Analyst

Supplementary Material

Rapid molecular diagnostic of COVID-19 by RT-LAMP in a centrifugal polystyrene-toner based microdevice with end-point visual detection

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Microdevice Fabrication

The main steps of microfabrication process described in item 2.4 are shown in Figure 1S.
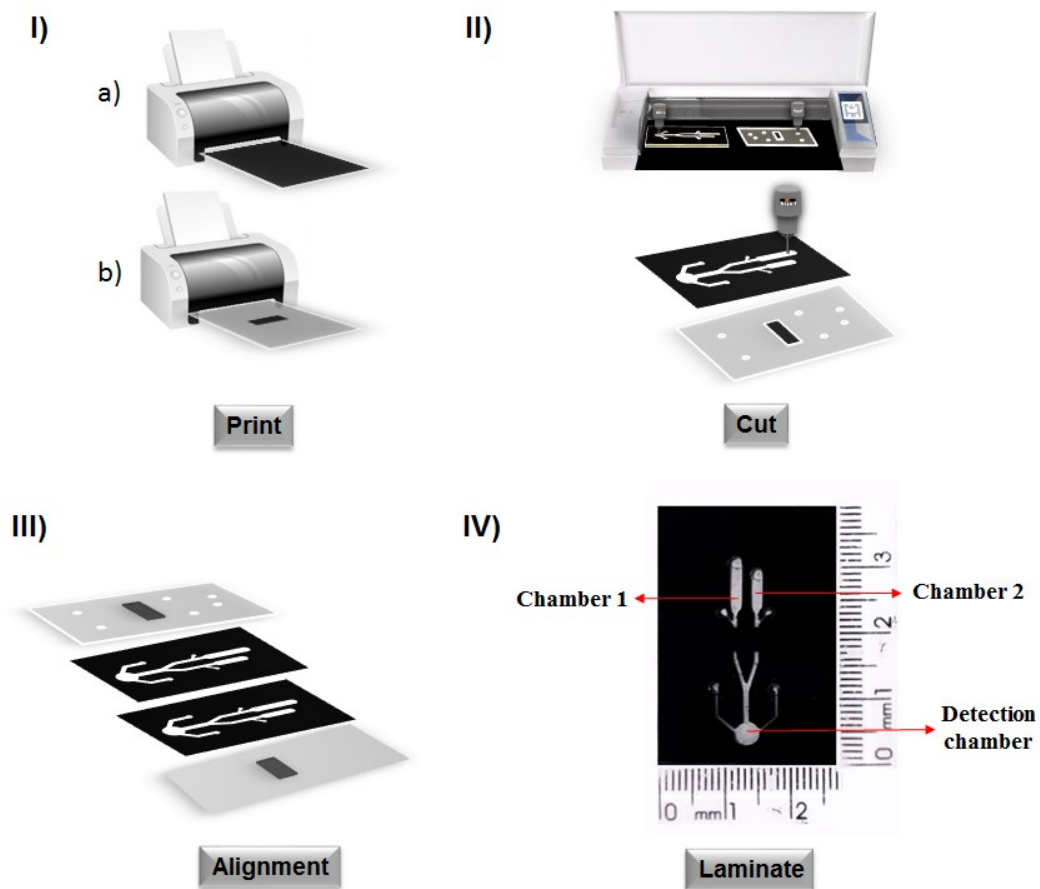

Figure 1S. Representation of the main steps of the fabrication process. I) Polyester film coated with toner on both sides for intermediated parts (a) and printed toner valve on the top and bottom surface (b). II) Microfeatures cut by Silhouette Studio® into middle layers and reservoirs at the top. III) Alignment of the valves and all layers for lamination. IV) Photograph of the PS-T microdevice.

