

## Design and manufacture of the evaluation panel

To enable the systematic and comparable decentralized evaluation of numerous RDTs, a panel of 50 samples was compiled by pooling a total of approximately 500 upper respiratory specimens from symptomatic patients which had been collected between March and September 2020 (Panel 1V1). For pooling, dry swabs resuspended in PBS were used, with only a low number of swabs obtained in medium, resulting in a final concentration of medium in pools of ≤20% for each pool, ≤10% for 38 pools and 0% medium for 25 pools.

Subsequently, up to ten respiratory specimens obtained for routine diagnostics with different virus loads as determined by real-time PCR were pooled and diluted to a defined RNA load in PBS. Pools were frozen at -80 °C. Real-time PCR was applied to determine the RNA load per pool. *In vitro* RNA (provided by the World Health Organisation WHO) as well as the quantitative reference material provided by INSTAND were used for quantification (<https://www.instand-ev.de>). Finally, the panel covered a range of SARS-CoV-2 RNA from  $1.1 \times 10^9$  genomes per mL down to 420 genomes per mL. When Panel 1V1 was used up, new pools were generated by diluting the same samples as for Panel 1V1 (except for 4 pools 1–4 that had to be constituted from new clinical specimens collected between October 2020 and January 2021), resulting in comparable virus loads as determined by real-time PCR, and the panel was labelled Panel 1V2. Additionally, panel 1V1 was compared to Panel 1V2 with RDT #3 and RDT #31 and showed identical results. Panel 1V1 and Panel 1V2 have been extensively used to evaluate the sensitivity of 122 RDTs. As negative control respiratory specimens obtained by swabbing SARS-CoV-2-negative patients were pooled.

Previous studies revealed that a minimal RNA genome copy number of  $10^6$  genome copies per mL of specimen represents an amount of infectious virus particles which is required for

successful virus propagation in cell culture. To correlate the pools to potential infectivity by a specimen, we subjected the pools with  $\geq 10^6$  genome copies per mL, corresponding to a Cq value <25, to cell culture. Confirmation of replication-competent SARS-CoV-2 was achieved by inoculation of VeroE6 cells with the respective pools. Pools containing infectious SARS-CoV-2 were subsequently titrated on VeroE6 cells. However, even if pools containing higher amounts of SARS-CoV-2 RNA showed generally higher titres than those with lower genome numbers, we observed no significant correlation between the genome load and the titre (data not shown).

The specifications of the 50 pools are listed in the Table below; pools allowing SARS-CoV-2 propagation are marked in bold.

**Table: Characteristics of the 50 pools constituting Panel 1V1 and Panel 1V2**

Panel 1V1			Panel 1V2		
Pool No.	Cq/5 µL of RNA	RNA copies subjected to test	Pool No.	Cq/5 µL of RNA	RNA copies subjected to test
1	<b>17.55</b>	1.1E+07	1	<b>17.31</b>	1.31E+07
2	<b>20.54</b>	1.4E+06	2	<b>19.08</b>	3.87E+06
3	20.38	1.6E+06	3	<b>19.62</b>	2.67E+06
4	<b>20.98</b>	1.0E+06	4	<b>20.61</b>	1.35E+06
5	<b>20.28</b>	1.7E+06	5	<b>20.60</b>	1.36E+06
6	<b>20.20</b>	1.8E+06	6	21.21	8.96E+05
7	<b>21.71</b>	6.4E+05	7	22.15	4.70E+05
8	21.95	5.4E+05	8	22.32	4.18E+05

9	22.14	4.7E+05	9	23.13	2.39E+05
10	22.88	2.8E+05	10	23.21	2.27E+05
11	22.34	4.1E+05	11	23.13	2.27E+05
12	<b>21.82</b>	5.9E+05	12	22.12	4.79E+05
13	23.32	2.1E+05	13	25.29	5.42E+04
14	24.28	1.1E+05	14	24.97	6.76E+04
15	<b>24.14</b>	1.2E+05	15	24.38	1.01E+05
16	22.55	3.6E+05	16	22.88	2.84E+05
17	24.00	1.3E+05	17	24.81	7.54E+04
18	25.30	5.4E+04	18	28.33	6.71E+03
19	25.50	4.7E+04	19	25.45	2.39E+05
20	26.27	2.8E+04	20	29.46	2.27E+05
21	25.54	4.6E+04	21	25.95	2.27E+05
22	25.87	3.7E+04	22	27.42	4.79E+05
23	<b>24.04</b>	1.3E+05	23	24.45	5.42E+04
24	25.24	5.6E+04	24	25.20	6.76E+04
25	29.70	2.6E+03	25	25.07	1.01E+05
26	25.47	4.8E+04	26	26.32	2.84E+05
27	25.14	6.0E+04	27	26.12	7.54E+04
28	27.14	1.5E+04	28	27.41	6.71E+03
29	27.15	1.5E+04	29	27.34	1.33E+04
30	28.86	4.7E+03	30	27.24	1.42E+04
31	25.27	5.5E+04	31	26.24	1.42E+04
32	26.44	2.5E+04	32	26.64	2.14E+04

33	28.96	4.4E+03	33	28.92	4.47E+03
34	27.89	9.1E+03	34	27.82	9.53E+03
35	27.04	1.6E+04	35	26.66	2.12E+04
36	28.13	7.7E+03	36	27.05	1.62E+04
37	30.54	1.5E+03	37	30.13	1.95E+03
38	28.14	7.6E+03	38	29.36	3.31E+03
39	29.76	2.5E+03	39	30.12	1.96E+03
40	27.65	1.1E+04	40	28.19	7.39E+03
41	30.13	1.9E+03	41	30.14	7.39E+03
42	28.43	6.2E+03	42	29.48	3.04E+03
43	31.05	1.0E+03	43	31.61	7.04E+02
44	29.24	3.6E+03	44	29.51	2.98E+03
45	30.10	2.0E+03	45	31.19	9.40E+02
46	31.54	7.4E+02	46	31.34	8.48E+02
47	35.19	6.0E+01	47	34.55	9.34E+01
48	32.06	5.2E+02	48	31.19	9.40E+02
49	35.22	5.9E+01	49	36.04	3.35E+01
50	36.36	2.7E+01	50	35.83	3.87E+01

Quantification Cycle values (Cq values) given in bold indicate that SARS-CoV-2 could be propagated in cell culture.

