Electronic Supplementary Material (ESI) for Analyst.

Supporting Information

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Smartphone-Based Point-of-Care Testing of Salivary α-Amylase for Personal Psychological Measurement

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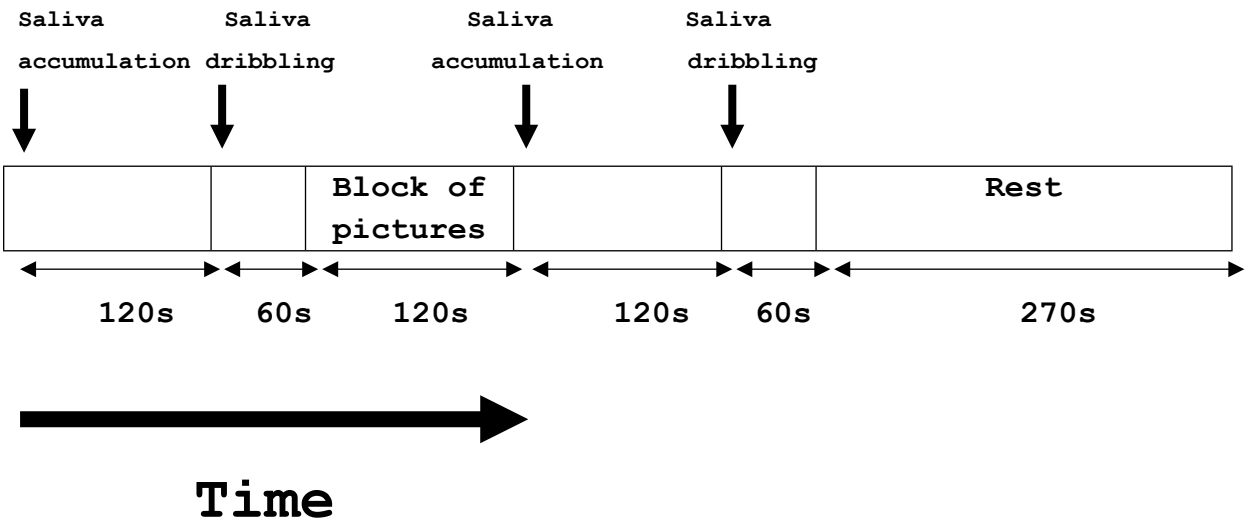
5 Pages



Scheme S1. Schematic illustration of the psychological measurement based on the sAA detection.
IAPS code is a four-digit number used to identify a certain picture in IAPS. For the pictures employed in the study, their IAPS code are:Mutilation:3030,3051,3060,3064,3071,3080,3100,3130,3150,3400,3550,9405
Sport:5621,5626,8030,8161,8162,8170,8180,8185,8370,8400,8490,8496.

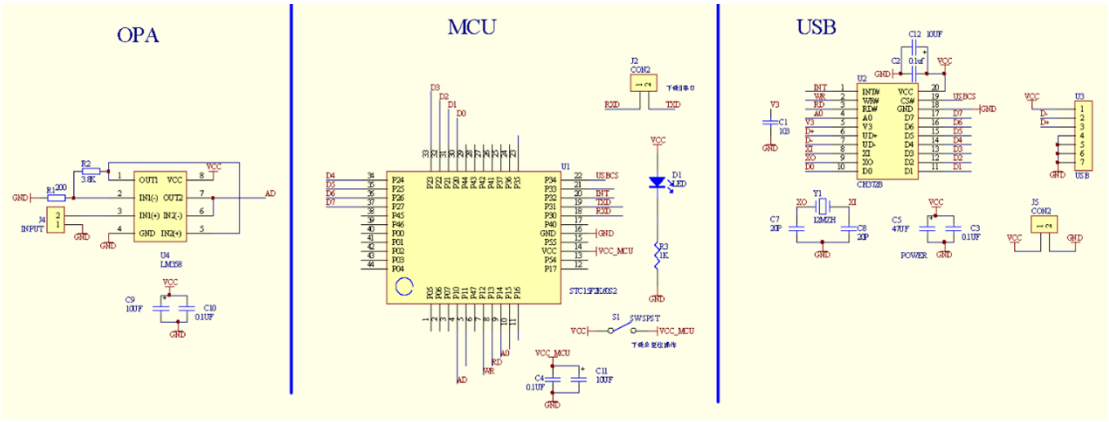


Fig. S1. Circuit schematic of potentiometric reader including the voltage amplification module (OPA), microprocessor module (MCU) and transport module (USB).