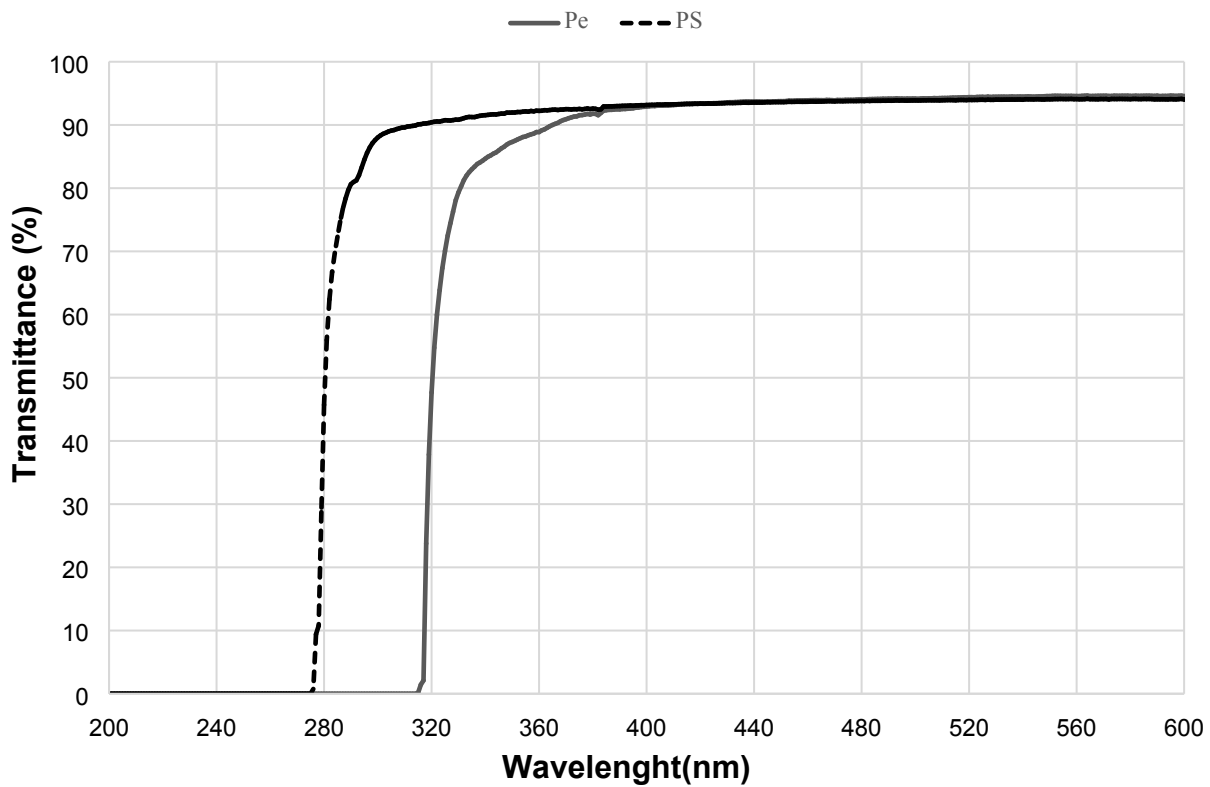**UV-vis transmittance spectrum of the polyester (Pe) and polystyrene (PS)**

Figure 2S. UV-vis transmittance spectrum of the polyester (Pe) and polystyrene (PS).
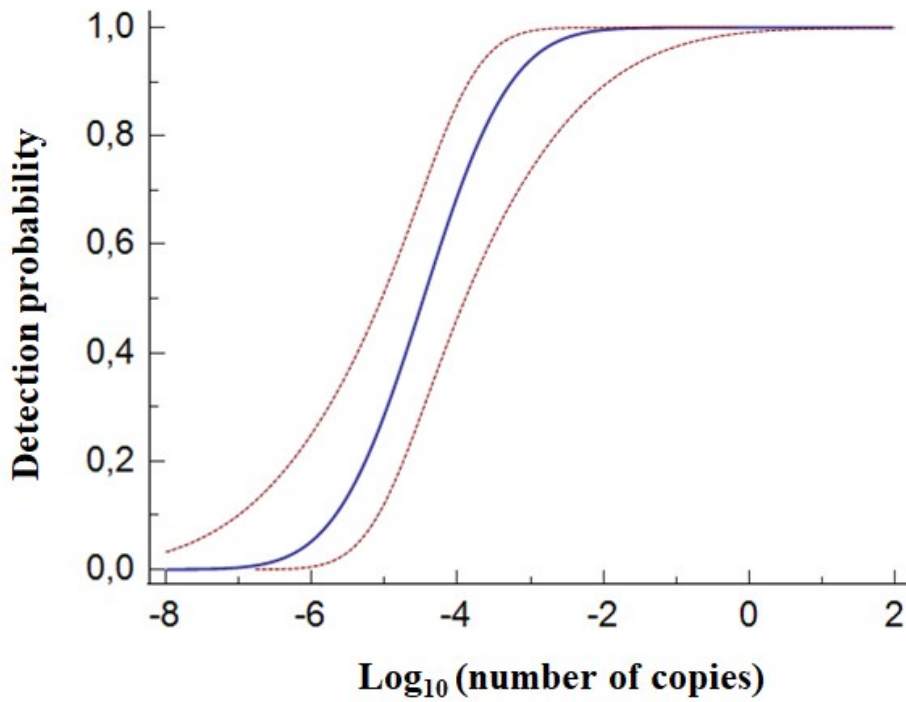
The probit regression analysis curve

Figure 3S. Limit of detection of the SARS-CoV-2 assay. The probit regression analysis curve was obtained from 8 replicates of serial dilutions using MedCalc software.

