

Clinical Trial Summary of COVID-19 Antigen Rapid Test Device (Nasopharyngeal/Oropharyngeal Swab)

COVID-19 Antigen Rapid Test Device clinical trials were performed at two sites in China from February 28, 2020 to April 8, 2020. These clinical trials were aimed to evaluate the performance of COVID-19 Antigen Rapid Test Device by comparing with RT-PCR.

1. Clinical Trial Location:

Site 1: Zhejiang Provincial Center for Disease Control and Prevention

Site 2: The First Hospital of Zhejiang Province

2. Clinical Specimens

A total of 348 clinical specimens were collected, including 168 specimens of nasopharyngeal swab and 180 specimens of oropharyngeal swab, to verify the performance of COVID-19 Antigen Rapid Test Device. Individuals who were suspected of COVID-19 were enrolled in this study (Including those who had symptoms, had contacted a confirmed patient, or had visited a disease outbreak area).

At the time of sample collection, some people exhibited mild (e.g. low fever, cough, fatigue) or severe (e.g. High fever, chest tightness, weakness) symptoms, while some people had no symptoms.

187 positive specimens and 161 negative specimens were confirmed by RT-PCR. There were 101 positive samples with $Ct < 25$, and 86 positive samples with $Ct \geq 25$. 150 samples presented positive results and 198 samples presented negative results by COVID-19 Antigen Rapid Test Device. There were 98 positive samples with $Ct < 25$, and 52 positive samples with $Ct \geq 25$. And there were 134 prospective samples (Tested in Site 2) and 214 retrospective samples (Tested in Site 1).

51.4% of the donor were male, and 48.6% were female. The list below was the proportion of all age groups.

Age	Percentage
≤20	2.6%
≤30	13.2%
≤40	17.8%
≤50	21.0%
≤60	20.4%
≤70	15.2%
>70	9.8%

3. Methods

COVID-19 Antigen Rapid Test Device was used to run the clinical specimens collected. Each specimen was tested according to IFU. The results were recorded and compared with the results obtained by RT-PCR.

4. Commercial kits used for Comparison

RT-PCR instrument ABI7500 (reagent Lot No.: 20200114A, exp. date: 2021-01-13, manufactured by Shanghai BioGerm Medical Biotechnology Co., Ltd)

5. Test Results

a) Clinical data

Clinical sample number	Site	Age	Gender	Sample Type	Symptoms (mild/severe)	Time of symptom onset	Days to Rapid test after symptom onset	Rapid test time	Rapid test result	PCR test time	PCR test result	PCR Ct Value
1	Site 1	39	Male	Nasopharyngeal swab	mild	2020/2/18	10	2020/2/28	+	2020/2/28	+	21
2	Site 1	39	Male	Oropharyngeal swab	mild	2020/2/18	10	2020/2/28	+	2020/2/28	+	21
3	Site 1	40	Male	Nasopharyngeal swab	mild	2020/1/30	29	2020/2/28	-	2020/2/28	+	37
4	Site 1	49	Male	Nasopharyngeal swab	mild	2020/2/11	17	2020/2/28	-	2020/2/27	+	35
5	Site 1	58	Female	Nasopharyngeal swab	mild	2020/2/25	4	2020/2/29	+	2020/2/27	+	22
6	Site 1	55	Male	Nasopharyngeal swab	mild	2020/2/19	10	2020/2/29	+	2020/2/28	+	20
7	Site 1	55	Male	Oropharyngeal swab	mild	2020/2/19	10	2020/2/29	+	2020/2/28	+	20
8	Site 1	47	Male	Oropharyngeal swab	mild	2020/2/2	27	2020/2/29	-	2020/2/27	+	36
9	Site 1	59	Male	Nasopharyngeal swab	mild	2020/2/26	3	2020/2/29	-	2020/2/27	-	NA
10	Site 1	67	Male	Oropharyngeal swab	NA	NA	NA	2020/2/29	-	2020/2/29	-	NA
11	Site 1	49	Male	Oropharyngeal swab	NA	NA	NA	2020/2/29	-	2020/2/28	-	NA
12	Site 1	39	Male	Oropharyngeal swab	NA	NA	NA	2020/2/29	-	2020/2/28	-	NA
13	Site 1	27	Male	Oropharyngeal swab	NA	NA	NA	2020/2/29	-	2020/2/27	-	NA
14	Site 1	70	Male	Nasopharyngeal swab	mild	2020/2/25	5	2020/3/1	+	2020/3/1	+	24
15	Site 1	57	Female	Nasopharyngeal swab	mild	2020/2/27	3	2020/3/1	-	2020/3/1	-	NA
16	Site 1	42	Female	Oropharyngeal swab	NA	NA	NA	2020/3/1	-	2020/3/1	-	NA
17	Site 1	40	Female	Oropharyngeal swab	NA	NA	NA	2020/3/1	-	2020/3/1	-	NA
18	Site 1	41	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/1	-	2020/2/28	-	NA
19	Site 1	60	Female	Oropharyngeal swab	mild	2020/2/17	14	2020/3/2	+	2020/3/2	+	23
20	Site 1	58	Male	Oropharyngeal swab	mild	2020/2/29	2	2020/3/2	-	2020/3/1	-	NA
21	Site 1	29	Male	Nasopharyngeal swab	mild	2020/2/29	2	2020/3/2	-	2020/3/1	-	NA
22	Site 1	35	Female	Nasopharyngeal swab	mild	2020/2/28	3	2020/3/2	-	2020/3/2	-	NA

