Modified CUPRAC method with electrochemical detection for the determination of antioxidant capacity

By

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SUPPLEMENTARY DATA

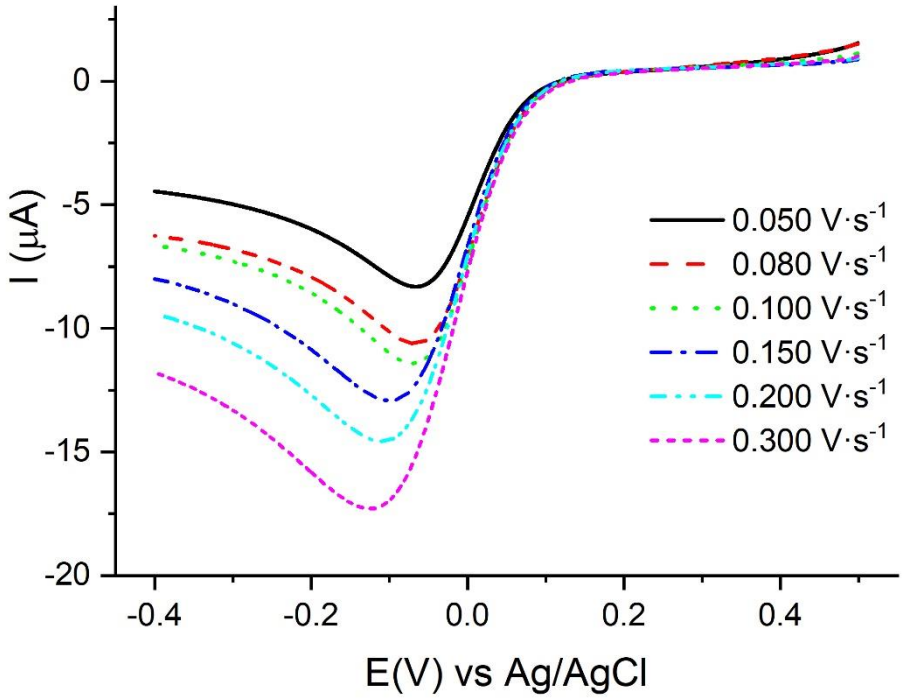

Figure S1. Linear Sweep Voltammograms at different scanning speeds. Scan rates (in $V \cdot s^{-1}$) are given in the figure. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

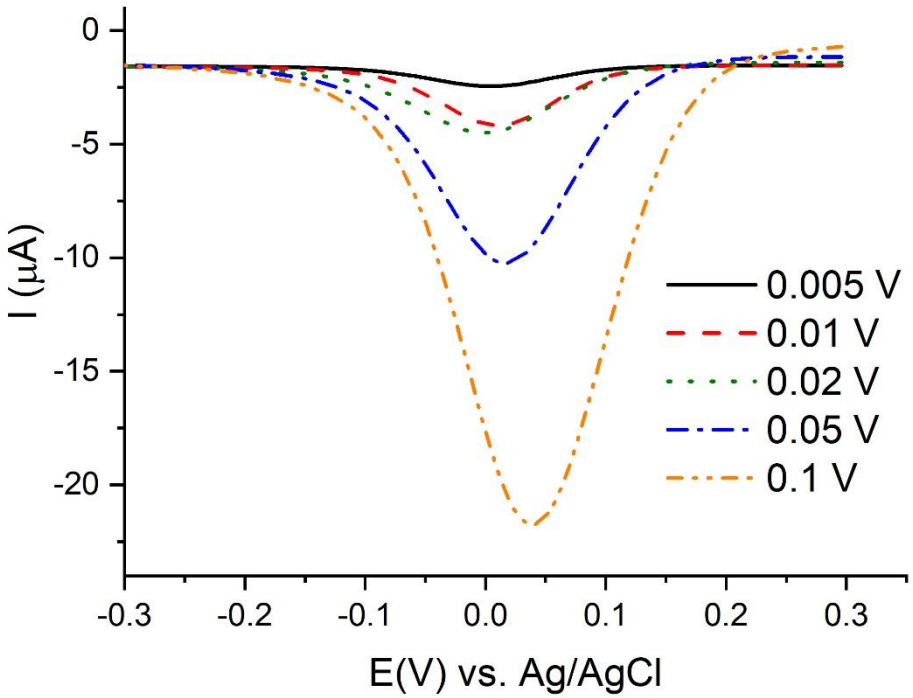

Figure S2. Differential Pulse Voltammograms made at different amplitudes. Pulse amplitude (in V) are given in the figure. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

