

Supplementary material

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Supplementary Table 1. List of LFD kits tested and summary of phase 2 and phase 3 methods and evaluation results.

NA = not applicable, NT = not tested

LFD kit			Phase 2							Phase 3									
Kit reference	Kit name	Version	Date tested	Virus	Sensitivity diluent	Sensitivity sample volume (µL)	Specificity sample	Specificity sample volume (µL)	Outcome	Phase 3 panel tested	Specificity (%)	95% CI	Sensitivity (%) at 10,000 RNA copies	95% CI	Sensitivity (%) at 100,000 RNA copies	95% CI	Predicted prop infectiousness in 18291 test set	95% CI	Outcome
1	RapiGen Biocredit COVID-19 Ag	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
2	SD Biosensor Standard Q COVID-19 Ag Test (swab)	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Specificity & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
3	SD Biosensor Standard Q COVID-19 Ag Saliva	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	99·9	99·45 - 100·0	39·80	28·5 - 52·0	91·90	85·0 - 97·7	83·6	81·0 - 85·8	Passed
4	AccessBio CareStart COVID-19 Antigen	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
5	Imutest Vstrip COVID-19 Antigen Rapid Test	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Specificity & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
6	Coris BioConcept COVID-19 Ag Respi-Strip	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Kit failures & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
7	BioNote NowCheck COVID-19 Ag Test	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
8	Innova SARS-CoV-2 Antigen Rapid Qualitative Test	1	Aug 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	100	99·61 - 100·0	69·2	61·2 - 80·8	94·6	91·4 - 98·4	88·6	86·5 - 90·5	Passed
9	Orient Gene / Healgen Coronavirus Ag Rapid Test (swab)	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	99·9	99·49 - 100·0	87·0	52·0 - 75·2	98·6	91·1 - 99·0	87·3	85·2 - 89·2	Passed
10	Formosa One Sure SARS-CoV-2 Ag Rapid Test Kit	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Kit failures & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
11	BD Veritor System for Rapid Detection of SARS-CoV-2	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Acceptance testing failure
12	Abbott Panbio	1	Sep	Fresh	Saliva	200	Saliva	200	Passed	SEP	99·7	99·27	72·3	62·7	96·1	92·7	89·0	86·5	Variant

COVID-19 Ag Rapid Test Device			2020	lab grown						20		-99·90		-82·0		-98·6		-90·9	sensitivity failure (Delta. BA.1)
13	GenBody COVID-19 Ag	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
14	SureScreen Diagnostics COVID-19 Rapid Antigen Test	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
15	Jiangsu Biopertectus Technologies Novel Corona Virus (SARS-CoV-2) Ag Rapid Test Kit	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
16	VirAlert COVID-19 Antigen Home Test Kit	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
17	SD Biosensor Standard Q COVID-19 Ag Test	2	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
18	LionRun SARS-CoV-2 Antigen Rapid Test	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Specificity & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
19	VivaChek Biotech (Hangzhou) Co LtdVivaDiag SARS-CoV-2 Ag Rapid Test	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
20	Liming Bio StrongStep SARS-CoV-2 Antigen Rapid Test	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
21	Sono Nanotech COVID-19 Lateral Flow Assay	1	Sep 2020	Fresh lab grown	Saliva	200	Saliva	200	Specificity & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
22	GenesPrint COVID-19 Ag Test	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
23	Nadal COVID-19 Ag Test	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
24	Anhui DeepBlue COVID-19 Antigen Test Kit	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	100	99·64 - 100·0	57·8	45·2 - 70·3	96·6	92·6 - 99·2	86·7	84·7 - 88·4	Variant sensitivity failure (BA.2)
25	Joinstar Biomedical Technology COVID-19 Antigen Rapid Test (Latex)	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
26	Lumiratek COVID-19 Antigen Rapid Test Cassette	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	100	99·42 - 100·0	10·2	4·6- 19·3	68·2	61·0 - 83·2	74·8	72·0 - 77·9	Sensitivity failure

