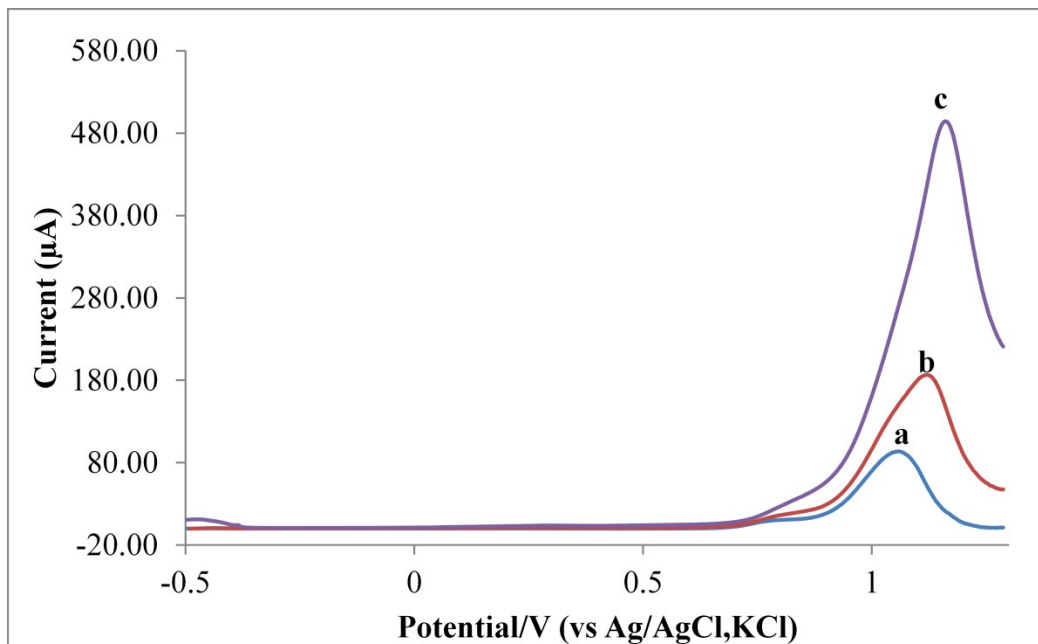


## Supplementary data

### Figures

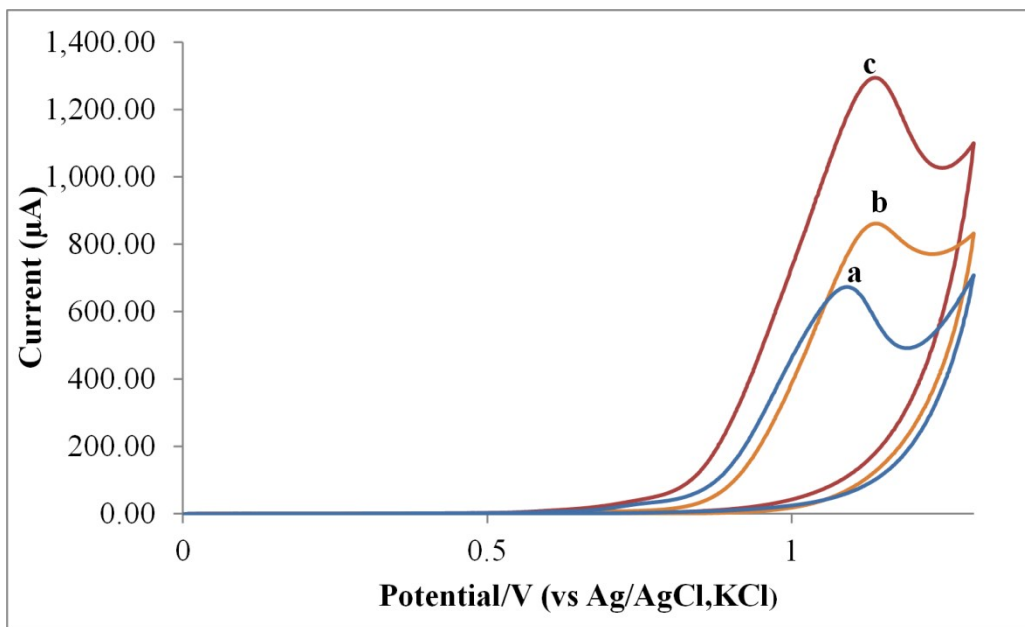


**Fig.1S.** The SWAdSV of 6.5 nM RAB sodium in presence of 65 μM cobalt nitrate at:

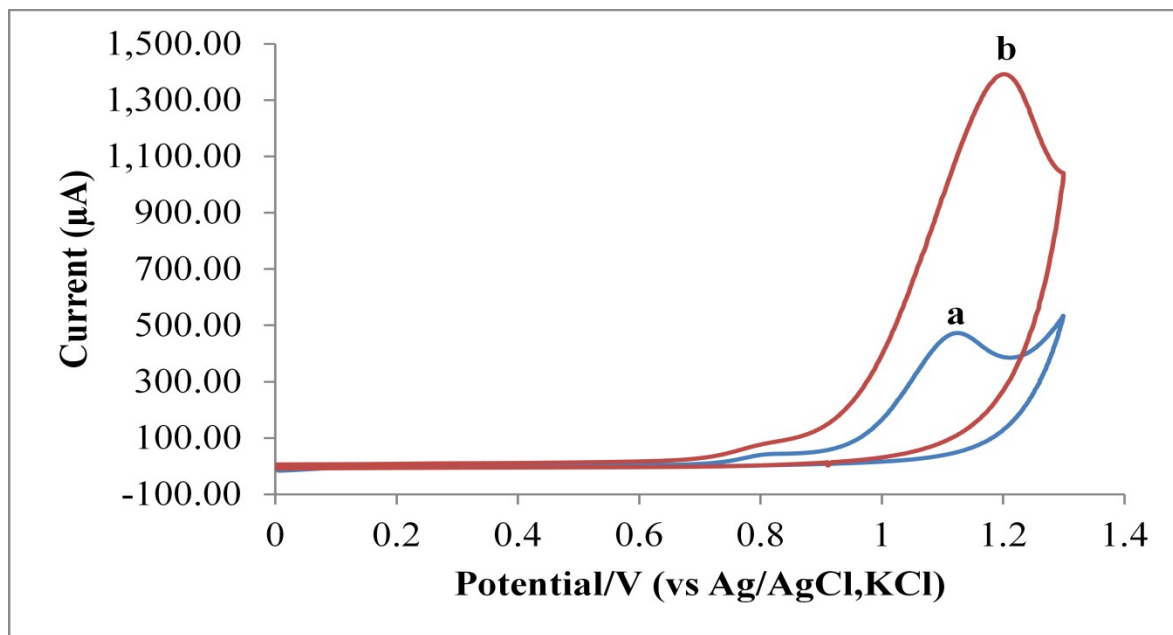