Source: Puyskens et al (2021). Establishment of a specimen panel for the decentralised technical evaluation of the sensitivity of 31 rapid diagnostic tests for SARS-CoV-2 antigen, Germany, September 2020 to April 2021. Eurosurveillance

Figure 1

Comparative evaluation results of SARS-CoV-2 antigen RDT passing the sensitivity criteria

Manufacturer	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Test name	Panbio™ Covid-19 Ag Rapid Test Device	Flowflex SARS-CoV-2 Antigenschnelltest (Nasopharynxtrüffler)	AESKU Biotech (Hangzhou) Co., Ltd	Aeskulab Diagnostics GmbH	Affimedix	Amazing Biotech (Shanghai) Co., Ltd	Ameda Labordiagnostik GmbH	AmonMed (Xiamen) Biotechnology Co.,Ltd.	Anbio (Xiamen) Biotechnology Co.,Ltd	ASAN PHARM CO.,LTD	Atlas Link Technology Co.,Ltd.	Avalun	AXIOM Gesellschaft für Diagnostica und Biochemica mbH	Azure Biotech Inc.	Becton Dickinson	Beijing Beier Bioengineering Co., Ltd.	Beijing Hotgen Biotech Co., Ltd.
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	
<b>Panel 1 V1</b> <b>Panel 1 V2</b>																	
1	17,55	1	17,31	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	20,20	2	19,08	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	20,28	3	19,62	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	20,38	5	20,60	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	20,54	4	20,61	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	20,98	6	21,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	21,71	12	22,12	1	1	1	1	0	1	1	1	1	1	1	1	1	1
12	21,82	7	22,15	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	21,95	8	22,32	1	1	1	1	0	1	1	1	1	1	1	1	1	1
9	22,14	16	22,88	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	22,34	9	23,13	1	1	1	1	1	1	1	1	1	1	1	0	1	1
16	22,55	11	23,13	1	1	0	1	1	1	1	1	1	1	0	1	1	1
10	22,88	10	23,21	1	1	1	1	1	1	1	1	1	1	1	0	0	1
13	23,32	15	24,38	1	1	0	1	0	1	1	1	1	1	1	1	1	1
17	24,00	23	24,45	1	1	0	1	0	1	1	1	1	1	1	0	1	1
23	24,04	17	24,81	1	0	1	1	1	1	1	1	1	1	0	0	0	1
15	24,14	14	24,97	1	1	1	1	1	1	1	1	1	1	0	0	0	1
14	24,28	25	25,07	1	0	0	1	0	1	1	1	1	1	0	1	0	1
27	25,14	24	25,20	1	0	0	1	1	1	1	1	1	1	0	1	0	1
24	25,24	13	25,29	1	1	1	1	1	1	1	1	1	1	1	1	0	1
31	25,27	19	25,45	0	0	1	0	0	1	1	1	1	1	0	1	0	1
18	25,30	21	25,95	1	0	0	1	0	1	1	1	1	1	0	0	1	0
26	25,47	27	26,12	1	0	0	1	0	1	1	1	1	1	0	1	0	1
19	25,50	31	26,24	1	0	0	1	0	1	1	1	1	1	0	0	0	0
21	25,54	26	26,32	1	0	0	1	0	1	1	1	0	0	1	0	0	0
22	25,87	32	26,64	1	0	0	0	1	0	1	0	0	0	0	0	0	0
20	26,27	35	26,66	1	0	0	0	1	0	1	1	0	0	0	1	0	1
32	26,44	36	27,05	0	0	0	0	0	1	1	1	0	1	0	0	0	0
35	27,04	30	27,24	1	0	0	1	0	1	1	1	0	1	0	1	0	1
28	27,14	29	27,34	0	0	0	0	0	1	1	0	0	1	1	0	0	0
29	27,15	28	27,41	1	0	0	0	0	1	1	0	0	0	1	0	0	0
40	27,65	22	27,42	0	0	1	0	0	1	1	1	1	0	1	0	0	1
34	27,89	34	27,82	1	0	0	0	0	0	0	0	0	0	0	0	0	0
36	28,13	40	28,19	1	0	0	0	1	0	0	0	0	0	0	0	0	0
38	28,14	18	28,33	1	0	1	0	0	1	1	1	1	1	1	0	0	1
42	28,43	33	28,92	0	0	0	0	0	0	1	0	0	0	0	0	0	0
30	28,86	38	29,36	1	0	0	0	0	1	1	0	0	1	1	0	0	0
33	28,96	20	29,46	0	0	0	0	0	1	1	1	1	0	1	0	0	1
44	29,24	42	29,48	0	0	0	0	0	0	1	0	0	0	0	0	0	0
25	29,70	44	29,51	0	0	0	0	1	0	0	0	0	0	0	0	0	0
39	29,76	39	30,12	0	0	0	0	0	0	1	0	0	0	0	0	0	0
45	30,10	37	30,13	0	0	0	0	0	0	1	0	0	0	0	0	0	0
41	30,13	41	30,14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	30,54	45	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	31,05	48	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	31,54	46	31,34	0	0	0	0	0	0	1	0	0	0	0	1	0	0
48	32,06	43	31,61	0	0	0	0	0	0	0	0	0	0	0	1	0	0
47	35,19	47	34,55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manufacturer	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Test name	SARS-CoV-2 Antigen Rapid Test Kit	Tigsun COVID-19 Saliva Antigen Rapid Test	COVID-19-Antigen-Schnelltest (Nasopharyngeal-Abstrich)	NowCheck® COVID-19 Ag Test	Covid 19 Antigen Schnelltest	BIOSYNEX SWISS SA	BTNX, Inc. (Biotrend Chemikalien GmbH)	Chil Tibbi Mal. San. Tic. Ltd. Şti	Core Technology Co., Ltd.	DNA Diagnostic A/S.	Edinburgh Genetics Limited	Eurobio Scientific	Fujirebio Inc. (Mast Diagnostica GmbH)	Genru Biotech Inc.	GenSure Biotech Inc.	Getein Biotech, Inc.	Green Cross Medical Science Corp. (Weko Pharma GmbH)