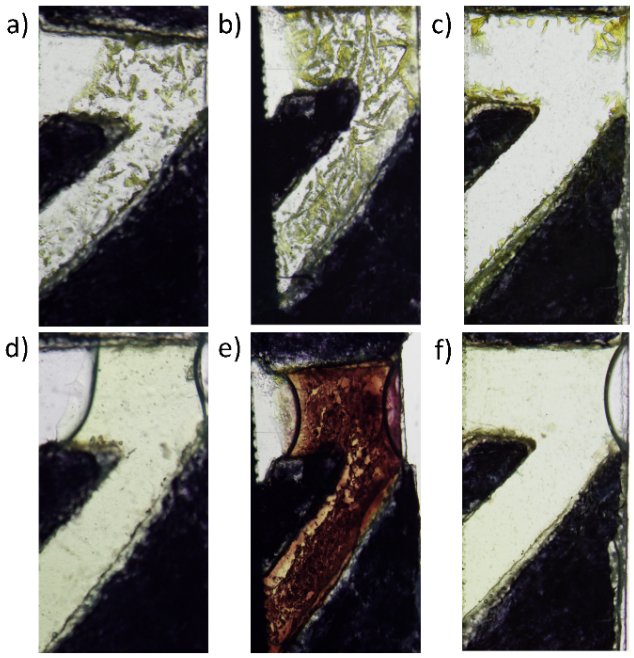


Fig. S2. Optical micrographs of the reaction zone showing the location of preloaded reagents (a-c) and re-dissolution (d-f). For a) and d), the preloaded reagents were starch, NaOH and $Fe(CN)_6^{3-}$. Human saliva sample was introduced into the detection zone to dissolve these reagents. For b) and e), the preloaded reagents were starch, NaOH and $Fe(CN)_6^{3-}$. Human saliva sample containing iodine was introduced to show the distribution of starch. For c) and f), the preloaded reagents were just NaOH and $Fe(CN)_6^{3-}$. Human saliva sample was introduced into the detection zone to dissolve the reagents.

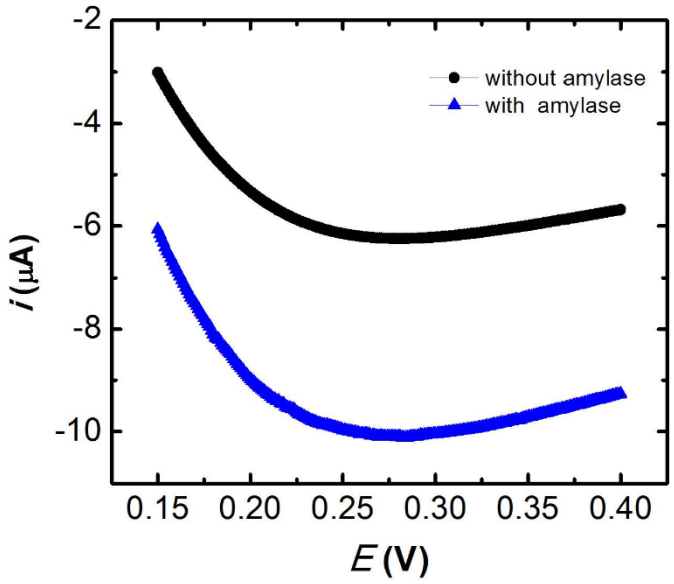


Fig. S3. Linear-sweep voltammogram obtained in a 0.010 M PBS solution (pH 7.4) containing 100 mM $Fe(CN)_6^{3-}$ and 100 mM NaOH. Temperature: 25 °C. 100 μL aliquot of real saliva sample was freshly taken from a male subject, and added into the solution.