

Supporting Information

Autonomous Lab-on-Paper for Multiplexed, CRISPR-based Diagnostics of SARS-CoV-2

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Table S1 RPA primers and Cas12a guide RNAs for N/S gene of SARS-CoV-2 and Human RNase P gene

Target	RPA primers / Cas12a guide RNA	Sequence (5'-3')
N gene	RPA forward primer	AGGCAGCAGTAGGGGAACTTCTCCTGCTAGAAT
	RPA reverse primer	TTGGCCTTTACCAGACATTTTGCTCTCAAGCTG
	Cas12a guide RNA	UAAUUUCUACUAAGUGUGAUGCUGCUUGACAGAUU GAAC
S gene	RPA forward primer	AGGTTTCAAACCTTTACTTGCTTTACATAGA
	RPA reverse primer	TCCTAGGTTGAAGATAACCCACATAATAAG
	Cas12a guide RNA	UAAUUUCUACUAAGUGUGAUGCAGCACCAGCUGUCCAA CCUGAAGAAG
Human RNase P gene	RPA forward primer	CGCAACAACCTCAGCCATCCACATCCGAGTC
	RPA reverse primer	TATCACGGAGGGGATAAGTGGAGGAGTGTC
	Cas12a guide RNA	UAAUUUCUACUAAGUGUGAUAUUACUUGGGUGUGACC CU

Table S2 Ct values of real-time RT-PCR for N gene detection of SARS-CoV-2 in clinical samples.

Samples	Ct values	Samples	Ct values
1	Not Detected	12	19
2	29	13	Not Detected
3	Not Detected	14	Not Detected
4	Not Detected	15	16
5	23	16	Not Detected
6	Not Detected	17	Not Detected
7	Not Detected	18	20
8	Not Detected	19	Not Detected
9	21	20	18
10	Not Detected	21	27
11	Not Detected		

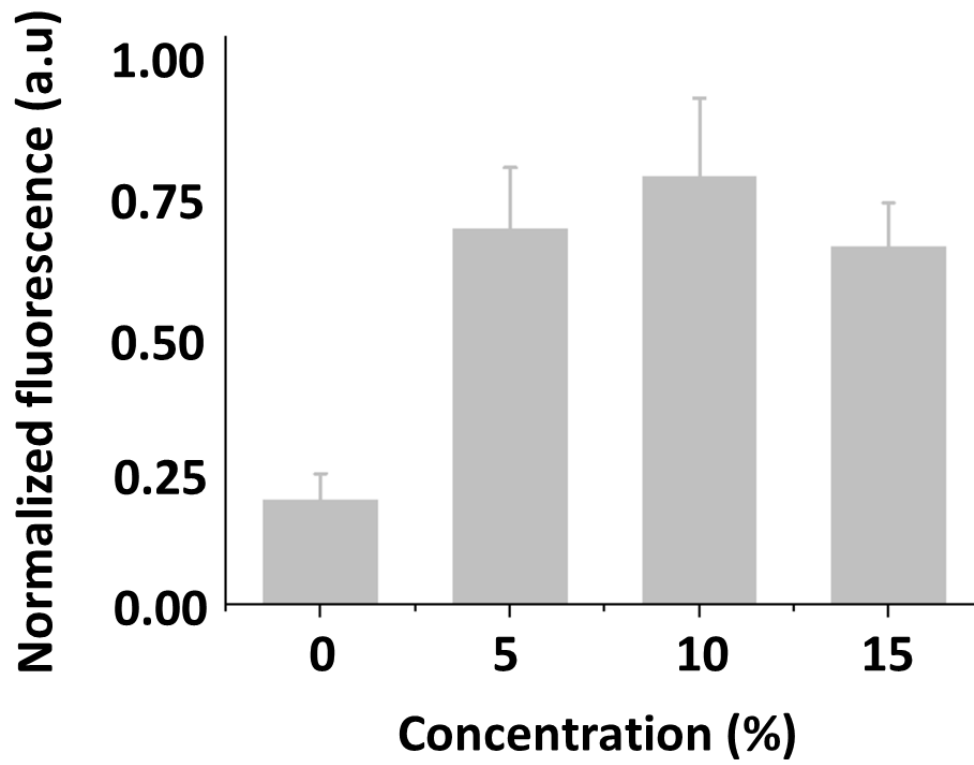


Figure. S1 Optimization of the trehalose's concentration for dry storage of CRISPR reagents. Error bars denote s.d. (n=3).

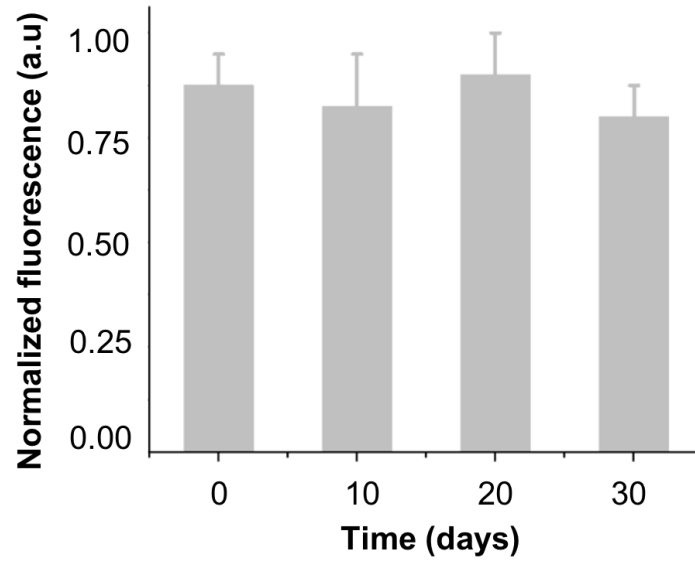


Figure. S2 Stability of pre-stored CRISPR/Cas12a reagents on the paper-based detection chambers. Error bars denote s.d. (n=3).