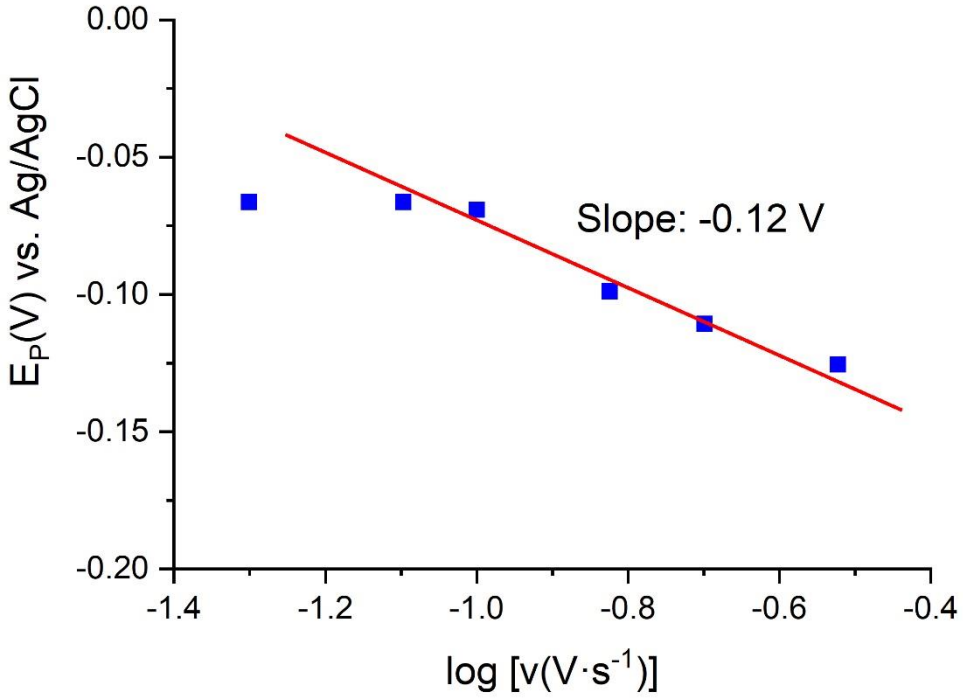

Figure S3. Plot of the peak potential of the reduction peak vs. Logarithm of scan rate. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

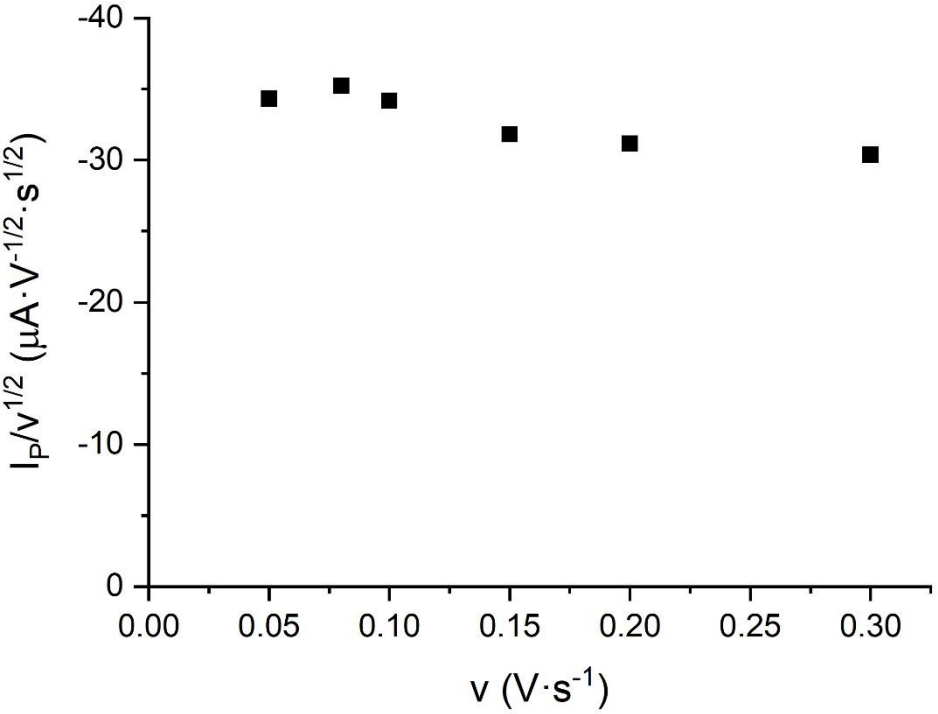

Figure S4. Plot of the current function (peak intensity to the square root of the scan rate ratio) vs. scan rate. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