Panel 1 V1	Panel 1 V2		Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V1
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V1
1	17,55	1	17,31	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	20,20	2	19,08	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	20,28	3	19,62	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	20,38	5	20,60	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	20,54	4	20,61	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	20,98	6	21,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	21,71	12	22,12	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	21,82	7	22,15	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	21,95	8	22,32	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	22,14	16	22,88	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	22,34	9	23,13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	22,55	11	23,13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	22,88	10	23,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	23,32	15	24,38	1	1	1	1	1	0	1	0	1	1	1	1	1	1
17	24,00	23	24,45	1	1	1	1	1	1	0	1	1	0	1	0	0	1
23	24,04	17	24,81	1	1	1	1	1	1	1	1	1	1	1	1	1	0
15	24,14	14	24,97	1	1	1	1	1	1	1	1	1	1	1	1	1	0
14	24,28	25	25,07	1	1	1	1	1	1	0	1	1	1	1	1	1	0
27	25,14	24	25,20	0	1	1	1	1	0	1	0	1	1	0	1	0	0
24	25,24	13	25,29	1	1	1	1	1	1	1	1	1	1	0	1	1	0
31	25,27	19	25,45	1	1	1	1	1	0	1	1	1	1	0	1	0	1
18	25,30	21	25,95	0	1	0	1	1	1	0	1	0	1	0	1	1	1
26	25,47	27	26,12	0	1	0	1	1	0	1	1	1	1	1	1	0	1
19	25,50	31	26,24	0	1	0	1	1	1	0	0	0	0	0	1	0	0
21	25,54	26	26,32	0	1	1	1	1	0	1	0	0	0	1	0	0	0
22	25,87	32	26,64	0	1	0	1	1	1	0	1	0	0	0	1	0	1
20	26,27	35	26,66	0	1	0	1	1	1	0	0	0	0	0	1	0	1
32	26,44	36	27,05	0	1	0	0	1	1	1	0	0	0	0	0	0	1
35	27,04	30	27,24	0	1	0	1	1	0	1	0	0	0	0	1	0	0
28	27,14	29	27,34	1	1	0	0	1	0	1	0	0	0	0	1	0	1
29	27,15	28	27,41	0	1	0	1	1	1	0	0	0	0	0	0	1	0
40	27,65	22	27,42	1	1	0	0	1	0	0	1	1	1	0	1	0	1
34	27,89	34	27,82	0	1	0	1	0	1	0	0	0	0	0	1	0	1
36	28,13	40	28,19	0	0	0	1	0	1	0	0	0	0	0	N/A	0	0
38	28,14	18	28,33	1	1	1	1	1	0	1	1	1	1	1	0	1	1
42	28,43	33	28,92	0	1	0	0	0	0	0	0	0	0	0	N/A	0	0
30	28,86	38	29,36	0	1	0	1	1	0	0	0	0	0	0	0	1	0
33	28,96	20	29,46	0	1	1	0	1	0	0	1	0	1	1	0	1	0
44	29,24	42	29,48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	29,70	44	29,51	0	0	0	0	0	1	0	0	0	0	0	0	0	0
39	29,76	39	30,12	0	0	0	0	0	1	0	0	0	0	0	0	0	0
45	30,10	37	30,13	0	1	0	0	0	0	0	0	0	0	0	0	0	0
41	30,13	41	30,14	0	0	0	0	0	1	0	0	0	0	0	0	0	0
37	30,54	45	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	31,05	48	31,19	0	1	0	0	0	0	0	0	0	0	0	0	0	0
46	31,54	46	31,34	0	1	0	0	0	0	1	0	0	0	0	0	0	0
48	32,06	43	31,61	invalid	0	0	0	0	0	0	0	0	0	0	0	0	0
47	35,19	47	34,55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manufacturer	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
Test name	Guangdong Hecin Scientific, Inc.	Guangdong Wesail Biotech Co., Ltd.	Guangzhou Wondfo Biotech Co., Ltd	Hangzhou Clongene Biotech Co., Ltd.	Hangzhou Immuno Biotech Co., Ltd.	Hangzhou Laihe Biotech Co., Ltd. (Lissner Qi GmbH)	Hangzhou Lysun Biotechnology Co., Ltd.	Hangzhou Testsea Biotechnology Co., Ltd.	Humasis Co., Ltd.	IVC Pragen Healthcare	Jiangsu Diagnostics Biotechnology Co., Ltd	Jiangsu Medomics Medical Technology Co., Ltd	Joinstar Biomedical Technology Co., Ltd (CIV Care impuls Vertrieb)	Labnoven Technologies, Inc.	Lumigenex (Suzhou) Co., Ltd.	LumiQuick Diagnostics Inc.	LumiraDX
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1