23	Site 1	29	Female	Oropharyngeal swab	NA	NA	NA	2020/3/2	-	2020/3/1	-	NA
24	Site 1	68	Male	Oropharyngeal swab	NA	NA	NA	2020/3/2	-	2020/3/1	-	NA
25	Site 1	39	Female	Oropharyngeal swab	NA	NA	NA	2020/3/2	-	2020/3/1	-	NA
26	Site 1	43	Male	Oropharyngeal swab	mild	2020/2/23	9	2020/3/3	+	2020/3/1	+	24
27	Site 1	59	Female	Oropharyngeal swab	mild	2020/2/22	10	2020/3/3	+	2020/3/2	+	23
28	Site 1	43	Male	Nasopharyngeal swab	mild	2020/2/23	9	2020/3/3	+	2020/3/1	+	24
29	Site 1	43	Female	Nasopharyngeal swab	mild	2020/3/1	2	2020/3/3	-	2020/3/3	-	NA
30	Site 1	39	Male	Oropharyngeal swab	mild	2020/3/2	1	2020/3/3	-	2020/3/2	-	NA
31	Site 1	27	Female	Oropharyngeal swab	mild	2020/3/1	2	2020/3/3	-	2020/3/2	-	NA
32	Site 1	39	Male	Nasopharyngeal swab	mild	2020/3/2	1	2020/3/3	-	2020/3/2	-	NA
33	Site 1	57	Female	Nasopharyngeal swab	mild	2020/2/29	3	2020/3/3	-	2020/3/2	-	NA
34	Site 1	28	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/3	-	2020/3/3	-	NA
35	Site 1	55	Male	Oropharyngeal swab	NA	NA	NA	2020/3/3	-	2020/3/2	-	NA
36	Site 1	65	Female	Nasopharyngeal swab	mild	2020/3/2	2	2020/3/4	-	2020/3/2	-	NA
37	Site 1	40	Female	Oropharyngeal swab	NA	NA	NA	2020/3/4	-	2020/3/2	-	NA
38	Site 1	72	Male	Oropharyngeal swab	NA	NA	NA	2020/3/4	-	2020/3/4	-	NA
39	Site 1	68	Male	Oropharyngeal swab	NA	NA	NA	2020/3/4	-	2020/3/2	-	NA
40	Site 1	27	Female	Oropharyngeal swab	NA	NA	NA	2020/3/4	-	2020/3/4	-	NA
41	Site 1	69	Male	Oropharyngeal swab	NA	NA	NA	2020/3/4	-	2020/3/3	-	NA
42	Site 1	10	Male	Nasopharyngeal swab	mild	2020/2/24	10	2020/3/5	+	2020/3/5	+	22
43	Site 1	60	Male	Oropharyngeal swab	mild	2020/2/20	14	2020/3/5	+	2020/3/5	+	22
44	Site 1	69	Male	Oropharyngeal swab	mild	2020/2/18	16	2020/3/5	-	2020/3/3	+	33
45	Site 1	43	Female	Oropharyngeal swab	NA	NA	NA	2020/3/5	-	2020/3/5	-	NA
46	Site 1	29	Male	Oropharyngeal swab	NA	NA	NA	2020/3/5	-	2020/3/4	-	NA
47	Site 1	57	Male	Oropharyngeal swab	NA	NA	NA	2020/3/5	-	2020/3/5	-	NA
48	Site 1	43	Male	Oropharyngeal swab	NA	NA	NA	2020/3/5	-	2020/3/4	-	NA
49	Site 1	47	Male	Oropharyngeal swab	NA	NA	NA	2020/3/5	-	2020/3/5	-	NA