a. GCE

b. CPE

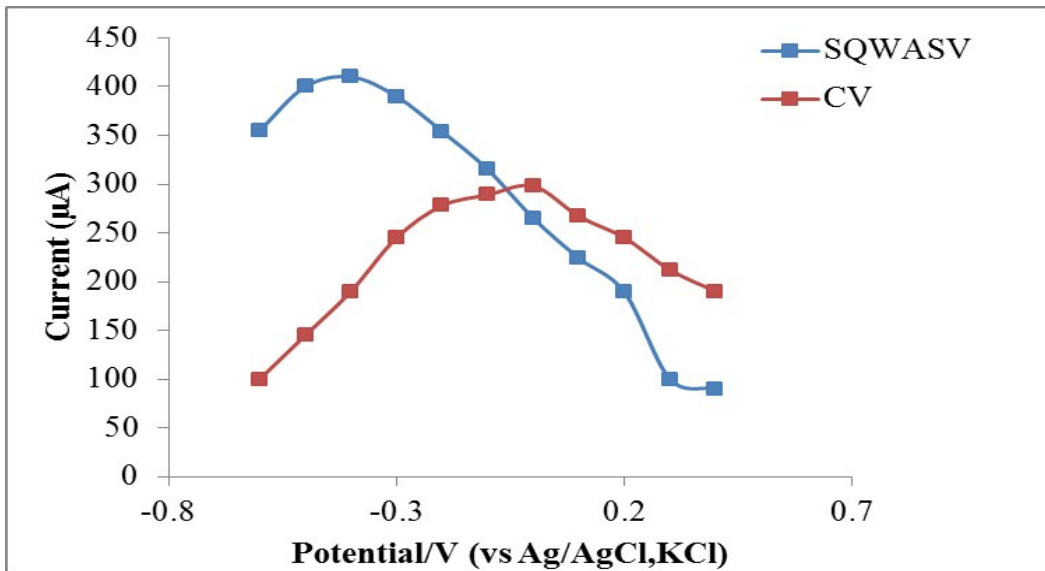
c. PGE



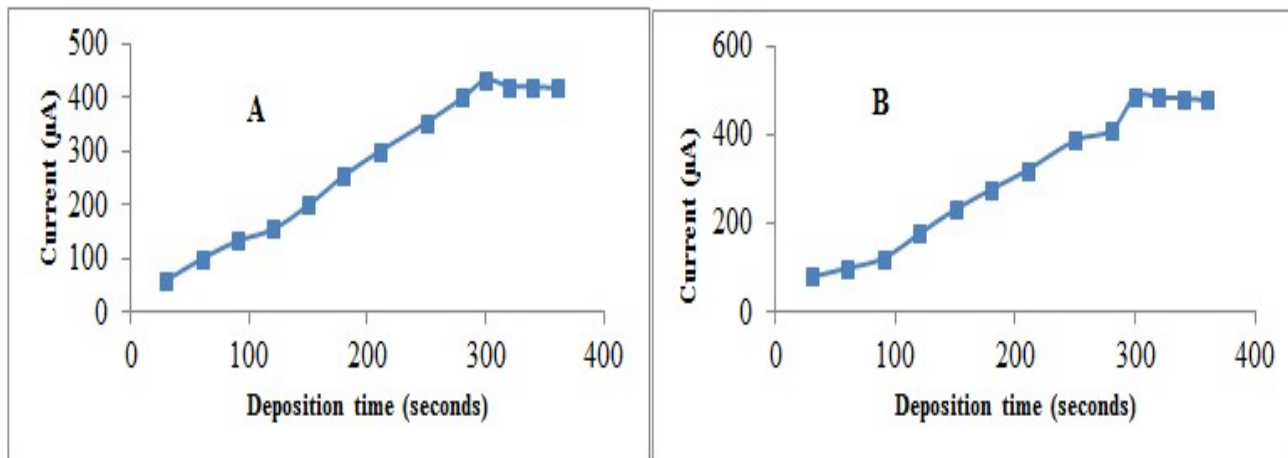
**Fig.2S.** The CV of RAB Na with 65  $\mu\text{M}$  cobalt nitrate: (a) acetate buffer (pH=7.0) (b) Phosphate buffer (pH=7.0) (c) B.R. buffer (pH=7.0).