1	17,55	1	17,31	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	20,20	2	19,08	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	20,28	3	19,62	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	20,38	5	20,60	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	20,54	4	20,61	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	20,98	6	21,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	21,71	12	22,12	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	21,82	7	22,15	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	21,95	8	22,32	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	22,14	16	22,88	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	22,34	9	23,13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	22,55	11	23,13	0	1	1	1	0	1	1	1	0	1	1	1	1	1
10	22,88	10	23,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	23,32	15	24,38	0	1	1	1	1	1	1	1	1	1	1	1	1	1
17	24,00	23	24,45	0	1	0	1	0	1	1	1	0	1	0	1	0	1
23	24,04	17	24,81	1	1	1	0	1	0	1	1	0	1	1	1	1	1
15	24,14	14	24,97	1	1	0	1	1	1	1	1	1	1	1	1	1	1
14	24,28	25	25,07	0	1	0	1	0	1	1	1	1	0	0	1	1	1
27	25,14	24	25,20	0	1	0	1	0	0	1	1	0	1	0	1	1	1
24	25,24	13	25,29	1	1	0	0	1	0	1	1	0	1	1	1	1	0
31	25,27	19	25,45	0	0	0	0	1	0	1	0	0	1	1	1	1	0
18	25,30	21	25,95	0	1	0	1	0	1	1	1	0	1	0	0	0	1
26	25,47	27	26,12	0	1	0	1	0	1	1	1	1	0	1	0	1	1
19	25,50	31	26,24	0	1	0	1	0	0	1	0	0	1	0	1	1	1
21	25,54	26	26,32	0	1	0	0	0	0	1	0	0	1	0	1	0	0
22	25,87	32	26,64	0	1	0	1	0	1	1	0	0	1	0	1	1	1
20	26,27	35	26,66	0	1	0	1	0	0	1	1	0	0	1	0	1	1
32	26,44	36	27,05	0	0	0	0	0	0	1	0	0	0	1	0	1	1
35	27,04	30	27,24	0	1	0	0	0	0	1	1	0	1	0	0	1	1
28	27,14	29	27,34	0	0	0	0	0	0	1	1	0	0	0	1	1	0
29	27,15	28	27,41	0	1	0	1	0	0	1	0	0	0	1	0	1	1
40	27,65	22	27,42	0	0	0	0	0	0	1	1	0	0	1	1	1	0
34	27,89	34	27,82	0	0	0	0	0	0	0	0	0	0	0	0	1	0
36	28,13	40	28,19	0	1	0	0	0	0	0	0	0	0	0	1	0	1
38	28,14	18	28,33	1	0	0	0	1	0	1	1	1	0	1	0	1	0
42	28,43	33	28,92	0	0	0	0	0	0	0	0	0	0	0	N/A	0	0
30	28,86	38	29,36	0	1	0	0	0	1	0	0	0	1	0	1	1	1
33	28,96	20	29,46	1	0	0	0	0	1	1	0	0	1	1	0	1	0
44	29,24	42	29,48	0	0	0	0	0	0	0	0	0	0	0	0	1	0
25	29,70	44	29,51	0	0	0	1	0	0	0	0	0	0	1	0	0	1
39	29,76	39	30,12	0	0	0	0	0	0	0	0	0	0	0	0	1	0
45	30,10	37	30,13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	30,13	41	30,14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	30,54	45	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	31,05	48	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	31,54	46	31,34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	32,06	43	31,61	0	0	0	0	0	0	0	0	0	0	0	0	1	0
47	35,19	47	34,55	0	1	0	0	0	0	0	0	0	0	0	0	0	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manufacturer	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
Test name	MEDsan GmbH	Merlin Biomedical (Xiamen) Co., Ltd.	Mölab GmbH	MP Biomedicals Germany GmbH	nal von minden GmbH	NanoEntek Inc.	Nanjing Norman Biological Technology Co.,Ltd	Nantong Diagnos Biotechnology Co.,Ltd.	New Gene (Hangzhou) Bioengineering Co.,Ltd	Novatech Tibbi Cihaz Ürünlü San. Ve Tic. A.S.	Oncosem Onkolojik Sistemler San. Ve Tic. A.S.	PCL, Inc.	PerGrande BioTech Development Co., Ltd.	Precision Biosensor Inc. (Axon Lab AG)	ProGnosis Biotech	Quidel Corporation	Qingdao Hightop Biotech Co., Ltd.
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2
1	17,55	1	17,31	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	20,20	2	19,08	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	20,28	3	19,62	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	20,38	5	20,60	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	20,54	4	20,61	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	20,98	6	21,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	21,71	12	22,12	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	21,82	7	22,15	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	21,95	8	22,32	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	22,14	16	22,88	1	1	1	1	1	1	1	1	1	1	1	0	1	1
11	22,34	9	23,13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	22,55	11	23,13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	22,88	10	23,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	23,32	15	24,38	1	1	1	1	0	0	1	1	1	0	1	1	1	1
17	24,00	23	24,45	1	1	1	1	0	0	1	1	0	1	1	1	1	1
23	24,04	17	24,81	1	1	1	1	0	1	1	1	1	1	1	0	1	1
