Supplementary materials

A simplified and miniaturized glucometer-based assay for the detection of β-glucosidase activity

Min-yi JIN[1], Tong ZHANG[†1], Yi-shun YANG[1], Yue DING[1], Jun-song LI[1], Gao-ren ZHONG[2]

[1]*Experiment Center for Teaching and Learning, Shanghai University of Traditional Chinese Medicine, Shanghai 201203, China*

[2]*School of Pharmacy, Fudan University, Shanghai 200032, China*

[†]E-mail: zhangtdmj@hotmail.com

Data S1 Preparation of the DNS reagent

DNS reagent was prepared by the following steps: 10 g of 3, 5-dinitrosalicylic acid was dissolved in 600 mL of distilled water. 10 g of NaOH was added to the prepared solution and stirred in water bath at 50℃. And then 200 g of sodium tartrate, 2 g of phenol and 5 g of sodium sulfite were dissolved in the mixture, successively. When the mixture was cooled to room temperature, it was diluted to a final volume of 1000 mL using distilled water. After being prepared, DNS reagent was filtered and stored in brown bottle for 7 days before it could be used.

Data S2 Preparation of the glucose calibration standards

The calibration standards were prepared in citric acid-sodium citrate buffer solution (0.05M, pH 5.0) by serial dilution of the primary glucose standard (7.701 mg mL^{-1}) to provide final concentrations of 6.1608, 4.6206, 3.8505, 2.3103, 1.5402 and 0.7701 mg mL^{-1}.

Fig. S1 Experimental protocol design