

Supplementary Information

Simple and sensitive determination of sibutramine in slimming tea beverages using a carbon screen-printed electrode with adsorptive stripping voltammetry.

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1. Procedure to background current correction.

Origin software (OriginPro 2017, Northampton, MA) was used to create a polynomial fit to voltammograms obtained by AdSDPV detection. This analysis was performed according to following steps: (I) 5 to 10 data points are selected both before and after the current peak from the voltammogram; (II) A polynomial fit for different orders (2 to 5) was carried out to these data points and then plotted together with original voltammogram to show the quality of fitting; (III) The best polynomial fitting was chosen (in this paper was of order 4) and the all data in the original voltammogram were subtracted of the polynomial fit; (IV) The area of the peak was obtained from peak analyser (Origin software); (V) The charge of the electrochemical process was calculated dividing the obtained peak area (step IV) by scan rate (V s^{-1}) used in the electrochemical experiment.

2. Electrochemical behavior of Sibutramine

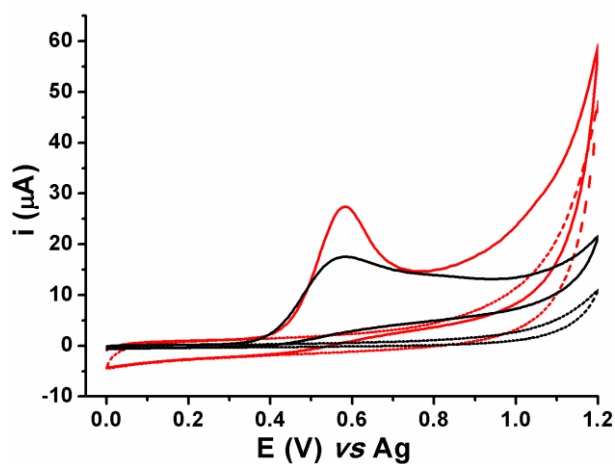


Fig. S1. Voltammograms recorded 0.1 M BRB (red-lines) and 0.1M phosphate buffer solution (black-lines), both pH 7.0, before (dash-lines) and after (solid-lines) addition of 0.2 mM sibutramine at SPE-Gr. All potential scans were started at 0.) V in the positive-going direction with a scan rate of 50 mV s^{-1} .

3. Reproducibility study

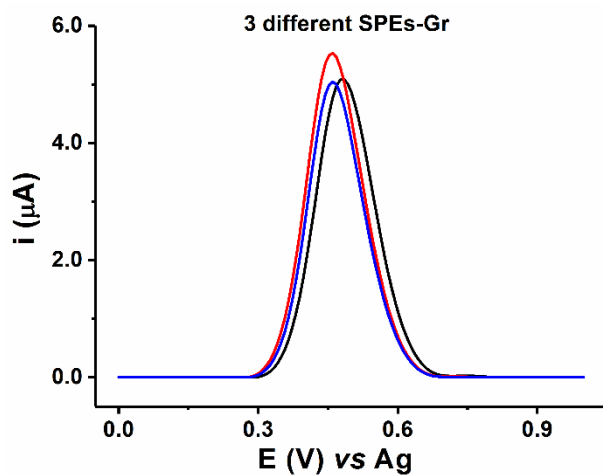


Fig. S2. AdSDPVs recorded (corrected background current) in 0.1 M BR buffer (pH 7.0) at three independent SPEs-Gr for detection of $10.0 \text{ } \mu\text{M}$ sibutramine after accumulation time of 15 min. Amplitude of 100 mV and scan rate 80 mV s^{-1} .

4. Addition-recovery study.

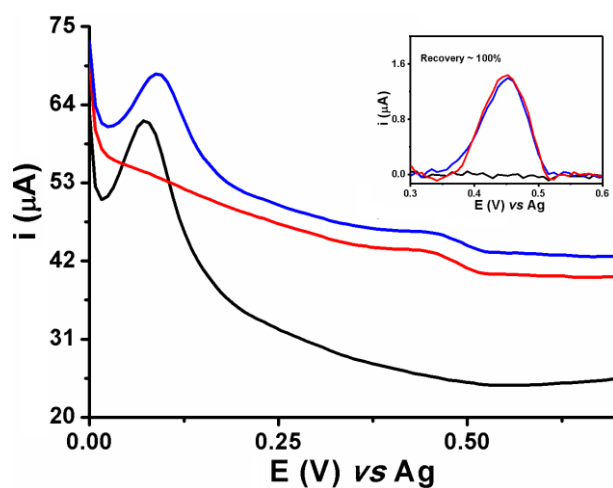


Fig. S3. AdSDPVs recorded in 0.1 M BRB at a SPE-Gr after 15 min in diluted tea sample (black line) without and with addition of 2.5 μM sibutramine (blue line). The detection of 2.5 μM sibutramine was also performed in 0.1 M BR buffer at a SPE-Gr after 15 min sibutramine (red line). Amplitude of 100 mV and scan rate 80 mV s⁻¹. Inset is AdSDPVs recorded with corrected background current.