15	24,14	14	24,97	1	1	1	1	1	1	1	1	1	1	1	0	1	1
14	24,28	25	25,07	1	1	1	1	0	0	1	1	1	1	0	1	1	1
27	25,14	24	25,20	1	1	1	1	0	0	0	1	1	0	1	0	1	1
24	25,24	13	25,29	0	1	1	1	0	1	1	1	1	0	1	0	1	1
31	25,27	19	25,45	0	1	0	1	0	0	1	1	0	1	0	1	0	1
18	25,30	21	25,95	1	1	1	1	0	0	0	1	0	0	1	1	1	0
26	25,47	27	26,12	1	1	1	1	0	0	1	1	0	1	0	0	1	1
19	25,50	31	26,24	1	1	1	1	0	0	0	0	0	0	0	1	0	0
21	25,54	26	26,32	1	1	1	1	1	0	0	1	0	0	1	0	1	0
22	25,87	32	26,64	1	1	1	0	1	0	0	0	1	0	0	0	1	0
20	26,27	35	26,66	1	0	1	0	0	0	0	1	0	0	0	0	0	1
32	26,44	36	27,05	1	0	0	1	0	0	0	0	1	0	0	1	0	0
35	27,04	30	27,24	1	1	0	0	0	0	1	1	0	1	0	1	1	0
28	27,14	29	27,34	0	0	0	0	0	0	0	1	0	0	0	0	0	1
29	27,15	28	27,41	0	1	1	0	0	0	0	1	0	0	1	1	0	0
40	27,65	22	27,42	0	1	0	1	0	0	1	1	0	1	0	0	1	1
34	27,89	34	27,82	0	1	0	0	0	0	0	1	0	0	0	0	0	0
36	28,13	40	28,19	0	0	0	0	0	0	0	0	0	0	0	1	0	0
38	28,14	18	28,33	1	1	0	1	0	1	1	1	1	1	0	1	1	0
42	28,43	33	28,92	1	0	0	0	0	0	0	0	0	0	1	0	1	0
30	28,86	38	29,36	0	0	0	0	0	0	1	1	0	0	0	1	0	0
33	28,96	20	29,46	0	1	0	0	0	0	1	1	0	0	1	0	1	1
44	29,24	42	29,48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	29,70	44	29,51	0	0	1	0	0	0	0	0	0	0	0	1	0	0
39	29,76	39	30,12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	30,10	37	30,13	0	0	0	0	0	0	0	0	0	0	0	0	1	0
41	30,13	41	30,14	0	0	0	0	0	0	0	1	0	0	0	0	0	0
37	30,54	45	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	31,05	48	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	31,54	46	31,34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	32,06	43	31,61	0	0	0	0	0	0	0	1	0	0	0	0	0	0
47	35,19	47	34,55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manufacturer	R-Biopharm AG	Safecare Biotech Hangzhou Co., Ltd.	Salofa OY	ScheBo Biotech AG	SD BIOSENSOR (Roche Diagnostics GmbH)	SD BIOSENSOR	SD BIOSENSOR	SGA Mühendislik DAN. EG. İcve DIS.Ltd.STİ	Shenzhen Lvhuiyuan Biotechnology Co., Ltd.	Shenzhen Microprofit Biotech Co., Ltd.	Shenzhen Watmind Medical Co.,Ltd.	Shenzhen Watmind Medical Co.,Ltd.	Shenzhen Zhenrui Biotech co.Ltd.	Siemens Healthineers	Sugentech, Inc.	Toda Pharma	Triplex International Biosciences (China) Co., Ltd.
Test name	RIDA®QUICK SARS-CoV-2 Antigen	Safecare COVID-19 Ag Rapid Test Kit (Swab)	salocor SARS-CoV-2 Antigen Rapid Test Cassette (Nasopharyngeal swab)	ScheBo SARS-CoV-2 Quick Antigen	SARS-CoV-2 Rapid Antigen Test	STANDARD™ F COVID-19 Ag FIA	STANDARD™ Q COVID-19 Ag Test	V-Chek SARS-CoV-2 Rapid Ag Test Kit (Colloidal Gold)	Green Spring SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold)	fluorecare COVID-19 SARS-CoV-2 Spike Protein Test Kit (Colloidal Gold Chromatographic Immunoassay)	SARS-CoV-2 Ag Diagnostic Test Kit (Colloidal Gold)	SARS-CoV-2 Ag Diagnostic Test Kit (Immuno-fluorescence)	Zhenrui COVID-19 (SARS-CoV-2) Antigen Test Kits	CLINITEST® Rapid COVID-19 Antigen Test	SGTi-flex COVID-19 Ag	Toda Coronadiag Ag	SARS-CoV-2 Antigen Rapid Test Kit
Panel 1 V1	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V1	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	
Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq	Pool Nr.	Cq
1	17,55	1	17,31	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	20,20	2	19,08	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	20,28	3	19,62	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	20,38	5	20,60	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	20,54	4	20,61	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	20,98	6	21,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	21,71	12	22,12	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	21,82	7	22,15	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	21,95	8	22,32	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	22,14	16	22,88	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	22,34	9	23,13	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	22,55	11	23,13	1	1	0	1	1	1	1	1	1	1	1	1	1	1
10	22,88	10	23,21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	23,32	15	24,38	1	1	0	1	1	1	1	1	1	1	1	0	1	1