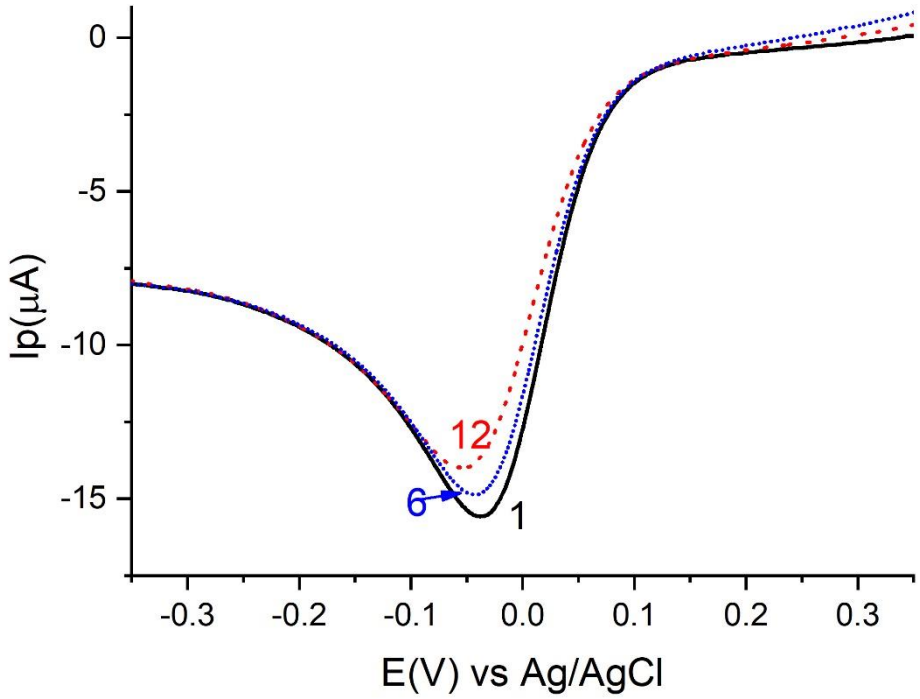

Figure S5. Linear Sweep Voltammograms performed without cleaning between measurements. Numbers correspond to the measurement made. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

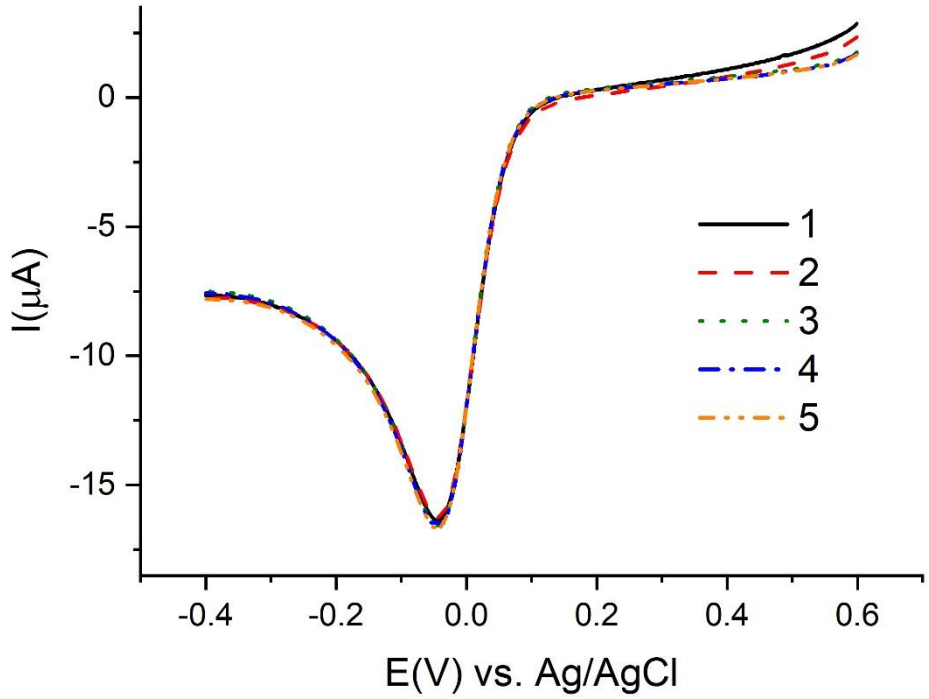

Figure S6. Linear Sweep Voltammograms performed cleaning with alumina B between measurements. Numbers correspond to the measurement made. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