50	Site 1	27	Male	Oropharyngeal swab	NA	NA	NA	2020/3/5	-	2020/3/3	-	NA
51	Site 1	35	Female	Nasopharyngeal swab	mild	2020/2/27	8	2020/3/6	+	2020/3/5	+	21
52	Site 1	35	Female	Oropharyngeal swab	mild	2020/2/27	8	2020/3/6	+	2020/3/5	+	21
53	Site 1	78	Female	Oropharyngeal swab	mild	2020/2/16	19	2020/3/6	-	2020/3/6	+	33
54	Site 1	58	Male	Oropharyngeal swab	NA	NA	NA	2020/3/6	-	2020/3/4	-	NA
55	Site 1	55	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/6	-	2020/3/5	-	NA
56	Site 1	48	Female	Oropharyngeal swab	NA	NA	NA	2020/3/6	-	2020/3/6	-	NA
57	Site 1	48	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/6	-	2020/3/6	-	NA
58	Site 1	52	Female	Nasopharyngeal swab	mild	2020/2/23	13	2020/3/7	+	2020/3/5	+	22
59	Site 1	34	Female	Nasopharyngeal swab	mild	2020/2/25	11	2020/3/7	+	2020/3/7	+	23
60	Site 1	80	Male	Oropharyngeal swab	mild	2020/2/22	14	2020/3/7	+	2020/3/5	+	22
61	Site 1	38	Male	Nasopharyngeal swab	mild	2020/3/3	4	2020/3/7	-	2020/3/7	+	23
62	Site 1	48	Male	Oropharyngeal swab	NA	NA	NA	2020/3/7	-	2020/3/6	+	37
63	Site 1	58	Male	Nasopharyngeal swab	mild	2020/3/4	3	2020/3/7	-	2020/3/7	-	NA
64	Site 1	50	Female	Nasopharyngeal swab	mild	2020/3/6	1	2020/3/7	-	2020/3/5	-	NA
65	Site 1	20	Female	Nasopharyngeal swab	mild	2020/3/5	2	2020/3/7	-	2020/3/7	-	NA
66	Site 1	64	Female	Nasopharyngeal swab	mild	2020/3/5	2	2020/3/7	-	2020/3/6	-	NA
67	Site 1	80	Female	Nasopharyngeal swab	mild	2020/3/5	2	2020/3/7	-	2020/3/6	-	NA
68	Site 1	38	Male	Oropharyngeal swab	mild	2020/3/5	2	2020/3/7	-	2020/3/6	-	NA
69	Site 1	28	Female	Oropharyngeal swab	NA	NA	NA	2020/3/7	-	2020/3/7	-	NA
70	Site 1	44	Female	Oropharyngeal swab	mild	2020/2/23	14	2020/3/8	+	2020/3/8	+	22
71	Site 1	29	Female	Nasopharyngeal swab	mild	2020/3/4	4	2020/3/8	+	2020/3/6	+	21
72	Site 1	29	Female	Oropharyngeal swab	mild	2020/3/4	4	2020/3/8	+	2020/3/6	+	21
73	Site 1	44	Female	Nasopharyngeal swab	mild	2020/2/23	14	2020/3/8	+	2020/3/8	+	22
74	Site 1	54	Female	Oropharyngeal swab	mild	2020/3/3	5	2020/3/8	+	2020/3/6	+	20
75	Site 1	70	Female	Oropharyngeal swab	mild	2020/2/29	8	2020/3/8	+	2020/3/6	+	20
76	Site 1	59	Male	Oropharyngeal swab	mild	2020/2/21	16	2020/3/8	-	2020/3/7	+	35