17	24,00	23	24,45	1	1	0	1	1	1	0	1	1	1	0	1	1	1
23	24,04	17	24,81	1	1	1	1	0	1	0	1	1	1	1	1	1	1
15	24,14	14	24,97	1	1	1	1	0	1	0	1	1	1	0	1	1	1
14	24,28	25	25,07	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27	25,14	24	25,20	0	1	0	1	1	1	0	1	1	1	0	1	1	1
24	25,24	13	25,29	1	1	1	1	0	1	0	1	1	1	1	1	1	1
31	25,27	19	25,45	0	1	0	1	0	0	0	1	1	1	0	1	1	1
18	25,30	21	25,95	1	1	0	1	1	1	1	N/A	1	1	0	0	1	1
26	25,47	27	26,12	1	1	0	1	1	1	1	0	1	1	0	1	1	1
19	25,50	31	26,24	0	0	0	1	1	1	0	0	1	0	0	1	1	1
21	25,54	26	26,32	1	1	0	1	0	1	0	0	1	0	0	1	1	1
22	25,87	32	26,64	0	0	0	1	1	1	1	0	1	0	0	0	1	1
20	26,27	35	26,66	0	0	1	0	1	0	0	0	1	0	1	0	1	1
32	26,44	36	27,05	0	1	0	1	0	0	0	0	1	1	0	1	1	1
35	27,04	30	27,24	0	1	0	1	1	1	0	0	1	1	0	1	1	1
28	27,14	29	27,34	0	1	0	1	0	1	0	0	1	0	0	1	1	1
29	27,15	28	27,41	0	0	0	1	0	1	0	0	1	0	0	1	1	1
40	27,65	22	27,42	0	1	0	1	0	0	0	1	1	1	0	0	1	1
34	27,89	34	27,82	0	0	0	1	0	1	0	1	1	1	0	1	1	1
36	28,13	40	28,19	0	0	N/A	1	1	1	1	N/A	1	0	1	0	1	0
38	28,14	18	28,33	0	1	1	1	0	1	0	N/A	1	1	1	1	1	1
42	28,43	33	28,92	0	0	0	0	0	0	0	N/A	1	0	0	1	0	0
30	28,86	38	29,36	0	1	0	1	0	0	0	0	1	1	0	1	1	1
33	28,96	20	29,46	0	0	0	1	0	0	0	1	1	1	0	1	1	1
44	29,24	42	29,48	0	0	0	1	0	0	0	0	1	0	0	0	1	1
25	29,70	44	29,51	0	0	0	0	0	1	0	0	0	0	0	1	0	0
39	29,76	39	30,12	0	0	0	0	0	0	0	1	0	0	0	0	0	0
45	30,10	37	30,13	0	0	0	0	0	0	0	0	1	1	0	0	0	1
41	30,13	41	30,14	0	0	0	0	0	0	0	0	0	1	0	0	0	1
37	30,54	45	31,19	0	0	0	1	0	0	0	N/A	0	0	0	0	1	0
43	31,05	48	31,19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	31,54	46	31,34	0	0	0	0	0	0	0	0	1	0	0	0	1	0
48	32,06	43	31,61	0	0	0	0	0	0	0	0	0	0	0	0	0	1
47	35,19	47	34,55	0	0	0	0	0	0	0	0	1	0	0	0	1	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Manufacturer	86	87	88	89	90	91	92	93	94	95	96
Test name	ulti med Products (Deutschland) GmbH	Vitrosens Biyoteknoloji Ltd. Sti	Wantai (Beijing Wantai Biological Pharmacy Enterprise Co., Ltd.)	Wuhan EasyDiagnosis Biomedicine Co., Ltd	Wuhan Life Origin Biotech Joint Stock Co., Ltd.	Wuhan UNScience Biotechnology Co., Ltd.	Xiamen Boson Biotech Co., Ltd.	Xiamen WiZ Biotech Co., Ltd.	Zet Medikal Tekstil Dis Ticaret Ltd. STI.	Zhejiang Anji Saianfu Biotech Co.,Ltd.	Zhejiang Orient Gene Biotech Co.,Ltd
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V1
1	17,55	1	17,31	1	1	1	1	1	1	1	1
6	20,20	2	19,08	1	1	1	1	1	1	1	1
5	20,28	3	19,62	1	1	1	1	1	1	1	1
3	20,38	5	20,60	1	1	1	1	1	1	1	1
2	20,54	4	20,61	1	1	1	1	1	1	1	1
4	20,98	6	21,21	1	1	1	1	1	1	1	1
7	21,71	12	22,12	1	1	1	1	1	1	1	1
12	21,82	7	22,15	1	1	1	1	1	1	1	1
8	21,95	8	22,32	1	1	1	1	1	1	1	1
9	22,14	16	22,88	1	1	1	1	1	1	1	1
11	22,34	9	23,13	1	1	1	1	1	1	1	1
16	22,55	11	23,13	1	1	1	1	1	1	1	1
10	22,88	10	23,21	1	1	1	1	1	1	1	1
13	23,32	15	24,38	1	1	1	1	0	1	0	1
17	24,00	23	24,45	1	1	1	1	0	1	N/A	0
23	24,04	17	24,81	1	1	1	1	1	1	1	1
15	24,14	14	24,97	1	1	1	1	1	1	1	1
14	24,28	25	25,07	1	1	1	1	1	0	1	1
27	25,14	24	25,20	1	0	1	1	0	1	0	1
24	25,24	13	25,29	1	1	1	1	1	1	1	1
31	25,27	19	25,45	1	1	1	1	1	1	0	1
18	25,30	21	25,95	1	0	1	1	0	1	N/A	0
26	25,47	27	26,12	1	1	1	1	0	1	0	1
19	25,50	31	26,24	1	0	1	1	0	0	invalid	0
21	25,54	26	26,32	1	0	1	1	0	1	0	1
22	25,87	32	26,64	1	0	1	1	0	0	0	1
20	26,27	35	26,66	1	0	1	1	0	0	0	1
32	26,44	36	27,05	1	0	1	1	0	1	0	1
35	27,04	30	27,24	1	0	1	1	0	0	0	1
28	27,14	29	27,34	1	0	1	1	0	0	0	1
29	27,15	28	27,41	1	0	1	0	0	0	0	1
40	27,65	22	27,42	1	1	0	1	0	1	1	0
34	27,89	34	27,82	1	0	1	0	0	0	0	1
36	28,13	40	28,19	1	0	1	0	0	0	N/A	0
38	28,14	18	28,33	1	1	1	1	1	1	N/A	1
42	28,43	33	28,92	1	0	0	0	0	0	N/A	0
30	28,86	38	29,36	1	0	1	1	0	0	0	1
33	28,96	20	29,46	1	1	0	1	1	0	0	0
44	29,24	42	29,48	1	0	0	0	0	0	0	0
25	29,70	44	29,51	0	0	1	0	0	0	0	1
39	29,76	39	30,12	0	0	0	0	0	0	invalid	0
45	30,10	37	30,13	0	0	0	0	0	0	0	0
41	30,13	41	30,14	1	0	0	0	0	0	0	0
37	30,54	45	31,19	0	0	0	0	0	0	N/A	0
43	31,05	48	31,19	0	0	0	0	0	0	invalid	0
46	31,54	46	31,34	1	0	0	0	0	0	invalid	0
48	32,06	43	31,61	0	0	0	0	0	0	0	0
47	35,19	47	34,55	0	0	0	0	0	0	0	0
49	35,22	50	35,83	0	0	0	0	0	0	1	0
50	36,36	49	36,04	0	0	0	0	0	0	invalid	0