27	Huaketai New Coronavirus (SARS-CoV-2) N Protein Detection Kit	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
28	MEDsan SARS-CoV-2 Antigen Rapid Test	1	Oct 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
29	Mologic Saliva	1	Oct 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
30	Humasis COVID-19 Ag Test	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	99·5	98·83 - 99·98	45·5	36·8 - 53·3	73·7	66·9 - 80·0	78·3	74·7 - 81·8	Variant sensitivity failure (Alpha) NA
31	New Gene (Hangzhou) Bioengineering Novel Coronavirus Glycoprotein Detection Kit	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
32	JOYSBIO (Tianjin) Biotechnology Co Ltd SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold)	1	Oct 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
33	Sugentech Inc SGTi-flex COVID-19 Ag	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
34	My110 Senseutics Prototype	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
35	Hangzhou Really Tech Co Ltd Novel Coronavirus (SARS-CoV-2) Antigen Rapid Test Cassette (swab)	1	Oct 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
36	Wenzhou OJA Biotechnology Co Ltd SARS-CoV-2 (COVID-19) Antigen Detection Kit (Colloidal Gold Method)	1	Oct 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
37	Hangzhou AllTest Biotech Co Ltd Blnk COVID-19 Antigen Rapid Test (Nasopharyngeal Swab)	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	NT	NT	22·5	13·6 - 34·3	78·4	73·1 - 89·1	78·4	75·7 - 80·9	Sensitivity failure
38	Fortress Diagnostics Coronavirus Ag Rapid Test	1	Oct 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	99·9	99·63 - 100·0	73·3	64·9 - 83·6	95·1	90·8 - 98·4	89·2	86·6 - 91·5	Passed
39	My 110 Lateral Flow Antigen Test	2	Nov 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
40	MediPort Diagnostics COVID-19 Antigen	1	Nov 2020	Fresh lab	Saliva	200	Saliva	200	Passed	JAN 21	100	99·63 -	5·8	1·4- 12·1	88·1	80·8 -	78·6	76·6 -	Sensitivity failure

41	Rapid Test Kit Nantong Diagnos Biotechnology COVID-19 Ag Test PPE MedPro	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	100·0 99·63 - 100·0	37·9	28·0 - 45·7	74·5	95·8 67·6 - 81·5	78·2	80·2 75·4 - 80·9	Variant sensitivity failure (Delta)
42	Camtech Diagnostics Pte Ltd COVID-19 Antigen Rapid Test	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
43	Pro-Lab Diagnostics Proflow SARS-CoV-2 Antigen	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
44	PRIME4DIA Co Ltd P4DETECT COVID- 19 Ag	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
45	Sona Nanotech Rapid antigen Lateral Flow Test for saliva	2	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
46	DNA Diagnostic COVID-19 Antigen Detection Kit	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	99·63 - 100·0	84·6	79·3 - 90·6	97·3	95·2 - 99·0	92·1	90·5 - 93·6	Passed
47	ZandCell AB COVID- 19 Antigen Test (hypersensitive colloidal gold)	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
48	Surescreen SARS- CoV-2 Antigen Rapid Test Cassette	2	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Passed	SEP 20	99·9	99·44 - 100·0	40·0	24·7 - 52·9	96·8	92·2 - 99·7	84·9	83·2 - 86·4	Sensitivity failure
49	Roche SD Biosensor Standard Q COVID-19 Ag Saliva Test	2	Nov 2020	Irradiate d virus	Saliva	200	Saliva	200	Passed	JAN 21	100	99·63 - 100·0	61·10	52·2 - 68·9	90·40	85·3 - 94·4	86·1	83·8 - 88·4	Passed
50	Roche SD Biosensor Standard Q COVID-19 Ag Test	3	Nov 2020	Irradiate d virus	Saliva	200	Saliva	200	Passed	SEP 20	99·9	99·40 - 100·0	43·30	31·0 - 56·5	94·90	90·1 - 98·5	84·7	82·5 - 86·9	Sensitivity failure
51	Bioperfectus Technologies Novel Corona Virus Ag Rapid Test Kit	2	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	99·3	98·57 - 99·72	47·6	35·9 - 57·4	90·7	85·6 - 95·4	84·2	82·5 - 86·0	Passed
52	Rapigen BIOREDIT COVID-19 Ag One Step SARS-CoV-2 Antigen Rapid Test	2	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	99·63 - 100·0	24·4	14·3 - 33·0	69·4	61·4 - 76·6	75·8	72·6 - 78·4	Sensitivity failure
53	Liming Bio StrongStep SARS- CoV-2 Antigen Rapid Test	2	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	99·63 - 100·0	65·5	58·4 - 72·6	85·2	79·5 - 90·2	85·4	82·0 - 88·3	Passed
54	Beijing Hotgen Biotech Co Ltd Novel Coronavirus 2019- nCoV Antigen Test (Colloidal Gold)	1	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
55	Mologic Saliva	2	Nov 2020	grown Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA

56	BIOSYNEX COVID-19 Ag BSS	1	Nov 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
57	My 110 Lateral Flow Antigen Test	3	Nov 2020	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
58	Excalibur Rapid SARS-CoV-2 Antigen Test Card	1	Nov 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	99·64 - 100·0	64·8	55·5 - 72·9	92·4	87·9 - 96·0	87·2	85·2 - 89·1	Passed
59	Intelligent Fingerprinting Ltd SARS-CoV-2 Virus Screening Strip (VSS-1)	2	Nov 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
60	MP Biomedical Rapid SARS-CoV-2 Antigen Test Card	1	Dec 2020	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	99·61 - 100·0	50·8	41·3 - 59·4	87·6	82·2 - 92·7	83·9	81·6 - 86·2	Variant sensitivity failure (BA.1)
61	Joinstar Biomedical Technology COVID-19 Antigen Rapid Test (Latex)	2	Dec 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
62	University of Warwick and GlycanDx Ltd	1	Dec 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
63	Mologic Nose and Throat Swab	3	Dec 2020	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
64	Spring Healthcare Services SARS-CoV-2 Antigen Rapid Test Cassette (swab)	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
65	Avacta AffiDX SARS-CoV-2 Lateral Flow Test	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
66	ZandCell AB COVID-19 Antigen Test (Colloidal Gold)	2	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	99·9	99·45 - 100·0	74·2	68·5 - 80·4	93·2	90·0 - 96·5	89·4	87·4 - 91·1	Passed
67	Beijing Lepu Medical Technology Company Co Ltd SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold Immunochromotography)	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
68	ACON Biotech Flowflex SARS-CoV-2 Antigen Rapid Test	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	100	99·64 - 100·0	42·4	30·8 - 54·9	95·8	91·0 - 99·2	84·7	82·8 - 86·5	Passed
69	CTK Biotech Inc OnSite COVID-19 Ag Rapid Test	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Kit failures & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
70	AptaDx SARS-CoV-2	1	Jan 2021	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
71	LooK SPOT Covid-19 Rapid Antigen Test	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA

72	2San Global SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold)	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
73	Wondfo 2019-nCoV Antigen Test	1	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
74	Beijing Jinwofu Bioengineering Technology Co Ltd Novel Coronavirus (SARS-CoV-2) Antigen Rapid Test Kit	1	Jan 2021	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
75	BIOSYNEX COVID-19 Ag+ BSS	2	Jan 2021	Fresh lab grown	Saliva	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
76	EMMO PHARMA Encode SARS-CoV-2 Antigen Rapid Test Device	1	Jan 2021	NT	Saliva	200	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
77	Ameda AMP Rapid Test SARS-CoV-2 Ag	1	Feb 2021	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	99·3	98·60 - 99·70	65·3	54·7 - 77·0	98·4	95·6 - 99·9	87·9	86·4 - 89·1	Passed
78	Amazing Biotech (Shanghai) Co Ltd Birmingham Biotech BMH COVID-19 Antigen Sealing Tube Test Strip	1	Feb 2021	Fresh lab grown	Saliva	200	Saliva	200	Passed	JAN 21	99·8	98·80 - 100·0	36·9	26·2 - 46·4	72·6	64·6 - 81·0	77·3	73·5 - 80·7	Sensitivity failure
79	AptaDx SARS-CoV-2	2	Feb 2021	Fresh lab grown	Synthetic mucus	80	Saliva	80	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
80	Getein Biotech One Step Test for SARS-CoV-2 Antigen	1	Feb 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Passed	JAN 21	100	99·63 - 100·0	59·5	49·6 - 68·3	92·0	87·5 - 96·0	86·3	84·3 - 88·3	Passed
81	Chongqing Novegent Biotech Co Ltd COVID-19 Antigen Rapid Test Kit	1	Feb 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
82	New Gene (Hangzhou) Bioengineering COVID-19 Antigen Detection Kit	2	Feb 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
83	Wenzhou OJA Biotechnology Company OJABIO SARS-CoV-2 Antigen Detection Kit (Colloidal Gold Method)	2	Feb 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
84	Surescreen SARS-CoV-2 Antigen Rapid	3	Feb 2021	Frozen lab	Synthetic mucus	200	Saliva	200	Passed	JAN 21	100	99·63 -	56·9	47·1 -	90·3	85·9 -	85·5	83·2 -	Passed

