

# Supporting Information

## Point-of-care human milk testing for maternal secretor status

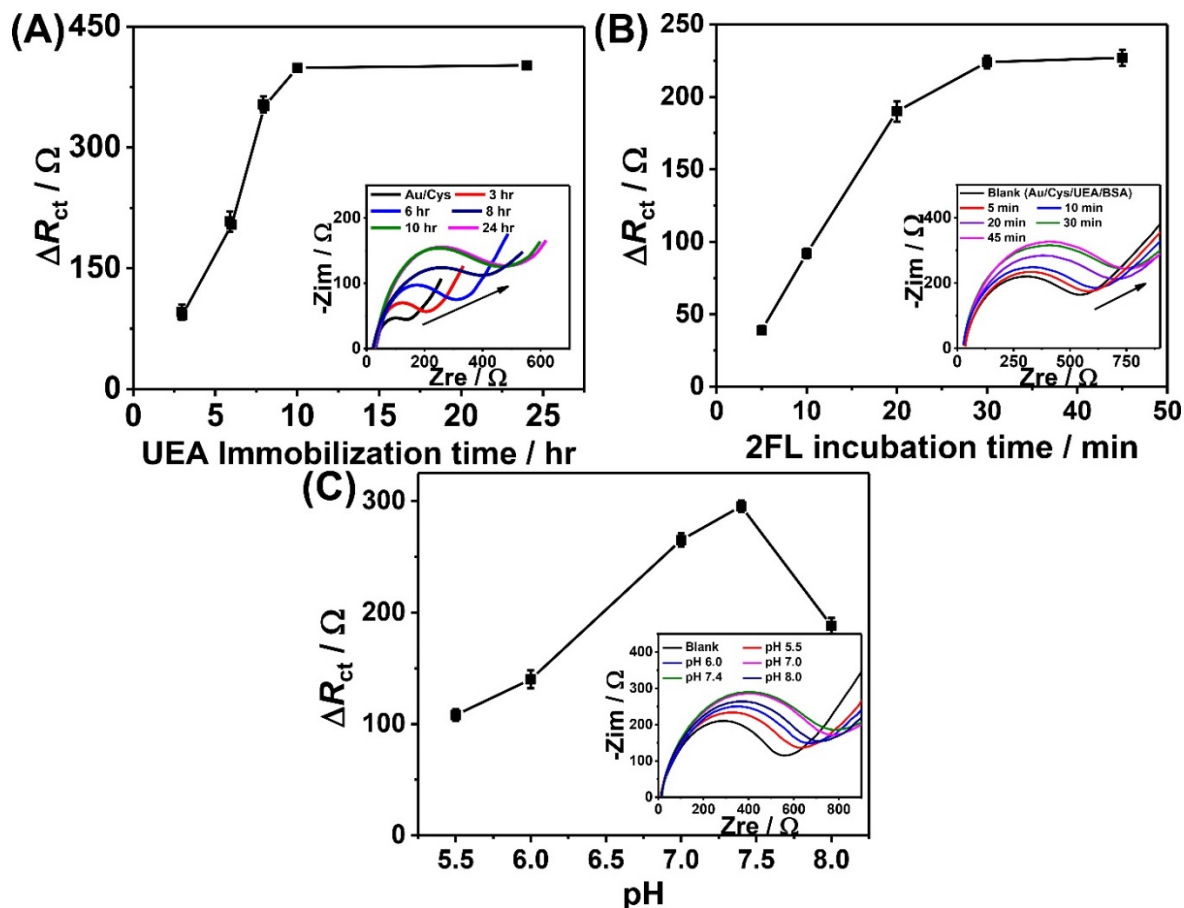
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**Figure S1. Optimization of experimental parameters.** A. UEA immobilization time, B. 2'FL incubation time with 1.5 $\mu$ M 2'FL, and C. pH with 2.0 $\mu$ M 2'FL in 0.1 M PBS containing 5 mM Fe(CN) $_6^{3-/4-}$ .

**Table S1.** Comparison of concentration of banked samples (HPLC vs. EIS).

Sample ID	EIS ( $\mu$ M)	HPLC ( $\mu$ M)	Secretor/non-secretor?	Prediction
A	<330	5	Non-secretor	Correct
B	10129	11985	Secretor	Correct
C	7268	8197	Secretor	Correct
D	5323	4017	Secretor	Correct
E	10243	11378	Secretor	Correct
F	<330	71	Non-secretor	Correct
G	8660	9159	Secretor	Correct
H	4894	4632	Secretor	Correct
I	<330	34	Non-secretor	Correct
J	6126	7045	Secretor	Correct
K	<330	5	Non-secretor	Correct
L	9484	9585	Secretor	Correct

**Table S2.** Cost analysis of proposed assay for 2'FL detection. All prices are from the published price on the vendor's website in low quantity.

Item	Unit Cost (USD)	Cost (USD)/batch (20 $\times$ )	
Top 5 reagents	Cys	\$15/10g	\$0.15
	UEA	\$44.40/1mg	\$0.44
	Glutaraldehyde	\$20/10mL	\$0.10
	10% BSA	\$24.20/10mL	\$0.01
	NH $_4$ OH	\$40/1L	\$0.10
Electrode	Au electrode	\$350/75	\$50.00

**Cost per test** **\$2.50**