

Self-Digitization Chip for Quantitative Detection of Human Papillomavirus Using Digital LAMP

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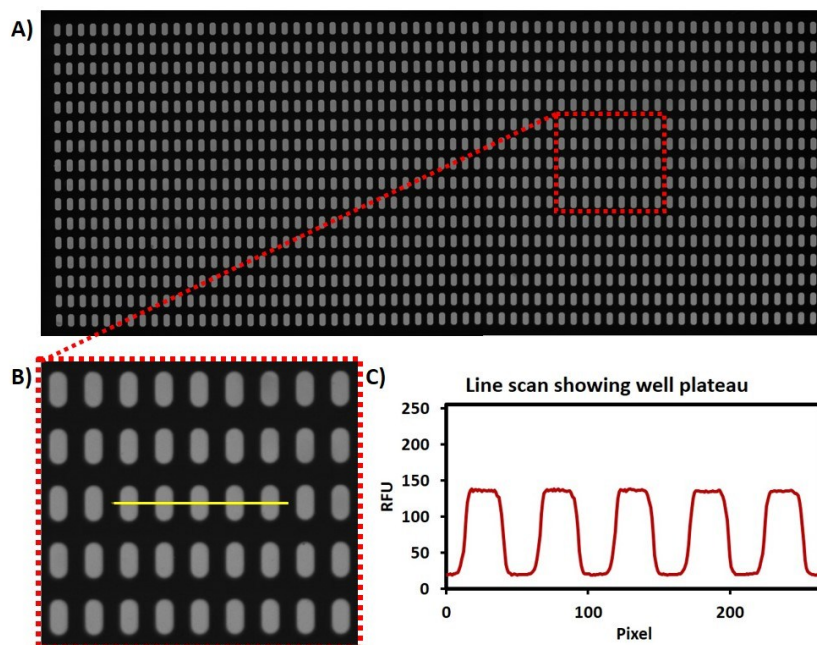


Figure S1. (A) Fluorescent image of SD chip with 1024 wells with well volumes of 7.5 nL. (B) Enlargement showing wells and line scan. (C) The line scan shows plateaus where the well is full vertically.

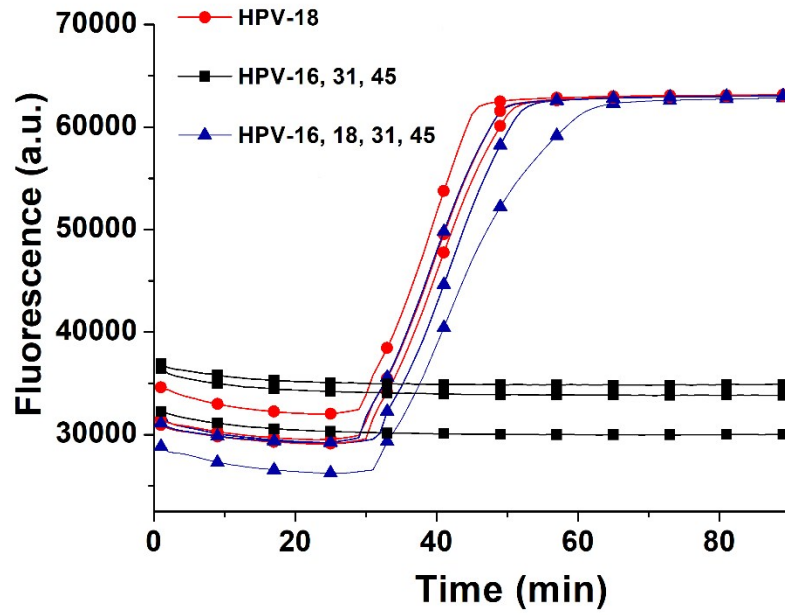


Figure S2. Real-time LAMP curves from samples described in Figure 4C. The concentrations are listed in the same order as in Figure 4C for Devices 3 and 7, and also the control sample containing HPV-16, 31 and 45. Each sample was repeated three times. The red curve with a circle marker contained HPV-18 at 3.1×10^4 molecules/mL. The black curve with a square marker contained HPV-16, 31 and 45 at 3.1×10^4 molecules/mL and showed no fluorescence increase. The blue curve with a triangle marker contained all four HPV plasmids at 3.1×10^4 molecules/mL, and showed an increase in fluorescence a little later than the sample containing only HPV-18 at 3.1×10^4 molecules/mL.

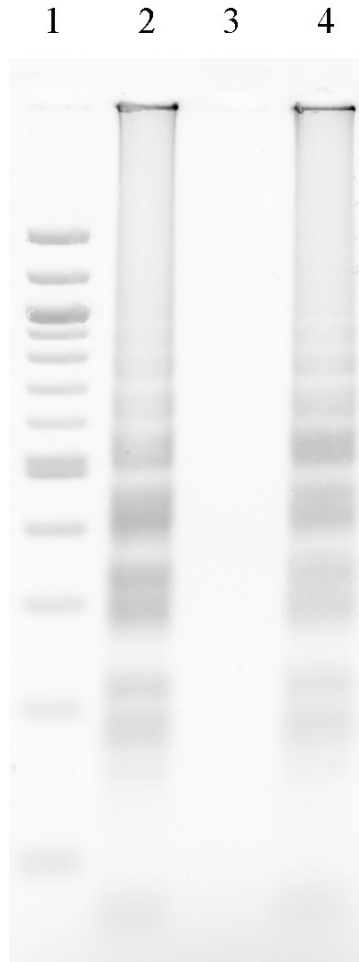


Figure S3. The agarose gel electrophoresis results from samples in **Figure S2**. Line 1 is the DNA marker ladder. Line 2 is the sample that contained HPV-18 at 3.1×10^4 molecules/mL, showing the typical ladder of amplified LAMP products. Line 3 is the sample that contained HPV-16, 31 and 45 at 3.1×10^4 molecules/mL, showing no amplified products. Line 4 is the sample that contained all four HPV plasmids including HPV18 at 3.1×10^4 molecules/mL.