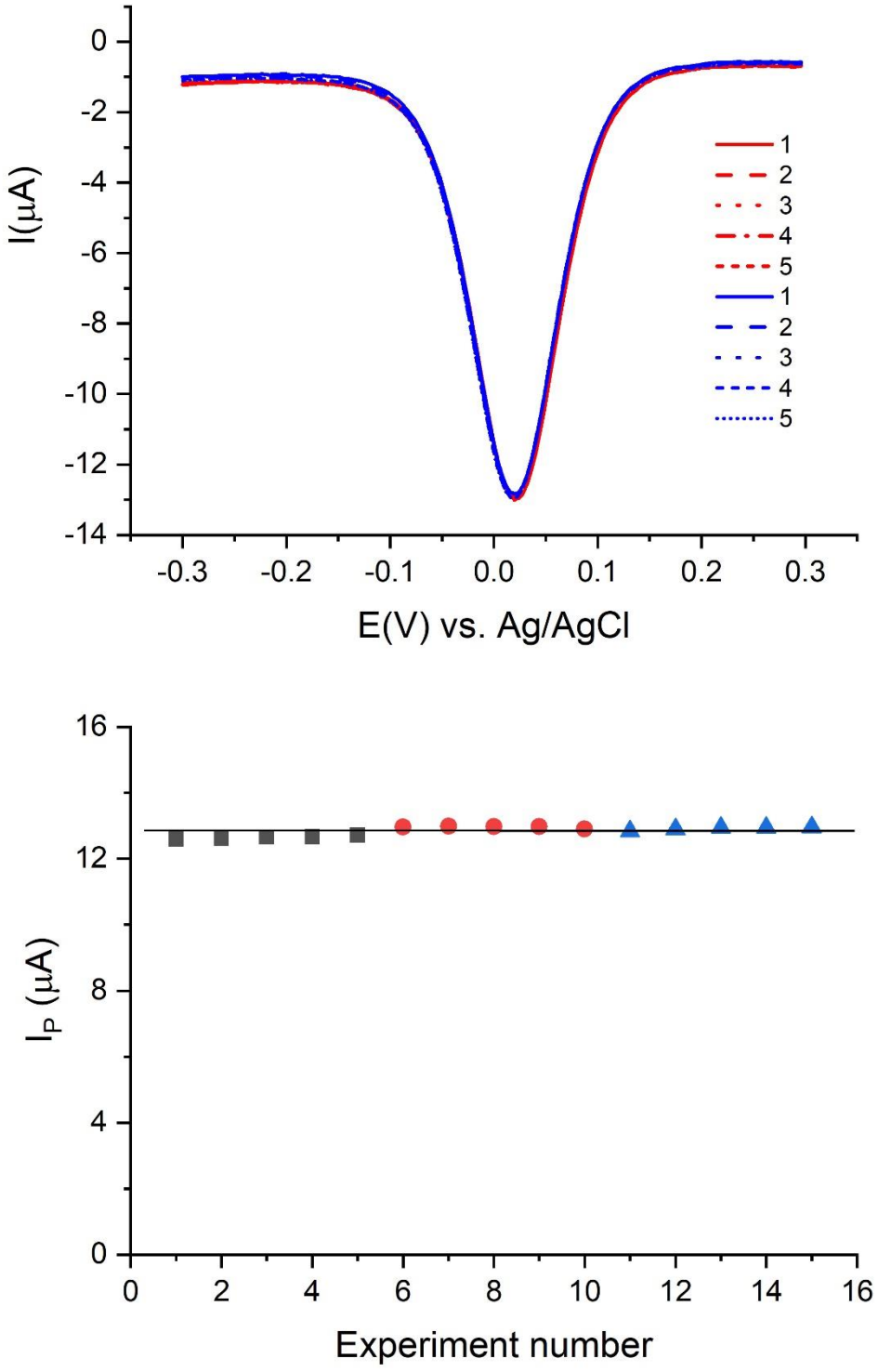

Figure S7. Up: Differential Pulse Voltammograms performed cleaning with alumina B between measurements. Down: Peak currents for three independent sets of experiments. Numbers correspond to the measurement made. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

