

Supplementary information

A low-cost, simple and rapid fabrication method for paper-based
microfluidics by wax screen printing

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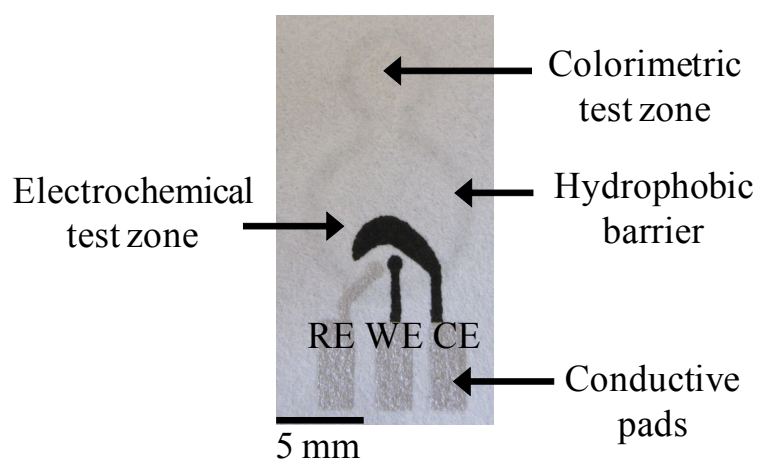


Figure S1 Picture of μ PAD for the dual electrochemical/ colorimetric method (WE: working electrode; RE: reference electrode; CE: counter electrode)

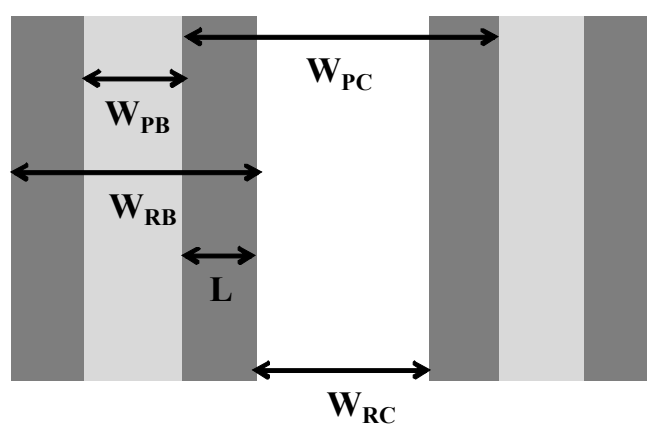


Figure S2 Schematic representation of the spreading of wax in paper and definition of variables: W_{PC} is the printed width of the channel, W_{PB} is the printed width of the wax hydrophobic line, W_{RC} is the resulting width of hydrophilic channel after melting of wax, W_{RB} is the resulting width of hydrophobic barrier after melting of wax, L is the spreading of wax from the original edge of wax line.

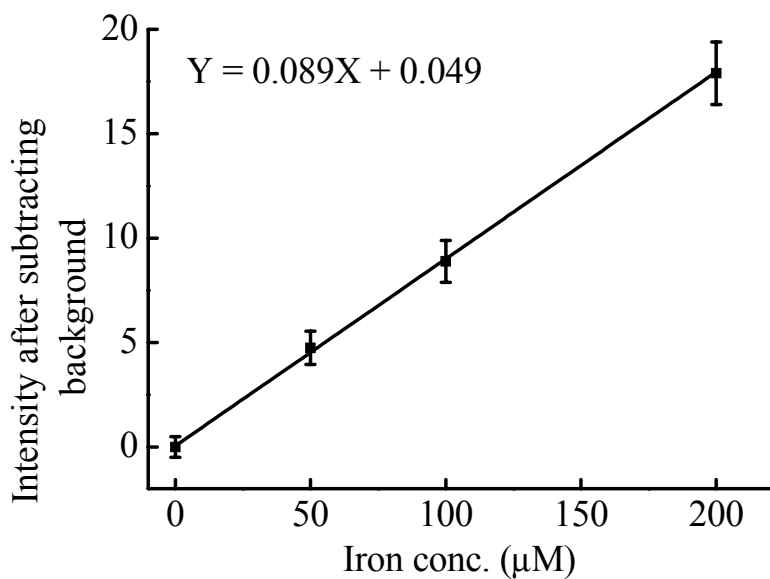


Figure S3 The calibration plot of total iron concentration and the red color intensity subtracting with background

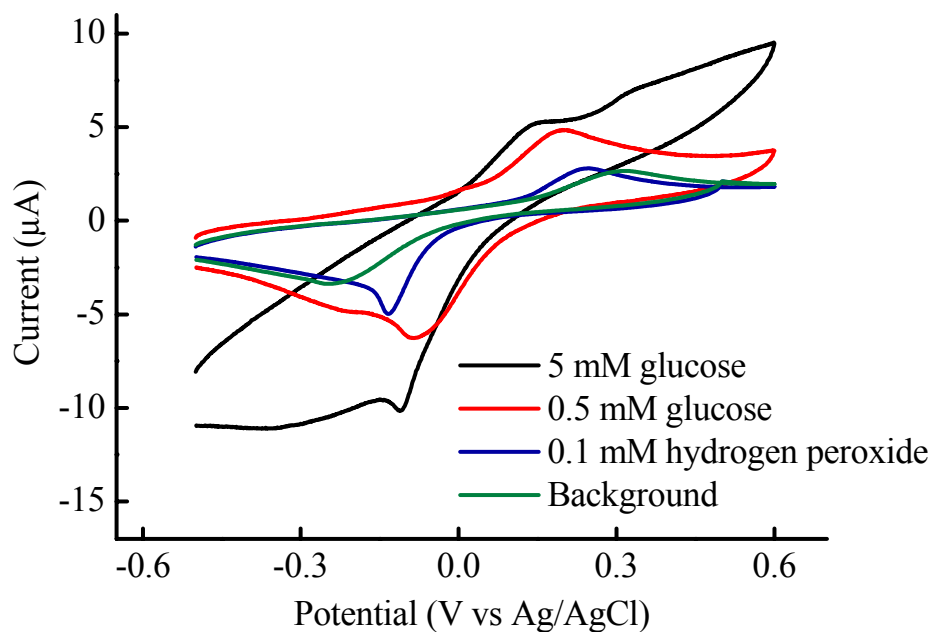


Figure S4 Cyclic voltammograms of the carbon mediator Prussian blue electrode in the absence and presence of 0.1 mM H₂O₂, 0.5 and 5 mM of glucose at a 100 mV/s scan rate.