Figure 2

Comparative evaluation results of SARS-CoV-2 antigen RDT missing the sensitivity criteria

Manufacturer	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
Test name	Acro COVID-19 Antigen Rapid Test	SARS-CoV-2 Antigen Test Kit (Immunochromatography)	New Coronavirus (SARS-CoV-2) N Protein Detection Kit (Fluorescence Immunochemistry)	CerTest Biotec SARS-CoV-2 Ag Test	COVID-19 Ag Respiratory Strip	COVID-19 AG AllTest	Lumiratek SARS-CoV-2 Antigen Rapid Test Cassette	KaiBILI COVID-19 Antigen Rapid Test Device	Novel Coronavirus (SARS-CoV-2) Antigen Rapid Test Cassette (swab)	Biozek medical COVID-19 Antigen Rapid Test Cassette	COVID-19 Antigen Rapid Test (Latex)	Joysbio SARS-CoV-2 Antigen Rapid Test Kit (Colloidal Gold)	Lionex COVID-19 Ag Rapid Test	Trueline COVID-19 Ag Rapid Test	QuickTestCorona COVID-19 Antigen Schnelltest
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2	Panel 1 V2
1	17,55	1	17,31	1	1	0	1	1	1	1	1	background	1	background	1
6	20,20	2	19,08	0	1	0	1	1	0	1	1	background	1	background	1
5	20,28	3	19,62	0	0	0	0	1	0	1	1	background	1	background	1
3	20,38	5	20,60	0	0	0	1	1	1	1	1	background	1	background	1
2	20,54	4	20,61	0	0	0	1	1	1	1	1	background	1	background	1
4	20,98	6	21,21	0	0	0	1	1	0	0	1	background	1	background	1
7	21,71	12	22,12	0	0	0	0	0	0	0	1	background	1	background	0
12	21,82	7	22,15	0	0	0	0	0	0	0	0	background	0	background	1
8	21,95	8	22,32	0	0	0	0	0	0	0	1	background	1	background	0
9	22,14	16	22,88	1	0	0	0	0	0	1	0	background	0	background	1
11	22,34	9	23,13	0	0	0	0	0	0	0	1	background	0	background	1
16	22,55	11	23,13	0	0	0	0	0	0	0	0	background	0	background	1
10	22,88	10	23,21	1	0	0	0	0	0	0	1	background	0	background	0
13	23,32	15	24,38	0	0	0	0	0	0	0	0	background	0	background	0
17	24,00	23	24,45	0	0	0	0	0	0	0	0	background	0	background	0
23	24,04	17	24,81	0	0	0	0	0	0	0	0	background	0	background	0
15	24,14	14	24,97	0	0	0	0	0	0	0	0	background	0	background	1
14	24,28	25	25,07	0	0	0	0	0	0	0	0	background	0	background	1
27	25,14	24	25,20	0	0	0	0	0	0	0	0	background	0	background	0
24	25,24	13	25,29	0	0	0	0	0	0	0	0	background	0	background	0
31	25,27	19	25,45	0	0	0	0	0	0	0	0	background	0	background	0
18	25,30	21	25,95	0	0	0	0	0	0	0	0	background	0	background	0
26	25,47	27	26,12	0	0	0	0	0	0	0	0	background	0	background	0
19	25,50	31	26,24	0	0	0	0	0	0	0	0	background	1	background	0
21	25,54	26	26,32	0	0	0	0	0	0	0	0	background	0	background	0
22	25,87	32	26,64	0	0	0	0	0	0	0	0	background	0	background	0
20	26,27	35	26,66	0	0	0	0	0	0	0	0	background	0	background	0
32	26,44	36	27,05	0	0	0	0	0	0	0	0	background	0	background	0
35	27,04	30	27,24	0	0	0	0	0	0	0	0	background	0	background	0
28	27,14	29	27,34	0	0	0	0	0	0	0	0	background	0	background	0
29	27,15	28	27,41	0	0	0	0	0	0	0	0	background	0	background	0
40	27,65	22	27,42	0	0	0	0	0	0	0	0	background	0	background	0
34	27,89	34	27,82	0	0	0	0	0	0	0	0	background	0	background	0
36	28,13	40	28,19	0	0	0	0	0	0	0	0	background	0	background	0
38	28,14	18	28,33	0	0	0	0	0	0	0	0	background	0	background	0
42	28,43	33	28,92	0	0	0	0	0	0	0	0	background	0	background	0
30	28,86	38	29,36	0	0	0	0	0	0	0	0	background	0	background	0
33	28,96	20	29,46	0	0	0	0	0	0	0	0	background	0	background	0
44	29,24	42	29,48	0	0	0	0	0	0	0	0	background	0	background	0
25	29,70	44	29,51	0	0	0	0	0	0	0	0	background	0	background	1
39	29,76	39	30,12	0	0	0	0	0	0	0	0	background	0	background	0
45	30,10	37	30,13	0	0	0	0	0	0	0	0	background	0	background	0
41	30,13	41	30,14	0	0	0	0	0	0	0	0	background	0	background	0
37	30,54	45	31,19	0	0	0	0	0	0	0	0	background	0	background	0
43	31,05	48	31,19	0	0	0	0	0	0	0	0	background	0	background	0
46	31,54	46	31,34	0	0	0	0	0	0	0	0	background	0	background	0
48	32,06	43	31,61	0	0	0	0	0	0	0	0	background	0	background	0
47	35,19	47	34,55	0	0	0	0	0	0	0	0	background	0	background	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0	background	0	background	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0	background	0	background	0