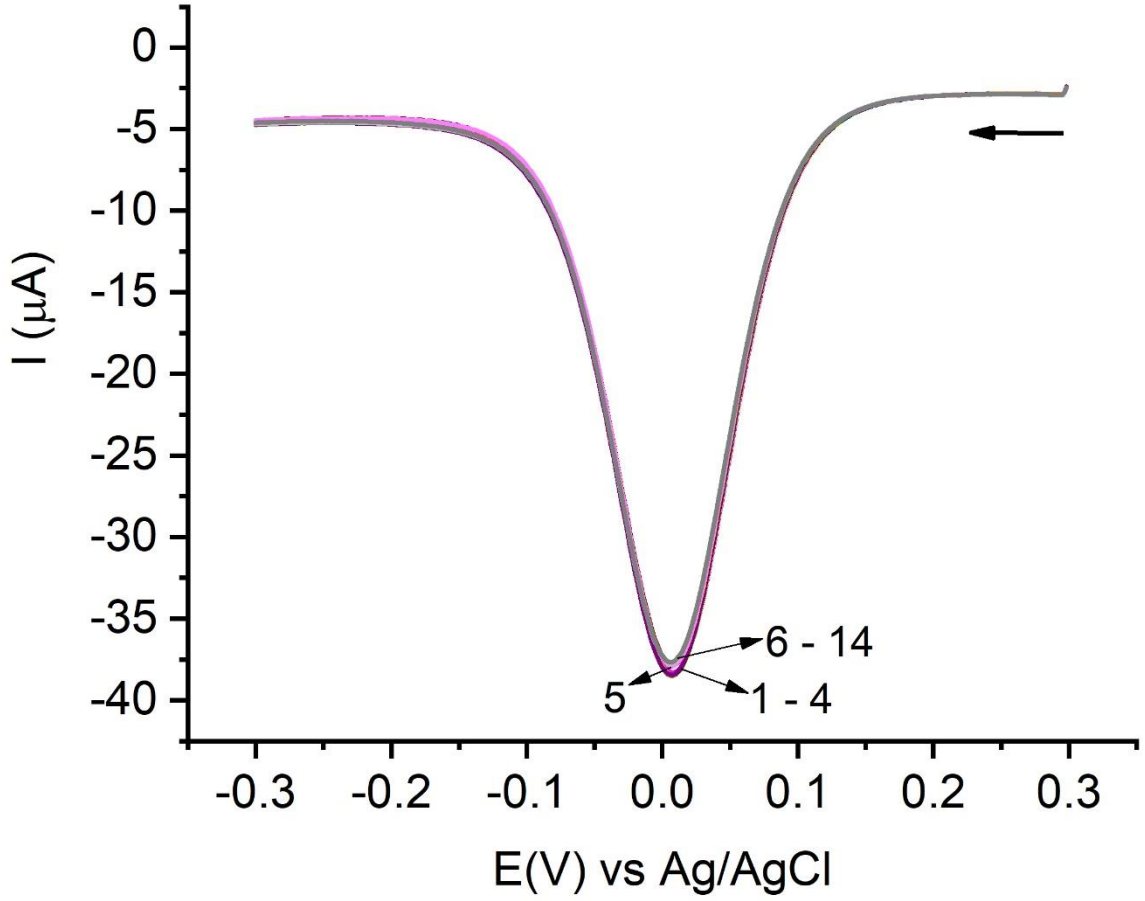

Figure 2.

Figure S8. Square Wave Voltammograms. Pulse step 2 mV, amplitude 20 mV, frequency 25 Hz. Numbers correspond to the successive cleanings of the electrode. 6 to 14 experiments were reproducible and made in the conditions given in the text. Arrow indicates the initial potential and the scan direction.

