Supplementary materials

Highly sensitive pork meat detection using copper(II) tetraaza complex by electrochemical biosensor

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Contents
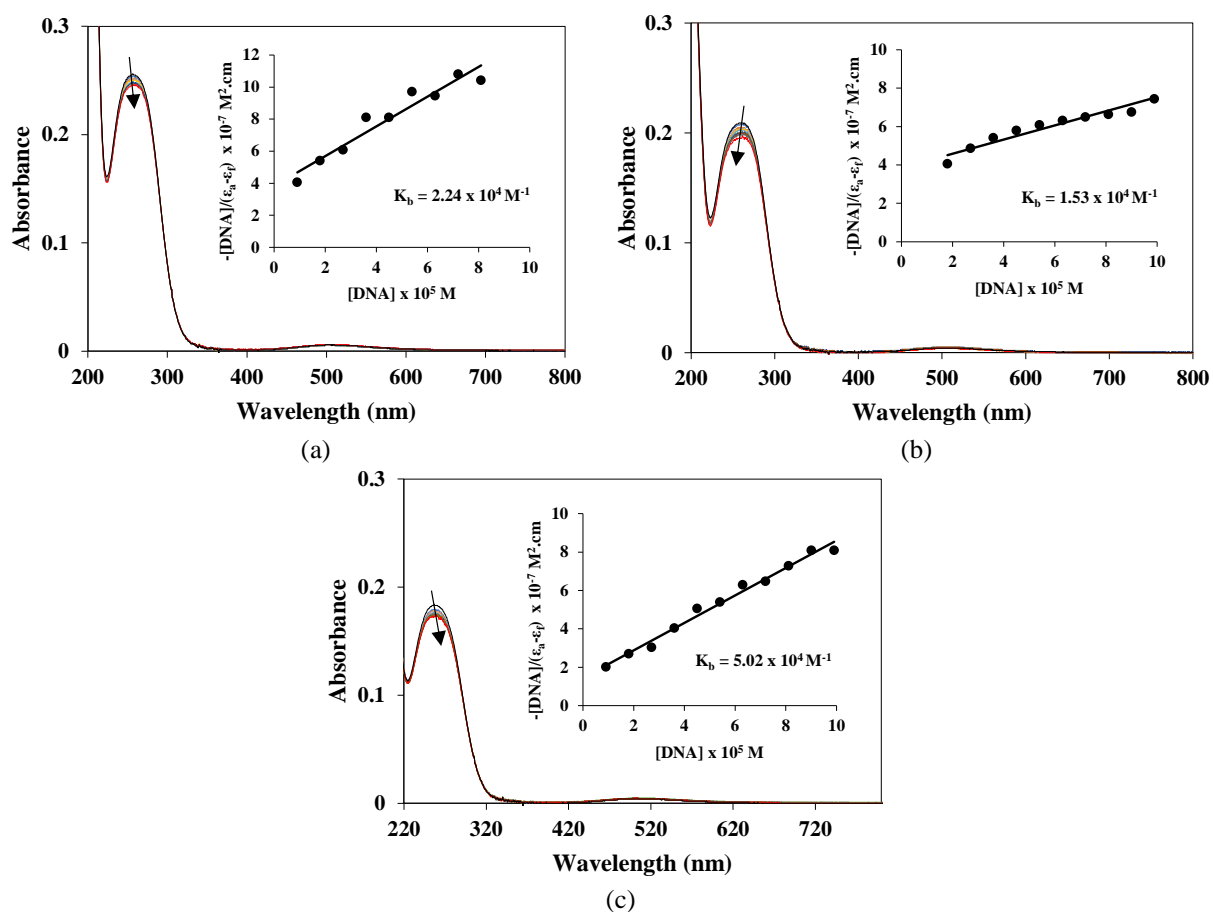
Fig. S1. Absorption spectra for complex (a) **1a**, (b) **2a**, (c) **2b** in Tris-HCl buffer after DNA addition. [**1a, 2a, 2b**] = 90 µM, [DNA] = 0–135 µM. Inset displayed reciprocal plot [DNA]/(ε_a-ε_f) vs. [DNA] for DNA titration with **1a, 2a, 2b**.
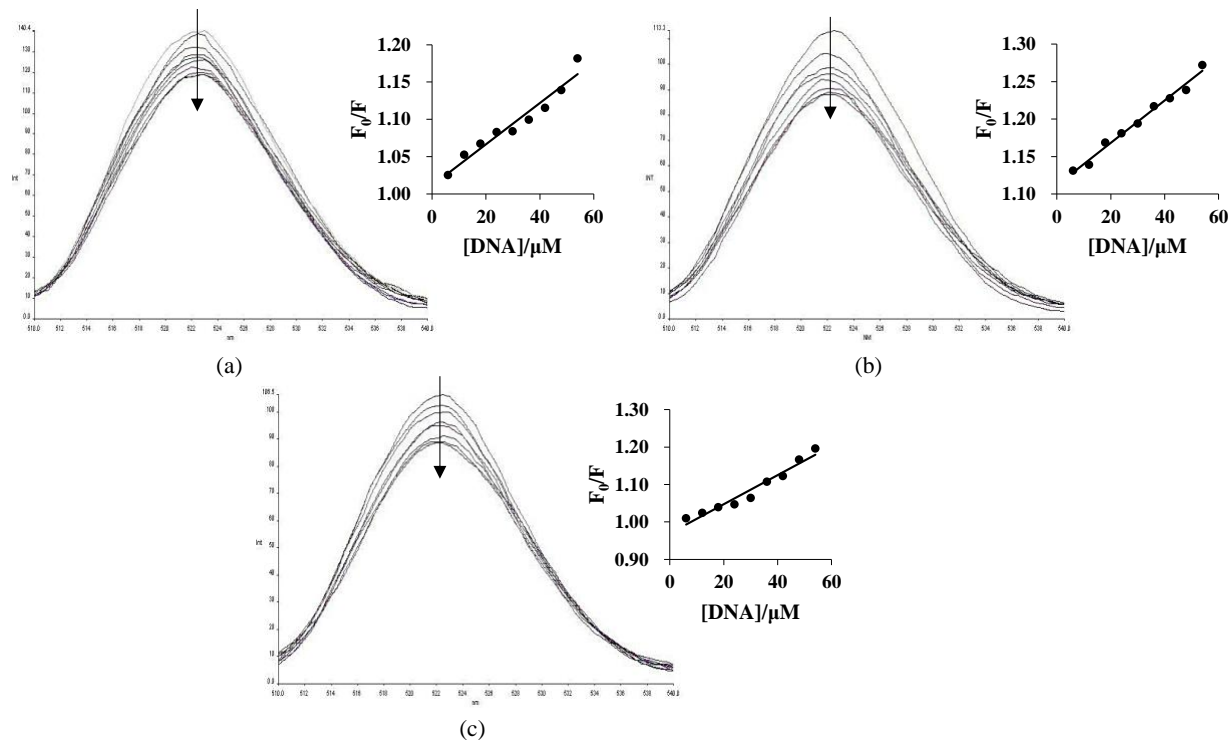
Fig. S2. Fluorescence emission spectrum of complex (a) **1a**, (b) **2a**, (c) **2b** as the volume of CT-DNA increases. The inset demonstrates the Stern Volmer plot for the binding with CT-DNA

Table S1. Optimized DPV parameters for porcine detection

Parameters	Results
Initial potential (V)	-0.8
Final potential (V)	1.1
Pulse amplitude (mV)	20
Pulse time (ms)	80
Scan rate (mVs^{-1})	5
Equilibration time (s)	5

Table S2. Porcine DNA biosensor parameter optimization

Parameters	Optimum amount
Amount of AuNPs	15 μL
Concentration of MPA	1 mM
Concentration of NHS: EDC	100 mM:400mM
Concentration of potassium phosphate buffer	0.05 M
pH of Potassium phosphate buffer	pH 7
Concentration of DNA probe	5 μM
Hybridization time	1 hour
Concentration of complex **2b**	3×10^{-5} M