Test Cassette			grown panel							100·0		65·2		94·7		87·2			
85	Mologic Ltd COVID-19 RAPID ANTIGEN TEST	4	Feb 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
86	Multibrands Trading (Suzhou) Co Ltd Panodyne SARS-CoV-2 Antigen Nasal Swab Antigen Test Kit	1	Feb 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
87	Jiangsu Medomics Medical Technology Co Ltd SARS-CoV-2 antigen Test Kit (LFIA)	1	Feb 2021	Frozen lab grown panel and repeated with Irradiated virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	21·1	12·9 - 28·6	88·8	82·1 - 94·6	87·8	78·5 - 82·7	Sensitivity failure
88	Anuhi Formaster Biosci Co Ltd HygienePRO New Coronavirus (COVID-19) Antigen Rapid Test (swab)	1	Feb 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
89	SG Diagnostics COVID-19 Antigen Rapid Test Kit Colloidal Gold Based	1	Feb 2021	Frozen lab grown panel and repeated with Irradiated virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	4·6	0·6- 10·3	98·8	96·4 - 99·9	81·7	80·5 - 82·9	Sensitivity failure
90	Wuhan EasyDiagnosis COVID-19 (SARS-CoV-2) Antigen Test Kit	1	Feb 2021	Frozen lab grown panel and repeated with Irradiated virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	55·0	45·5 - 63·7	94·8	91·0 - 98·1	86·0	84·4 - 87·4	Variant sensitivity failure (BA.2)
91	Edinburgh Genetics Limited ActivXpress+ COVID-19 Antigen Complete Testing Kit	1	Feb 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
92	Nanjing Liming Bio-Products Co Ltd StrongStep System Device for SARS-CoV-2 Antigen Rapid Test	3	Feb 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA

93	Jiangsu Konsung Bio-Medical Science and Technology Co Ltd COVID-19 Antigen Rapid Test Kit (Colloidal Gold)	1	Feb 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
94	VivaChek Biotech (Hangzhou) Co Ltd VivaDiag Pro SARS-CoV-2 Ag Rapid Test	2	Feb 2021	Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	23·5	12·2 - 32·5	98·5	94·7 - 99·9	83·9	82·5 - 85·0	Sensitivity failure
95	SD Biosensor SARS-CoV-2 Rapid Antigen Test Nasal	4	Mar 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Passed	JAN 21	100	99·61 - 100·0	29·30	19·4 - 37·6	71·80	63·7 - 79·1	76·7	73·6 - 79·5	Sensitivity failure
96	TaiDoc Technology Corporation VTRUST COVID-19 Antigen Rapid Test Model: TD-4531	1	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
97	Mologic Ltd COVID 19 RAPID ANTIGEN TEST	5	Mar 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Kit failures & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
98	Beijing Tigsun Diagnostics Co Ltd Tigsun COVID-19 Antigen Rapid Test	1	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
99	Intelligent Fingerprinting SARS-CoV-2 Virus Screening Strip (VSS-GP)	1	Mar 2021	Frozen lab grown panel	Synthetic mucus	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
100	GenSure Biotech Inc COVID-19 Antigen Rapid Test Kit	1	Mar 2021	Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	82·7	76·7 - 89·6	98·4	96·7 - 99·5	90·1	89·6 - 92·1	Passed
101	Shenzhen YHLO Biotech Co Ltd GLINE-2019-nCoV Ag	1	Mar 2021	Frozen lab grown panel and repeated with Irradiate	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	83·5	76·6 - 91·2	98·7	96·9 - 99·8	90·9	89·7 - 92·0	Passed

102	Biocan Diagnostics Inc Tell Me Fast COVID-19 Antigen Test	1	Mar 2021	d virus Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	33·6	25·6 - 40·6	81·9	73·1 - 90·7	80·2	77·0 - 83·0	Sensitivity failure
103	Shenzen Huian Biosci Technology Co Ltd SARS-CoV-2 Antigen Test Kit (Colloidal Gold)	1	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
104	Beijing Kewei Clinical Diagnostic Reagent Inc COVID-19 Antigen Rapid Test Kit	1	Mar 2021	Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	54·1	44·7 - 63·4	95·5	91·6 - 98·6	86·1	84·6 - 87·7	Passed
105	Biolidics Limited ClearEpi SARS-CoV-2 Antigen Rapid Test	1	Mar 2021	Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
106	Mologic Ltd COVID 19 RAPID ANTIGEN TEST	6	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
107	Humasis Co Ltd COVID-19 Ag Test	2	Mar 2021	Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	99·9	99·63 - 100·0	87·3	82·1 - 92·4	97·4	95·0 - 99·0	93·0	91·5 - 94·3	Passed
108	Hangzhou Laihe Biotech Co Ltd LYHER Novel Coronavirus (COVID-19) Antigen Test Kit (Colloidal Gold)	1	Mar 2021	Frozen lab grown panel and repeated with Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	89·9	84·7 - 95·2	99·5	98·6 - 99·9	92·1	91·2 - 93·1	Passed