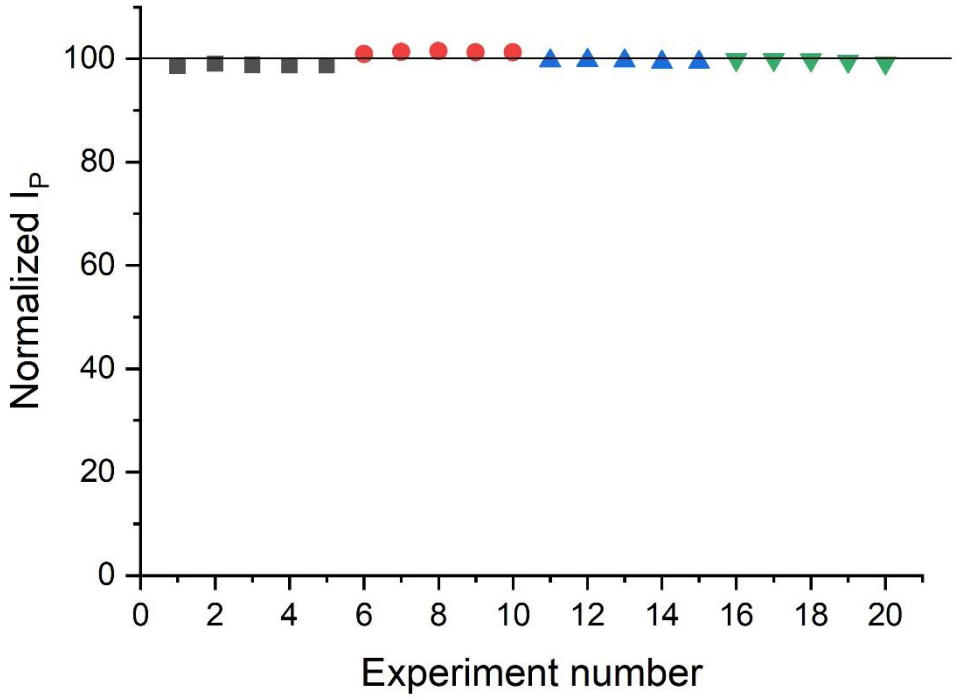

Figure S9. Square wave voltammetry. Normalized peak currents for four independent sets of experiments. Numbers correspond to the measurement made. $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5.

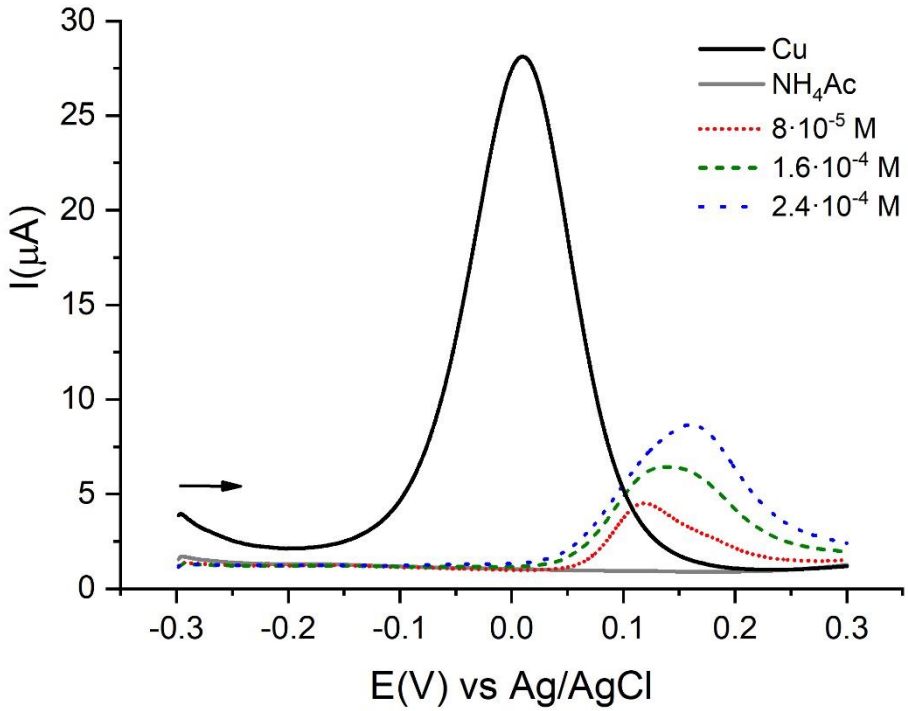

Figure S10. Reverse scan square wave voltammograms of gallic acid solutions in $1 \cdot 10^{-4}$ M $CuCl_2$ and 0.45 M NH_4Ac at pH 5.5. Arrow indicates the initial potential and the scan direction.