Manufacturer	112	113	114	115	116	117	118	119	120	121	122
Test name	nal von minden GmbH	Rapigen	Servoprax	Spring Healthcare Services SP zoo	SureScreen Diagnostics Ltd	TaiDoc Technology Corp.	Unioninvest	VivaChek Biotech(Hangzhou ) Co,Ltd.	VivaChek Biotech(Hangzhou ) Co,Ltd.	W.H.P.M, Inc	Xiamen Zhongsheng Langjie Biotechnology Co., Ltd
Panel 1 V1	Panel 1 V2										
Pool Nr.	Cq	Pool Nr.	Cq	Panel 1 V2	Panel 1 V1	Panel 1 V2	Panel 1 V2	Panel 1 V1	Panel 1 V1	Panel 1 V2	Panel 1 V2
1	17,55	1	17,31	1	1	1	1	0	1	1	1
6	20,20	2	19,08	1	0	1	1	0	1	1	1
5	20,28	3	19,62	1	1	1	1	0	1	1	0
3	20,38	5	20,60	1	1	1	1	0	1	1	0
2	20,54	4	20,61	1	0	1	1	0	1	1	0
4	20,98	6	21,21	0	0	1	0	0	1	1	0
7	21,71	12	22,12	0	0	1	0	0	1	1	0
12	21,82	7	22,15	0	0	1	0	0	1	1	0
8	21,95	8	22,32	0	0	1	0	0	0	1	0
9	22,14	16	22,88	1	0	1	0	0	1	0	0
11	22,34	9	23,13	0	0	0	0	0	0	1	1
16	22,55	11	23,13	0	0	0	0	0	0	0	0
10	22,88	10	23,21	0	0	1	0	0	0	1	0
13	23,32	15	24,38	0	0	1	0	0	0	0	0
17	24,00	23	24,45	0	0	0	0	0	0	0	0
23	24,04	17	24,81	0	0	0	0	0	0	0	0
15	24,14	14	24,97	0	0	0	0	0	0	0	0
14	24,28	25	25,07	0	0	0	0	0	0	0	0
27	25,14	24	25,20	0	0	0	0	0	0	0	0
24	25,24	13	25,29	0	0	0	0	0	0	0	0
31	25,27	19	25,45	0	0	0	0	0	0	0	0
18	25,30	21	25,95	0	0	0	0	0	0	0	0
26	25,47	27	26,12	0	0	0	0	0	0	0	0
19	25,50	31	26,24	0	0	0	0	0	0	0	0
21	25,54	26	26,32	0	0	0	0	0	0	0	0
22	25,87	32	26,64	0	0	0	0	0	0	0	0
20	26,27	35	26,66	0	0	0	0	0	0	0	0
32	26,44	36	27,05	0	0	0	0	0	0	0	0
35	27,04	30	27,24	0	0	0	0	0	0	0	0
28	27,14	29	27,34	0	0	0	0	0	0	0	0
29	27,15	28	27,41	0	0	0	0	0	0	0	0
40	27,65	22	27,42	0	0	0	0	0	0	0	0
34	27,89	34	27,82	0	0	0	0	0	0	0	0
36	28,13	40	28,19	0	0	0	0	0	0	0	0
38	28,14	18	28,33	0	0	0	0	0	0	0	0
42	28,43	33	28,92	0	0	0	0	0	0	0	0
30	28,86	38	29,36	0	0	0	0	0	0	0	0
33	28,96	20	29,46	0	0	0	0	0	0	0	0
44	29,24	42	29,48	0	0	0	0	0	0	0	0
25	29,70	44	29,51	0	0	0	0	0	0	0	0
39	29,76	39	30,12	0	0	0	0	0	0	0	0
45	30,10	37	30,13	0	0	0	0	0	0	0	0
41	30,13	41	30,14	0	0	0	0	0	0	0	0
37	30,54	45	31,19	0	0	0	0	0	0	0	0
43	31,05	48	31,19	0	0	0	0	0	0	0	0
46	31,54	46	31,34	0	0	0	0	0	0	0	0
48	32,06	43	31,61	0	0	0	0	0	0	0	0
47	35,19	47	34,55	0	0	0	0	0	0	0	0
49	35,22	50	35,83	0	0	0	0	0	0	0	0
50	36,36	49	36,04	0	0	0	0	0	0	0	0