Supplementary Data

Electrochemical determination of selected antihypertensive and antituberculosis drugs at tyrosine modified electrode

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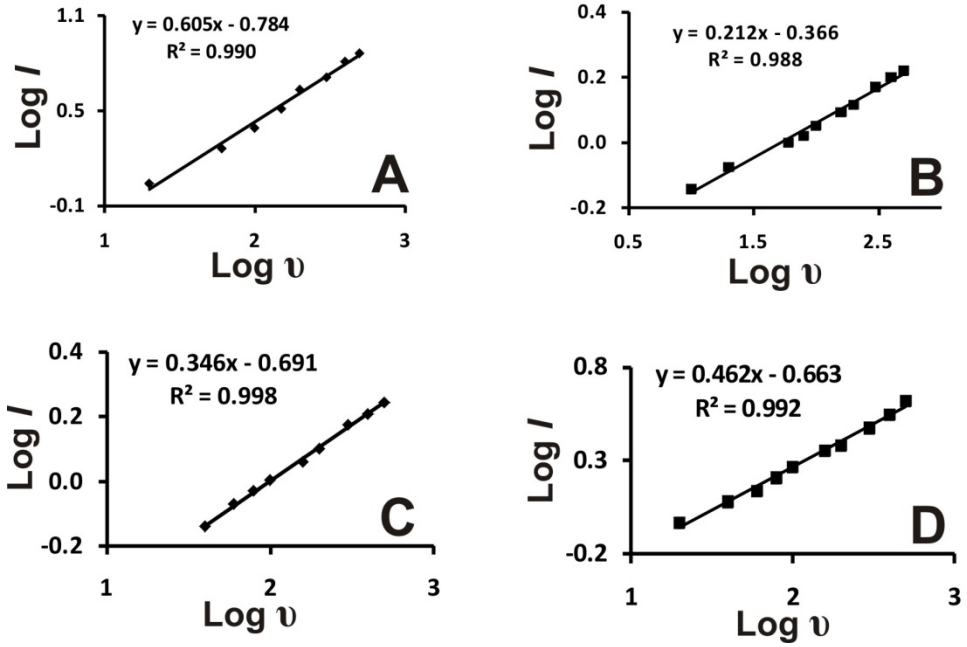

Fig.S1 Relationship between anodic log *I* and logarithm scan rate-log υ of 100 μM HDH (**A**), ISN (**B**), EBH (**C**) and relationship between cathodic log *I* and logarithm scan rate-log υ of 100 μM PZM (**D**) from 20 to 500 mV s^{-1} in pH 7.0 PBS at Tyr-GCE

S2. Optimization of DPV experimental parameters for Isoniazid, Pyrazinamide, Ethambutol hydrochloride, Hydralazine hydrochloride at Tyr-GCE

To maximize the DPV analytical signal, the effects of experimental parameters (pulse amplitude, pulse width and pulse period) were studied at the Tyr-GCE in pH 7 PBS with 150 μM concentration of each analyte in the electrochemical cell.

Pulse amplitude

The influence of DPV parameters was investigated in our study. The amplitude values were increased from 10 to 100 mV in the presence of 150 μM of each analyte separately in the electrochemical cell. While increasing the pulse amplitude, the peak current values of each analyte was increased, for PZM and HDH the peak shapes were good at 50 mV, compared to other amplitude values, similarly for EBH the peak current was proportional to pulse amplitude and the ISN was observed maximum current at 50 mV. The obtained current values were plotted against the pulse amplitude, based on this obtained results pulse amplitude at 50 mV was better to carry out to obtain the good peak current. Hence, in our method we chose 50 mV as pulse amplitude.

Pulse width

Similarly the influence of pulse width parameter of DPV was studied in this work. The pulse width values were increased from 10 to 100 ms in the presence of 150 μM of each analyte separately in the electrochemical cell. For PZM analyte the peak current was decreases when increasing the pulse width and the peak current was stable at pulse width of 30 and 50 ms. For ISN the peak shape found good at 50 ms and slightly shifting the peak potential towards less positive potential while increasing the pulse width. For HDH and EBH at low pulse width the peak shapes were found poor and the utmost current was observed at 50 and 100 ms. The obtained peak current values were plotted against the pulse width, based on this obtained pulse width values at 50 ms was shown good peak currents. Hence, in our method we chose 50 ms as pulse width.

Pulse period

The pulse period effect was studied in this work at Tyr-GCE. We carried the pulse period study from 100 to 500 ms in DPV for all of the four analytes mentioned in the above section (pulse width) . Almost the maximum current was observed at 200 ms for HDH, EBH, ISN and PZM. The I_{pa} value for EMH was slightly shifting towards less

positive side when increasing the pulse period from 100 to 500 ms. HDH shown clear enhancement at 200 ms, based on these results at 200 ms all the four analytes shown good peak increment with large current. Hence, in our method we chose 200 ms as pulse period.