109	Arista Biotech Pte Ltd ARISTA COVID-19 Antigen Rapid Test	1	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	86·8	81·3 - 91·8	96·4	93·0 - 98·7	93·1	91·5 - 94·6	Passed
110	Goldsite Diagnostics Inc SARS-CoV-2 Antigen Kit (Colloidal Gold)	1	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	74·1	66·5 - 82·5	96·8	93·7 - 98·9	89·2	87·7 - 90·7	Passed
111	Hughes Biotech Limited Hughes Veritas SARS-CoV-2 Rapid Antigen Test	1	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	52·6	37·6 - 65·9	99·8	99·4 - 100·0	86·7	85·9 - 87·8	Passed
112	Beijing Beier Bioengineering Co Ltd MediPort COVID-19 Antigen Rapid Test Kit	2	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	86·5	80·2 - 92·3	99·0	97·4 - 99·7	92·0	0·90 - 0·93	Passed
113	Avacta AffiDX SARS- CoV-2 lateral flow antigen test	2	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Specificity & sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
114	Safecare Biotech (Hangzhou) Co Ltd SAFE CARE One Step Rapid Test COVID-19 Antigen Rapid Test Kit (swab)	1	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
115	Shenzen Diasia Biomedical Technology Co Ltd SARS-CoV-2 Antigen Rapid Test Kit	1	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
116	Xiamen Bosun Biotech Co Ltd Rapid SARS-CoV-2 Antigen Test Card	1	Mar 2021	NT	NT	NT	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
117	Joinstar Biomedical Technology Co Ltd COVID-19 Antigen Rapid Test (Colloidal Gold)	3	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	NT	99·7	NT	NT	NA	NT	NA	NT	NT	Kit failures
118	BGI PathoGenesis Pharmaceutical Technology Co Ltd SARS-CoV-2 Virus Antigen Detection Kit (colloidal gold method)	1	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
119	Hangzhou Genesis Biodetection & Biocontrols Co Ltd KaiBiLi COVID-19 Antigen Rapid Test Device	1	Mar 2021	NT	NT	NT	Saliva	200	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA

120	Guangzhou Wondfo Biotech Co Ltd Wondfo 2019-nCoV Antigen Test (Lateral Flow Method)	2	Mar 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Passed	APR 21	100	99·63 - 100·0	60·4	50·5 - 70·4	98·0	95·5 - 99·6	87·2	86·0 - 88·3	Passed
121	ECAM FastTEST SARS-CoV-2 Antigen Lateral Flow Diagnostic Anterior Nares device for self test	1	Apr 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
122	Beijing Lepu Medical Technology Company Co Ltd 2019-nCoV Antigen Rapid Test Kit (Colloidal Gold Immunochromotography)	2	Apr 2021	Irradiate d virus	Synthetic mucus	200	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
123	Roche SARS-CoV-2 Rapid Antigen Test Nasal / Self Test Nasal	5	Apr 2021	Irradiate d virus	Synthetic mucus	200	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	77·30	69·1 - 86·1	98·00	95·7 - 99·5	89·8	88·4 - 91·0	Passed
124	Mologic SARS-COV-2 Ag Home	7	Apr 2021	Irradiate d virus	Synthetic mucus	200	Saliva	NA	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
125	Biopanda Reagents Ltd COVID-19 Rapid Antigen Test	1	Apr 2021	Irradiate d virus	Synthetic mucus	200	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	95·4	92·7 - 97·8	99·4	98·8 - 99·8	95·3	94·5 - 96·1	Passed
126	Hangzhou Clongene Biotech Co Ltd COVID-19 Antigen Rapid Test Cassette (Nasal Swab) Clungene	1	Apr 2021	Irradiate d virus	Synthetic mucus	200	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	91·4	85·9 - 96·5	98·9	96·7 - 99·8	93·8	92·6 - 94·9	Passed
127	ECOTEST Assure Tech (Hangzhou) Co Ltd MATRIX DIAGNOSTICS COVID-19 Antigen Rapid Test (Nasal Swab)	1	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	96·3	93·4 - 99·0	99·9	99·7 - 100·0	93·1	92·5- 93·8	Passed
128	Jiangsu Konsung Bio-Medical Science and Technology Co Ltd COVID-19 Antigen Rapid Test Kit (Colloidal Gold)	2	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	83·2	77·3 - 89·2	97·5	95·3 - 99·1	91·5	90·1 - 92·7	Passed
129	SureScreen Diagnostic Limited COVID-19 Antigen Rapid Test Cassette (Nasal Swab)	4	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
130	SLS Bio Co Ltd SsmarTest COVID-19 Ag Detection Kit	1	Apr 2021	Irradiate d virus	HBSS	100	Saliva	200	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
131	Vatic KnowNow SARS-CoV-2 Rapid	1	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in	100	Sensitivity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA

