang and E. Wang, *Biosensors and Bioelectronics*, 2011, **26**, 3494-3499.
- 26 X. Yu, H. Song, J. Huang, Y. Chen, M. Dai, Xucong Lin and Z. Xie, *J. Mater. Chem. B*, 2018, **10**, DOI: 1039/C7TB03319B.
27. J. Chen, Z. Fang, J. Liu and L. Zeng, *Food Control*, 2012, **25**, 555-560.
28. C. Yang, V. Lates, B. Prieto-Simón, J. Marty and X. Yang, *Biosensors and Bioelectronics*, 2012, **32**, 208-212.
29. H. Kuang, W. Chen, D. Xu, L. Xu, Y. Zhu, L. Liu, H. Chu, C. Peng, C. Xu and S. Zhu, *Biosensors and Bioelectronics*, 2010, **26**, 710-716.
30. S. Wang, Y. Zhang, G. Pang, Y. Zhang and S. Guo, *Anal. Chem.*, 2017, **89**, 1704-1709.

Table S3 Application of aptasensor for OTA determination in wine samples

Sample	Added (ng.mL ⁻¹)	Found (ng.mL ⁻¹) n=3	Average Found (ng.mL ⁻¹)	Recovery (%)	Average Recovery (%)
1	0.0	0.085			
		0.091	0.086	-	-
		0.082			
2	0.10	0.181		94.7	
		0.186	0.183	99.7	
		0.183		96.7	
3	1.0	0.991		90.5	
		1.114	1.062	102.8	97.3
		1.080		99.4	
4	25.0	24.01		95.7	
		22.85	24.41	91.1	
		26.38		105.2	