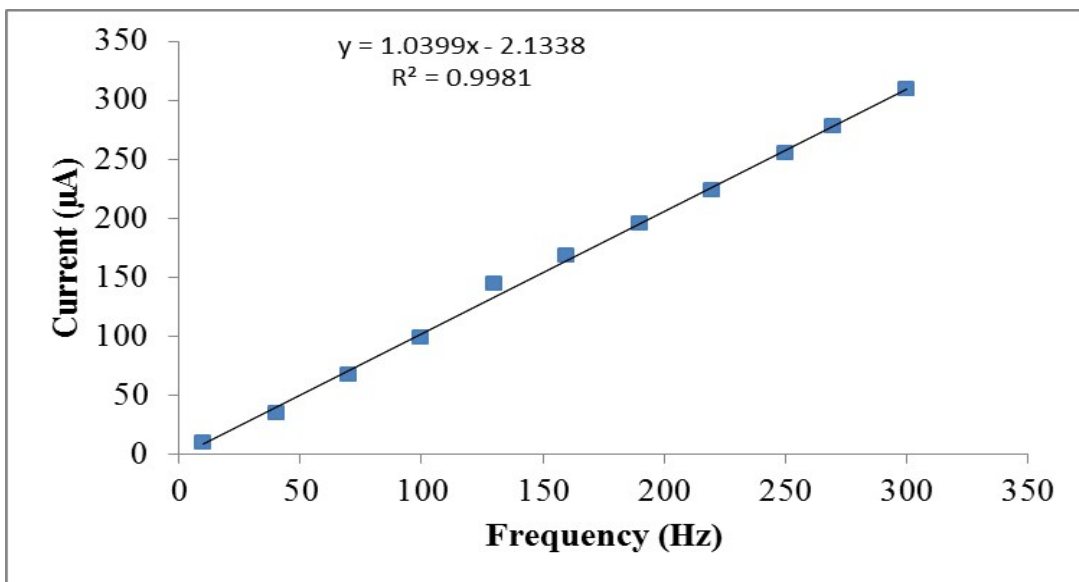
**Fig.3S.** The CV of  $6.5 \times 10^{-8}$  M RAB sodium using cobalt after deposition on PGE followed by complexation (a) and direct complexation without deposition (b).