Antigen Test VH1 015/A			HBSS																
132	Dynamiker Biotechnology (Tianjin) Co Ltd DenScreen SARSCoV2 Rapid Antigen Test Non-Invasive Nostril Swab	1	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	99.5	98.90 - 99.98	62.1	55.1 - 69.8	92.3	87.7 - 96.7	86.7	84.7 - 88.5	Passed
133	Rapigen Inc BIOCREREDIT COVID-19 Ag Test Nasal	3	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99.63 - 100.0	38.4	27.4 - 47.7	93.5	88.2 - 97.8	83.8	82.3 - 85.3	Sensitivity failure
134	Surge Medical Inc COVID-19 Antigen Test Kit	1	Apr 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99.63 - 100.0	93.4	88.9 - 97.4	99.7	99.1 - 100.0	93.1	92.2 - 94.0	Passed
135	Nanjing Liming Bio-products Co Ltd StrongStep System Device for SARS-CoV-2 Antigen Rapid Test	4	Apr 2021	NT	NT	NT	Nasal swab in HBSS	100	Specificity failure	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
136	Inzek International Trading BV BIOZEK Covid-19 Antigen Rapid Test Cassette (Swab)	1	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99.63 - 100.0	91.4	85.0 - 96.8	99.0	96.9 - 99.9	93.4	92.2 - 94.6	Passed
137	Core Technology Co Ltd Coretests COVID-19 Ag Test	1	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99.63 - 100.0	41.7	31.3 - 51.6	93.7	89.4 - 97.4	84.2	82.5 - 86.0	Variant sensitivity failure (BA.2)
138	Hangzhou Singclean Medical Products Co Ltd COVID-19 Test Kit (Colloidal Gold Method)	1	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Variant sensitivity failure (Alpha, Gamma)
139	CTK Biotech Inc Aria COVID-19 Ag Rapid Test	1	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Variant sensitivity failure (Gamma)
140	PerkinElmer COVID-19 Antigen Test	1	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Specificity failure	NT	27.1	18.50 - 37.10	NT	NA	NT	NA	NT	NT	NA
141	BIOSYNEX COVID-19 Ag+ BSS	3	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99.63 - 100.0	69.0	57.5 - 79.6	99.7	98.9 - 100.0	88.0	87.1 - 88.8	Passed
142	EMMO PHARMA SARS-CoV-2 Antigen Rapid Test Device Encode	2	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99.63 - 100.0	95.2	91.3 - 98.5	99.7	99.0 - 100.0	93.1	92.1 - 94.1	Passed
143	Beijing Tigsun Diagnostics Co Ltd Tigsun COVID-19	2	May 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99.63 - 100.0	66.6	57.1 - 75.4	96.9	94.2 - 98.9	82.7	84.7 - 87.8	Passed

