Electronic Supplementary Material (ESI) for Lab on a Chip.

A lab-on-chip device for sample-in-result-out detection of viable *Salmonella* using loop-mediated isothermal amplification and real-time turbidity monitoring

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Table S1. Nucleotide sequences of LAMP primers

Primer Type	Primer Name	Nucleotide Sequence
Inner primer 1	F3	5'-CGGCCCGATTTTCTCTGG-3'
Inner primer 2	B3	5'-CGGCAATAGCGTCACCTT-3'
Outer primer 1	FIP	5'-GCGCGGCATCCGCATCAATA-TGCCCGGTAAACAGATGAGT-3'
Outer primer 2	BIP	5'-GCGAACGGCGAAGCGTACTG-TCGCACCGTCAAAGGAAC-3
Loop primer 1	LF	5'- GGCCTTCAAATCGGCATCAAT-3'
Loop primer 2	LB	5'-GAAAGGGAAAGCCAGCTTTACG-3'

Table S2. Comparison of this proposed device with previously reported detection methods

Method	Target Bacteria	Detection Limit	References
PCR	*Bacillus cereus*	9.2×10^1 CFU/mL	1
ELISA	*Salmonella*/*E.coli*/*Vibrio choera*	1.0×10^4 CFU/mL	2
Plate count	*Enterobacter sakazakii*	1.0×10^2 CFU/mL	3
Biosensor	*Staphylococcus aureus*	1.0×10^1 CFU/mL	4
LAMP	*Salmonella spp.*/*E. coli* O157:H7	3.0×10^1 CFU/sample	5
LAMP	*Salmonella* typhimurium	1.4×10^1 CFU/mL	This study

References

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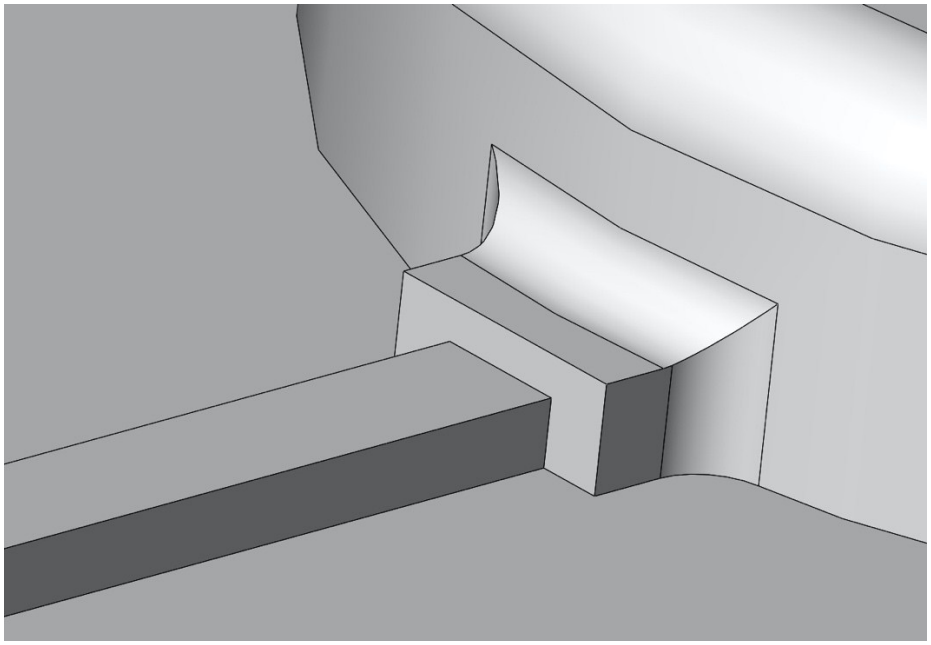

Fig S1. The connection between channel and chamber

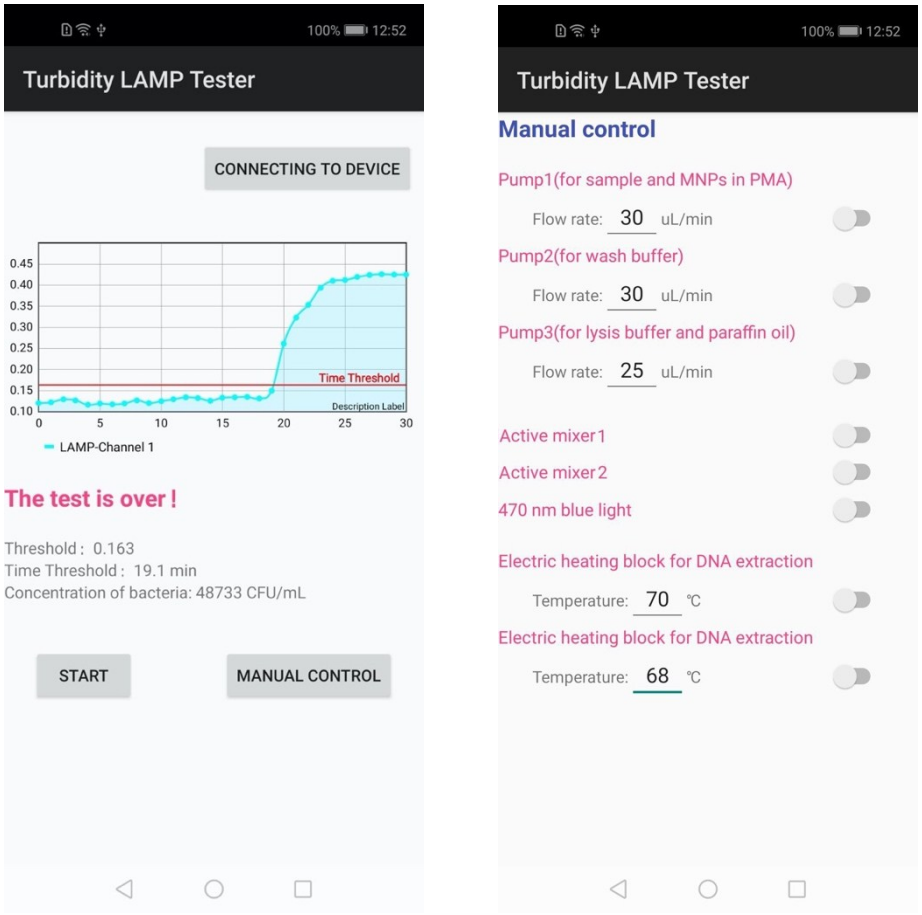

Fig S2. The interfaces of the smartphone App