

Supporting Information

Rapid and visual readout of Vitamin B1 based on the electrostatic interaction induced aggregation of gold nanoparticles

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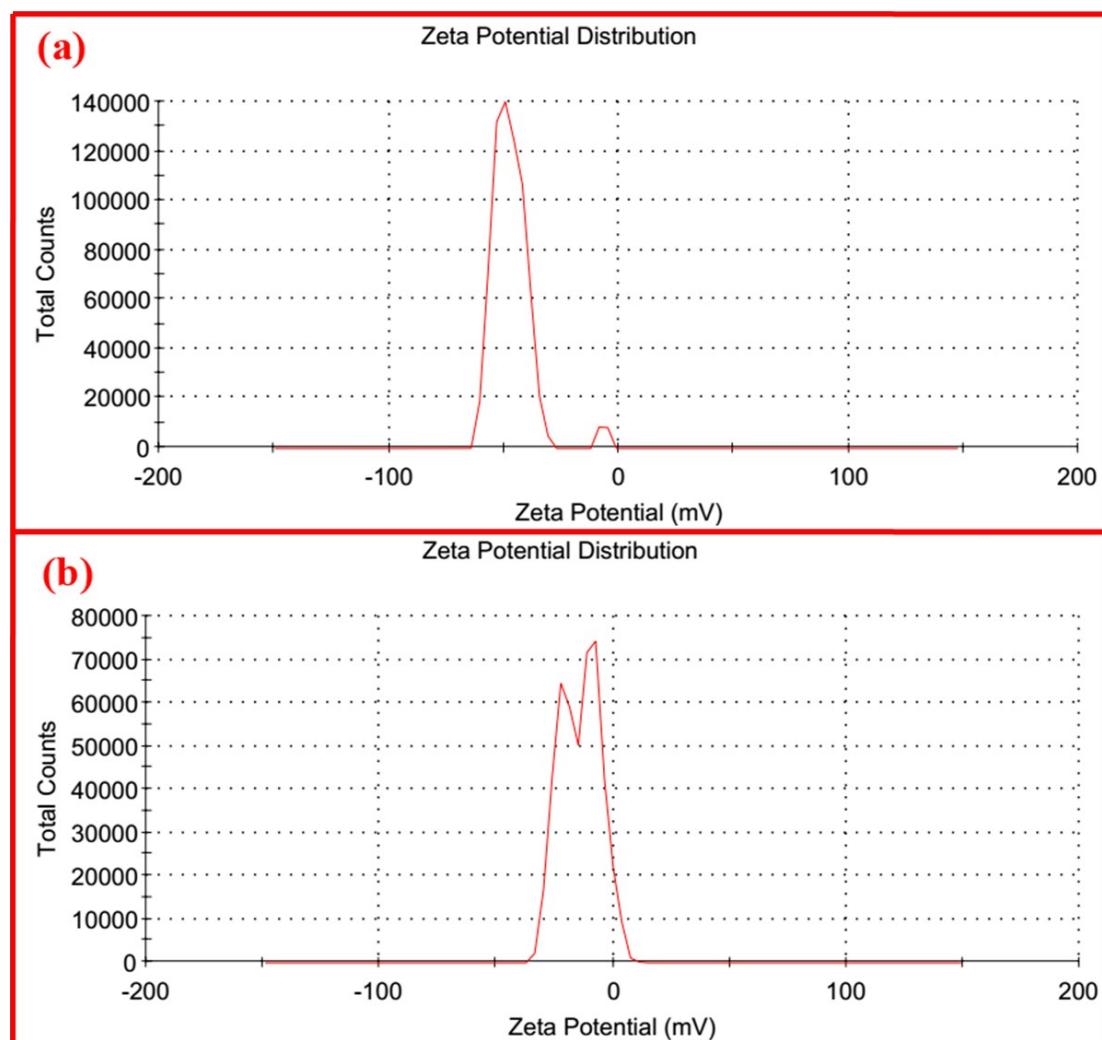


Fig. 1 Zeta potential results of AuNPs in the absence (a) and in the presence (b) of 300 nM VB1

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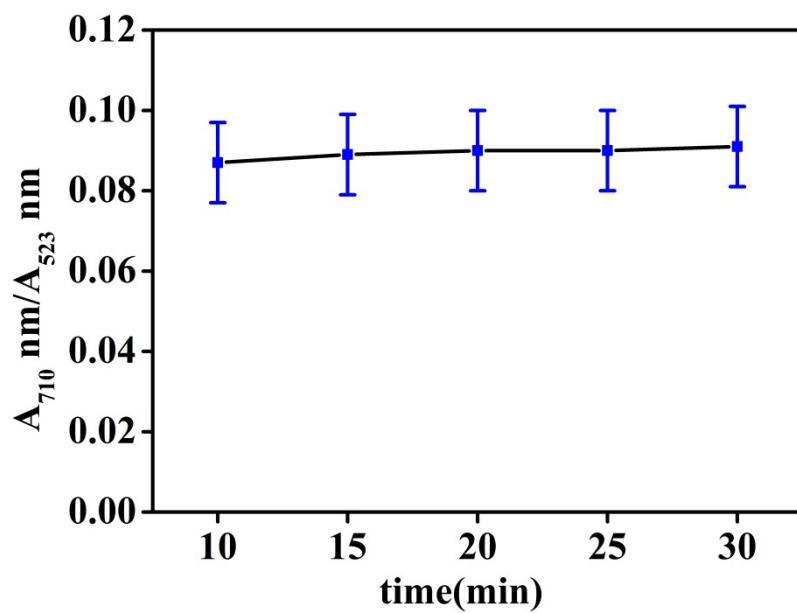


Fig. 2 Stability study of AuNPs-VB1 system

Table 1 Comparison of different methods for the detection of VB1.

Method	Linear range (nM)	Detection limit (nM)	References
AuNPs	30-650	10.9	Present method
Glutathione-AgNPs	4.0×10^3 - 1.2×10^4	50.0	1
Glutathione-Cu nanoclusters	20.0-100	4.6	2
Arginine-functionalized graphene quantum dots	1.0×10^2 - 8.0×10^3	53	3
Carbon dots	1.0×10^4 - 5.0×10^4	280	4
Eu-doped Y_2O_3 nanoparticles	$0-4.4 \times 10^4$	144	5

References

- 1 R. Rajamanikandan and M. Ilanchelian, *Sensor. Actuat. B: Chem.*, 2017, **244**, 380-386.
- 2 Y. Luo, H. Miao and X. Yang, *Talanta*, 2015, **144**, 488-495.
- 3 F. Nemati, R. Zare-Dorabei, M. Hosseini and M.R. Ganjali, *Sensor. Actuat. B: Chem.*, 2017, **255**, 2078-2085.
- 4 R. Purbia and S. Paria, *Biosens. Bioelectron.*, 2016, **79**, 467-475.
- 5 A. Bayandori Mogha dd am, F. Gudarzy and Y. Ganjkhanelou, *J. Fluoresc.*, 2014, **24**, 1025-1030.