144	Antigen Rapid Test Omega Diagnostics Ltd VISITECT COVID-19 Antigen Self-Test	1	Jun 2021	Irradiate d virus	HBSS	100	Fresh nasal swab	100	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
145	Xiamen Bosun Biotech Co Ltd Rapid SARS-CoV-2 Antigen Test Card	2	Jun 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	93·1	89·0 - 97·2	99·6	99·1 - 99·9	93·1	92·1 - 93·9	Passed
146	Omega Diagnostics Ltd VISITECT COVID-19 Antigen Self-Test	2	Aug 2021	Irradiate d virus	HBSS	100	Fresh nasal swab	100	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
147	Amazing Biotech (Shanghai) Co Ltd Birmingham Biotech BMH COVID-19 Antigen Sealing Tube Test Strip	2	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	94·3	89·6 - 98·3	99·6	98·5 - 100·0	93·9	93·0 - 94·8	Passed
148	Multibrands Trading (Suzhou) Co Ltd Panodyne SARS-CoV- 2 Antigen Rapid Qualitative Test	2	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JULY 21	100	99·63 - 100·0	97·0	93·3 - 99·5	99·9	99·3 - 100·0	94·7	93·8 - 95·4	Passed
149	Shenzen Huian Biosci Technology Co Ltd SARS-CoV-2 Antigen Test Kit	2	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·62 - 100·0	75·7	66·1 - 84·7	98·4	96·3 - 99·6	89·2	89·0 - 89·5	Passed
150	Monocent Inc SARS- Cov-2-Antigen Rapid Test System	1	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	21·0	11·5 - 29·9	90·2	84·8 - 95·6	81·0	80·6 - 81·7	Sensitivity failure
151	JOYSBIO (Tianjin) Biotechnology Co Ltd SARS-CoV-2 Antigen Rapid Test Kit	2	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·44 - 100·0	63·4	53·2 - 74·1	98·6	96·8 - 99·7	87·6	86·3 - 88·8	Passed
152	Shenzhen Kisshealth Biotechnology Co Ltd SARS-Cov-2-Antigen Test Kit	1	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·44 - 100·0	86·6	78·6 - 94·2	99·4	98·0 - 99·9	91·1	90·0 - 92·2	Passed
153	möLab GmbH Mö- screen Corona Antigen Test	1	Aug 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·44 - 100·0	89·4	82·7 - 95·3	99·7	99·0 - 99·9	91·8	91·6 - 92·0	Passed
154	ACRO SARS-CoV-2 Antigen Rapid Test	1	Sep 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	94·2	92·60 - 95·60	NT	NA	NT	NA	NT	NT	Specificity failure
155	Anuhi Formaster Biosci Co Ltd HygienePRO New Coronavirus (COVID- 19) Antigen Rapid Test	2	Sep 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	51·5	41·7 - 61·0	94·8	91·2 - 98·0	86·2	85·1 - 87·6	Passed
156	Guangdong Wesail Biotech Co. Ltd COVID-19 Ag Test kit	1	Sep 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Variant sensitivity failure

																			(Alpha, Gamma)
157	Nadal COVID-19 Ag Test	2	Sep 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	59·9	50·7 - 70·1	96·8	92·8 - 99·4	87·0	85·3 - 88·4	Passed
158	ECAM FastTEST SARS-CoV-2 Antigen Lateral Flow Diagnostic Anterior Nares device for self test	2	Sep 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Kit failures
159	ECOTEST Assure Tech (Hangzhou) Co Ltd COVID-19 Antigen Nasal Test Kit	2	Oct 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	96·4	92·6 - 99·2	99·9	99·6 - 100·0	93·3	92·5 - 94·1	Passed
160	Beijing Hotgen Biotech Co Ltd Novel Coronavirus 2019-nCoV Antigen Test	2	Oct 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	81·6	76·1 - 87·2	97·3	94·9 - 99·0	91·1	89·8 - 92·3	Passed
161	New Gene (Hangzhou) Bioengineering COVID-19 Antigen Detection Kit	3	Nov 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	98·3	95·4 - 99·8	100·0	99·8 - 100·0	94·2	93·5 - 95·0	Passed
162	Türklab Tibbi Malzemeler San TOYO COID-19 Ag Home test	1	Nov 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Acceptance testing failure
163	Hangzhou Alltest Biotech Co. Ltd SARS-CoV-2 Antigen Rapid Test (Nasal Swab)	1	Nov 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	91·9	85·7 - 97·3	99·9	99·4 - 100·0	91·6	90·6 - 92·6	Passed
164	Wantai SARS-CoV-2 Ag Rapid Test Collodial Gold	1	Nov 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	61·0	50·9 - 71·7	97·9	94·8 - 99·6	87·2	85·6 - 88·5	Passed
165	Omega Diagnostics Ltd VISITECT COVID-19 Antigen Self-Test	3	Nov 2021	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
166	Anbio RAPID COVID-19 Antigen test colloidal Gold	1	Feb 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21	100	99·63 - 100·0	81·3	74·6 - 88·8	98·4	96·7 - 99·5	90·5	89·2 - 91·7	Passed
167	Verino SARS-CoV-2 Ag Rapid Test	1	Feb 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	91·1	87·1 - 95·0	98·8	97·5 - 99·7	93·6	92·6 - 94·6	Passed
168	ACRO SARS-CoV-2 Antigen Rapid Test	2	Feb 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	95·7	93·0 - 98·2	99·6	99·0 - 99·9	94·9	94·1 - 95·7	Passed
169	COVIDFIND COVID-19 Antigen Self Test	1	Feb 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	16·8	7·7- 25·8	89·2	83·4 - 94·6	80·4	78·5 - 82·3	Sensitivity failure
170	Intelligent Fingerprinting Anterior Nares Test	3	Mar 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Variant sensitivity failure