77	Site 1	58	Male	Oropharyngeal swab	mild	2020/3/7	1	2020/3/8	-	2020/3/8	-	NA
78	Site 1	31	Male	Oropharyngeal swab	mild	2020/3/6	2	2020/3/8	-	2020/3/8	-	NA
79	Site 1	57	Male	Oropharyngeal swab	NA	NA	NA	2020/3/8	-	2020/3/7	-	NA
80	Site 1	30	Male	Oropharyngeal swab	mild	2020/3/2	7	2020/3/9	+	2020/3/8	+	24
81	Site 1	30	Male	Nasopharyngeal swab	mild	2020/3/2	7	2020/3/9	+	2020/3/8	+	24
82	Site 1	65	Male	Oropharyngeal swab	mild	2020/2/28	10	2020/3/9	+	2020/3/7	+	23
83	Site 1	67	Female	Oropharyngeal swab	NA	NA	NA	2020/3/9	-	2020/3/8	+	36
84	Site 1	60	Female	Oropharyngeal swab	mild	2020/3/8	1	2020/3/9	-	2020/3/7	-	NA
85	Site 1	13	Male	Nasopharyngeal swab	mild	2020/3/7	2	2020/3/9	-	2020/3/8	-	NA
86	Site 1	48	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/9	-	2020/3/7	-	NA
87	Site 1	68	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/9	-	2020/3/8	-	NA
88	Site 1	59	Male	Oropharyngeal swab	NA	NA	NA	2020/3/9	-	2020/3/7	-	NA
89	Site 1	45	Female	Oropharyngeal swab	mild	2020/2/29	10	2020/3/10	+	2020/3/10	+	20
90	Site 1	29	Female	Nasopharyngeal swab	mild	2020/3/6	4	2020/3/10	+	2020/3/8	+	24
91	Site 1	59	Male	Nasopharyngeal swab	mild	2020/3/9	1	2020/3/10	-	2020/3/10	-	NA
92	Site 1	59	Male	Oropharyngeal swab	mild	2020/3/9	1	2020/3/10	-	2020/3/10	-	NA
93	Site 1	57	Female	Oropharyngeal swab	NA	NA	NA	2020/3/10	-	2020/3/10	-	NA
94	Site 1	46	Female	Nasopharyngeal swab	mild	2020/3/2	9	2020/3/11	+	2020/3/11	+	23
95	Site 1	64	Female	Oropharyngeal swab	mild	2020/2/28	12	2020/3/11	+	2020/3/11	+	23
96	Site 1	46	Female	Oropharyngeal swab	mild	2020/3/2	9	2020/3/11	+	2020/3/11	+	23
97	Site 1	64	Female	Nasopharyngeal swab	mild	2020/2/28	12	2020/3/11	+	2020/3/11	+	23
98	Site 1	49	Male	Nasopharyngeal swab	mild	2020/3/10	1	2020/3/11	-	2020/3/10	-	NA
99	Site 1	41	Female	Oropharyngeal swab	mild	2020/3/9	2	2020/3/11	-	2020/3/10	-	NA
100	Site 1	49	Male	Oropharyngeal swab	mild	2020/3/10	1	2020/3/11	-	2020/3/10	-	NA
101	Site 1	29	Female	Nasopharyngeal swab	mild	2020/3/9	2	2020/3/11	-	2020/3/10	-	NA
102	Site 1	67	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/11	-	2020/3/10	-	NA
103	Site 1	68	Female	Oropharyngeal swab	NA	NA	NA	2020/3/11	-	2020/3/11	-	NA