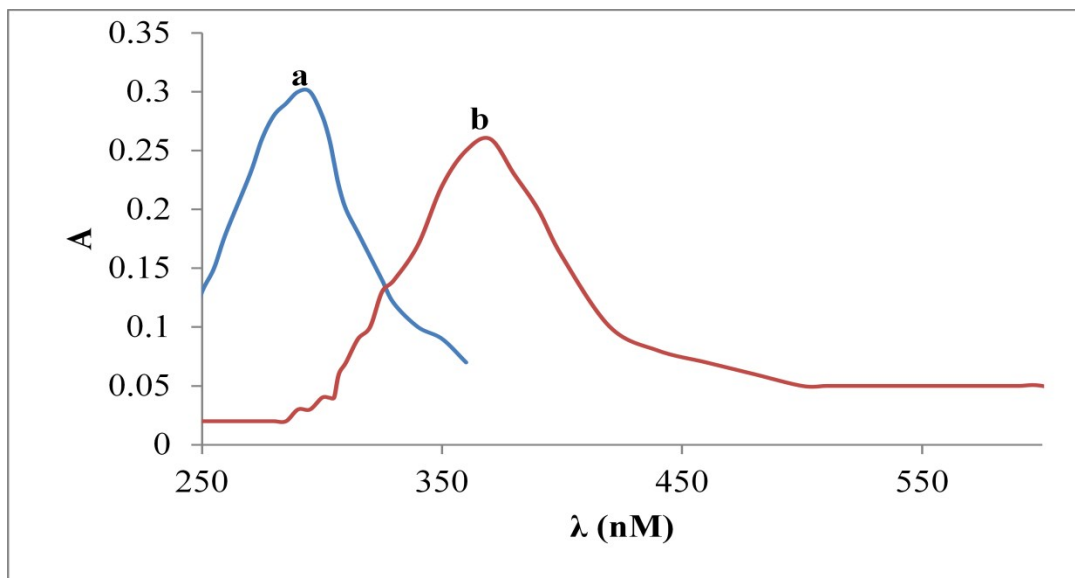
**Fig.4S.** Effect of initial potential on peak current of CV and SWAdSV.



**Fig.5S.** Effect of deposition time on peak current of CV (A) and SWAdSV (B).



**Fig.6S.** Effect of frequency on SWAdSV of 6.5 nM RAB sodium.



**Fig.7S.** UV-Vis spectra of 0.6  $\mu$ M RAB sodium (a) in B.R. buffer (pH=7.0) and after addition of 65  $\mu$ M cobalt nitrate (b).

## Supplementary tables

**Table 1S.** Quantitative parameters for the proposed methods for determination of RAB sodium in model urine samples.

Parameters	SWAdSV <sup>a</sup>		CV <sup>a</sup>	
	Volunteer A	Volunteer B	Volunteer A	Volunteer B
Measured potential (volts)	1.15	1.20	1.17	1.18
Linearity	5-31	5-31	5-31	5-31
Correlation coefficient (r)	0.9992±	0.9990±	0.9983±	0.9983±
± SD*	0.003	0.005	0.003	0.007
Intercept± SD	18.8± 0.01	-12.23± 0.03	-0.09±0.001	-0.06±0.0008
Slope± SD	15.1 ± 0.15	14.23± 0.05	0.07±0.001	0.075±0.0005
LOD*	0.002	0.007	0.047	0.035
LOQ*	0.066	0.021	0.143	0.107

<sup>a</sup> Concentration in SWAdSV expressed as 10<sup>-8</sup> M while in CV expressed as 10<sup>-6</sup>M.

\* Average of five replicates.



**Table 2S.** Recovery analysis of RAB sodium in spiked human urine samples using proposed methods.

Added amount	SWAdSV <sup>a</sup>				CV <sup>a</sup>			
	Volunteer A		Volunteer B		Volunteer A		Volunteer B	
	Found± SD*	% Recovery	Found± SD*	% Recovery	Found± SD*	% Recovery	Found± SD*	% Recovery
6	6.3	105.0± 3.5	6.2	103.3± 4.1	6.2	103.3± 3.9	6.4	106.6± 3.8
13	13.5	103.8± 2.9	13.7	105.4± 2.8	13.2	101.5± 4.1	12.5	96.2± 2.7
19	19.7	103.7± 3.1	19.4	102.1± 2.9	18.6	94.4± 2.8	18.7	98.4± 3.7

<sup>a</sup> Concentration in SWAdSV expressed as 10<sup>-8</sup> M while in CV expressed as 10<sup>-6</sup> M.

\* Average of five replicates.