for the Rapid Detection of SARS-CoV-2 Antigen (VSS-GP-AN)																			(Alpha, Beta, Gamma, Delta)
171	Fluorecare SARS-Cov-2 Antigen Test Kit	1	Apr 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	91·9	87·9 - 96·0	98·7	97·1 - 99·7	94·3	93·2 - 95·3	Passed
172	Genrui SARS-CoV-2 Antigen Test Kit Colloidal Gold	1	Jun 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	93·4	90·2 - 96·7	99·3	98·4 - 99·8	94·2	89·6 - 92·1	Passed
173	MyLab Discovery Colutions CoviSelf COVID-19 Antigen Lateral Flow Test Device OTC Home Test	1	Jul 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Kit failures	NT	NT	NT	NT	NA	NT	NA	NT	NT	NA
174	CiTEST Diagnostics Inc SARS-CoV-2 (COVID-19) Antigen Rapid Test	1	Aug 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Acceptance testing failure
175	Genefinder COVID-19 Ag Self-Test	1	Aug 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	54·4	46·7 - 61·8	89·8	84·9 - 94·5	85·0	83·0 - 86·7	Passed
176	CTK Biotech Inc Onsite Covid-19 Ag Self Test	2	Aug 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	93·8	90·5 - 97·2	99·0	97·7 - 99·8	95·1	94·1 - 96·0	Passed
177	Wuhan EasyDiagnosis COVID-19 (SARS-CoV-2) Antigen Test Kit	2	Aug 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	97·4	95·1 - 99·2	99·7	99·0 - 100·0	96·5	95·7 - 97·4	Passed
178	Surescreen SARS-CoV-2 Antigen Rapid Test Cassette	Tween	Aug 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	94·6	90·6 - 98·1	99·7	99·1 - 100·0	93·7	92·9 - 94·5	Passed
179	Getein Biotech COVID-19 Self Testing	2	Sep 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	APR 21 & JUL 21	100	99·63 - 100·0	62·4	54·3 - 70·8	96·4	92·6 - 99·1	87·3	85·9 - 88·5	Passed
180	Bioantibody Biotechnology Co Ltd SARS-CoV-2 Antigen Rapid Detection Kit (Latex Chromatography)	1	Oct 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	NT	NT	NT	NT	NA	NT	NA	NT	NT	Not delivered
181	Innova SARS-CoV-2 Antigen Rapid Qualitative Test	Tween	Oct 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	98·0	95·1 - 99·7	99·9	99·6 - 100·0	95·0	94·3 - 95·7	Passed
182	Synthgene SARS-CoV-2 Nucleocapsid Antigen Rapid detection kit (colloidal gold method)	1	Nov 2022	Irradiate d virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	95·2	92·2 - 97·9	99·5	98·7 - 99·9	94·9	94·1 - 95·8	Passed

183	Flowflex SARS-Cov-2 Antigen Rapid Test	Tween	Dec 2022	Irradiated virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	95·8	91·5 - 98·9	100·0	99·9 - 100·0	91·8	90·9 - 92·6	Passed
184	DeepBlue COVID-19 Antigen test kit Colloidal Gold	2	Dec 2022	Irradiated virus	HBSS	100	Nasal swab in HBSS	100	Passed	JAN 23	100	99·63 - 100·0	86·6	81·5 - 91·8	97·4	95·1 - 99·1	92·7	91·2 - 94·0	Passed
185	Orient Gene Rapid Covid-19 (Antigen) Self Test	Tween	Dec 2022	Irradiated virus	HBSS	100	Nasal swab in HBSS	100	Passed	JUL 21	100	99·63 - 100·0	98·7	96·6 - 99·8	100·0	99·8 - 100·0	95·3	94·5 - 95·9	Passed

Supplementary Figure 1. Relationship of viral concentration with intensity of LFD bands from phase 3 sensitivity testing LFD band intensity values compared to viral concentration.

Individual graph title number = kit reference listed in Supplementary Table 1, x-axis 0 to 7 = LFD band intensity values (negative to very strong), y-axis = viral concentration (log RNA copies/ml), dashed line represents phase 2 sensitivity pass cut-off. Higher band values with lower viral concentration indicate more sensitive tests. Box plot shows the median, IQR, the whiskers are 1.5*IQR and the outliers are outside the 1.5*IQR range.