Agarose gel electrophoresis of RT-LAMP products ranging from 10^7 to 10^{-6} RNA copies of SARS-CoV-2
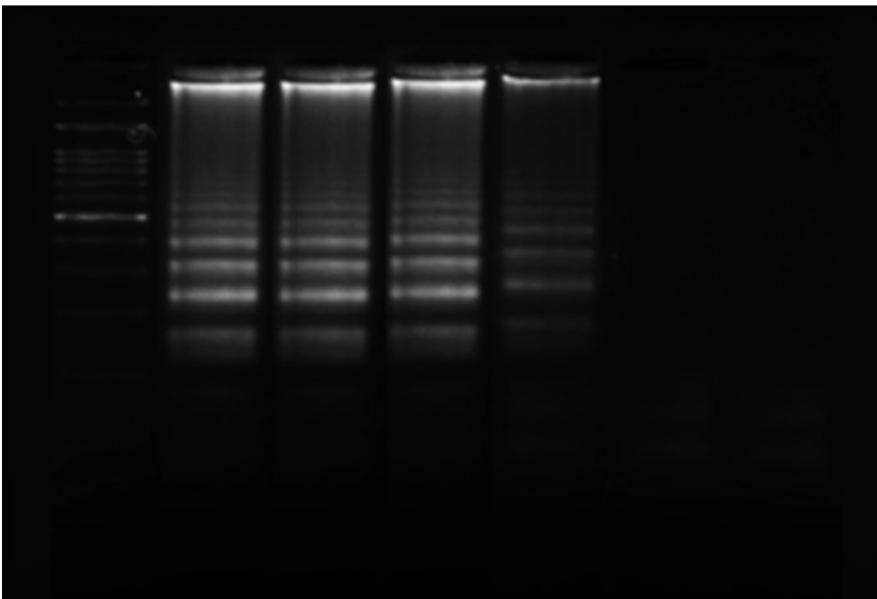

Figure 4S. Limit of detection on the agarose gel ranging from 10^7 to 10^{-6} RNA copies. NTC: non-template control; M: molecular weight marker.
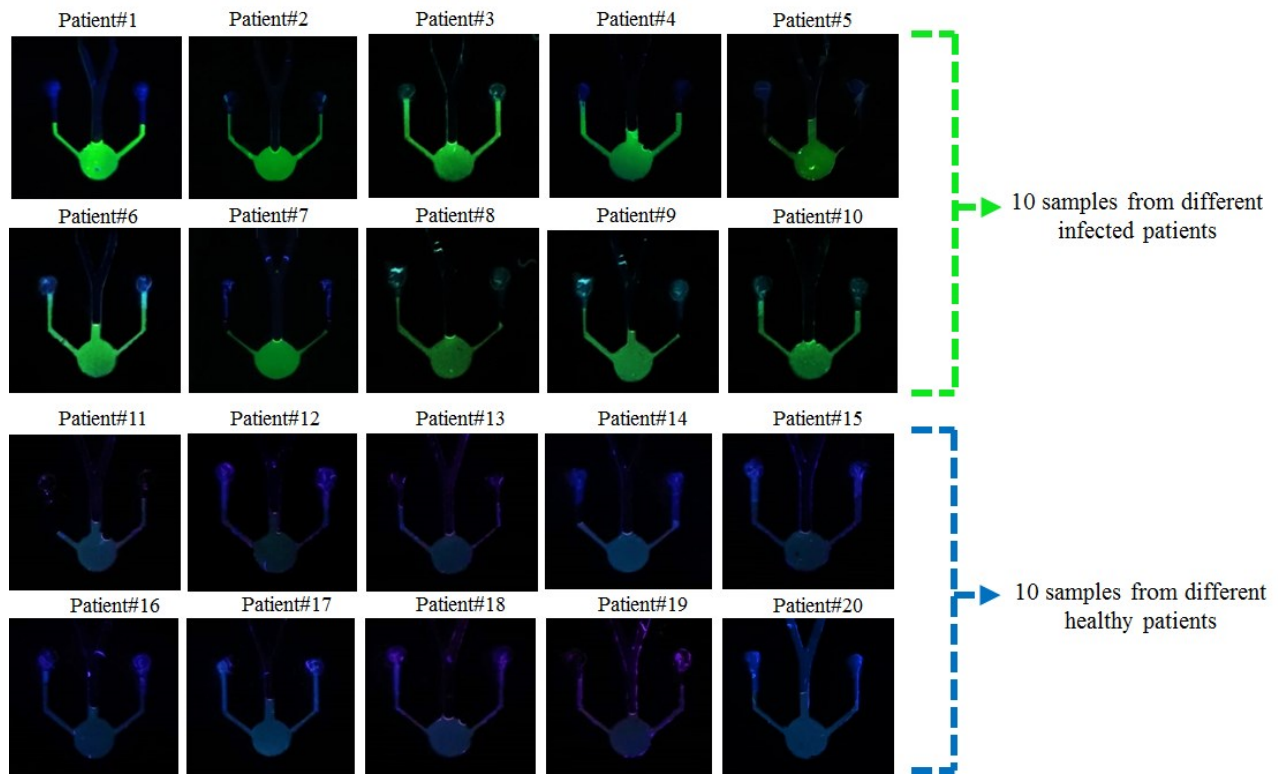
Real clinical samples RT-LAMP assays

Figure 5S. On-chip RT-LAMP assay of samples from 10 healthy patients and 10 infected patients.