Supporting Information for

Integration of solution-based assays onto lateral flow device for one-step quantitative point-of-care diagnostics using personal glucose meter

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Abstract: This Supporting Information provides additional data on the mechanism of DNA and invertase conjugation (Figure S1), the fluorescence assay of cocaine (Figure S2), the mechanism of biotin and invertase conjugation (Figure S3), the scheme of assembly of a lateral flow device (Figure S4), and the glucose meter response to invertase-biotin conjugate (Figure S5).

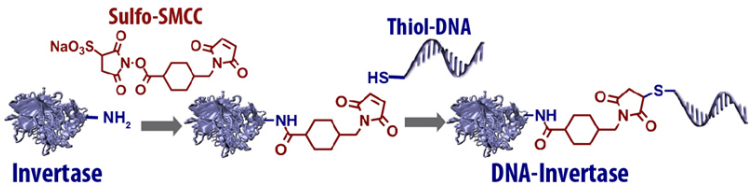

Figure S1. The conjugation of DNA and invertase by the heterobifuntional linker (sulfo-SMCC).

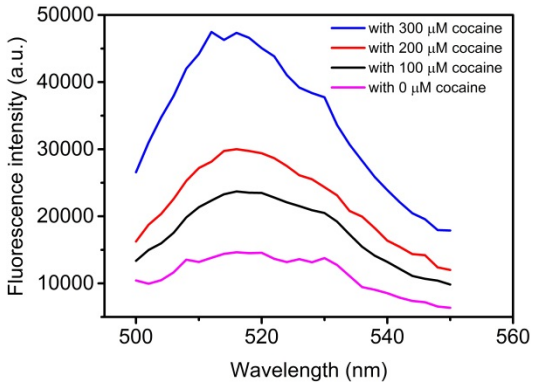

Figure S2. Fluorescence spectra of the release of FAM-labeled DNA–Invertase conjugates from the lateral flow dipstick upon the addition of cocaine at different concentrations.

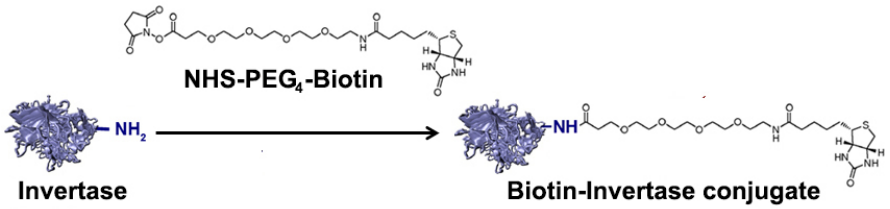

Figure S3. The conjugation of biotin and invertase by the NHS-ester biotinylation reagent (NHS-PEG$_4$-Biotin).

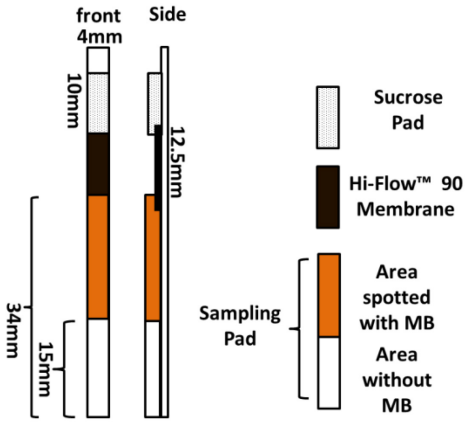

Figure S4. Assembly of a lateral flow device.

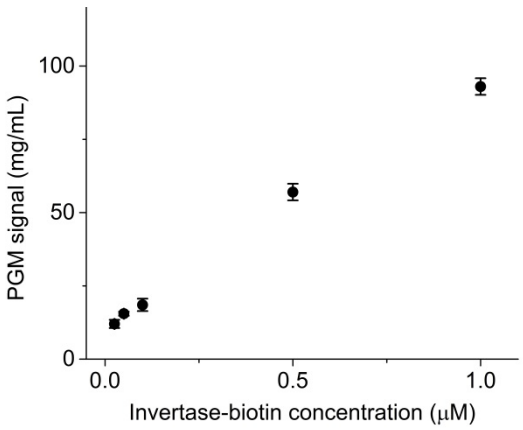

Figure S5. Relationship between PGM signals and Invertase-biotin concentrations in the solution. Invertase-biotin conjugate was directly added to the reaction pad, and incubated at room temperature for 20 min, and then measured using a PGM.