104	Site 1	46	Female	Oropharyngeal swab	NA	NA	NA	2020/3/11	-	2020/3/9	-	NA
105	Site 1	80	Male	Oropharyngeal swab	NA	NA	NA	2020/3/11	-	2020/3/10	-	NA
106	Site 1	39	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/11	-	2020/3/10	-	NA
107	Site 1	30	Female	Oropharyngeal swab	mild	2020/3/4	8	2020/3/12	+	2020/3/10	+	23
108	Site 1	38	Male	Nasopharyngeal swab	mild	2020/3/6	6	2020/3/12	+	2020/3/12	+	23
109	Site 1	36	Female	Oropharyngeal swab	mild	2020/3/6	6	2020/3/12	+	2020/3/10	+	20
110	Site 1	30	Female	Oropharyngeal swab	mild	2020/3/4	8	2020/3/12	+	2020/3/10	+	23
111	Site 1	73	Male	Oropharyngeal swab	mild	2020/2/27	14	2020/3/12	+	2020/3/12	+	24
112	Site 1	59	Male	Nasopharyngeal swab	mild	2020/2/27	14	2020/3/12	+	2020/3/12	+	21
113	Site 1	40	Female	Nasopharyngeal swab	mild	2020/2/26	15	2020/3/12	-	2020/3/11	+	32
114	Site 1	60	Female	Nasopharyngeal swab	mild	2020/3/10	2	2020/3/12	-	2020/3/11	-	NA
115	Site 1	76	Male	Oropharyngeal swab	NA	NA	NA	2020/3/12	-	2020/3/11	-	NA
116	Site 1	58	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/12	-	2020/3/10	-	NA
117	Site 1	36	Male	Oropharyngeal swab	NA	NA	NA	2020/3/12	-	2020/3/11	-	NA
118	Site 1	27	Male	Oropharyngeal swab	mild	2020/3/5	8	2020/3/13	-	2020/3/13	+	36
119	Site 1	40	Female	Nasopharyngeal swab	mild	2020/2/25	17	2020/3/13	-	2020/3/13	+	33
120	Site 1	75	Male	Oropharyngeal swab	mild	2020/2/24	18	2020/3/13	-	2020/3/11	+	36
121	Site 1	28	Male	Nasopharyngeal swab	mild	2020/3/11	2	2020/3/13	-	2020/3/13	-	NA
122	Site 1	22	Male	Nasopharyngeal swab	mild	2020/3/11	2	2020/3/13	-	2020/3/12	-	NA
123	Site 1	25	Male	Oropharyngeal swab	NA	NA	NA	2020/3/13	-	2020/3/13	-	NA
124	Site 1	11	Male	Oropharyngeal swab	NA	NA	NA	2020/3/13	-	2020/3/13	-	NA
125	Site 1	38	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/13	-	2020/3/13	-	NA
126	Site 1	26	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/13	-	2020/3/13	-	NA
127	Site 1	54	Female	Nasopharyngeal swab	mild	2020/3/9	5	2020/3/14	+	2020/3/12	+	21
128	Site 1	80	Male	Oropharyngeal swab	mild	2020/2/25	18	2020/3/14	-	2020/3/12	+	34
129	Site 1	58	Male	Oropharyngeal swab	NA	NA	NA	2020/3/14	-	2020/3/14	-	NA
130	Site 1	60	Female	Oropharyngeal swab	NA	NA	NA	2020/3/14	-	2020/3/12	-	NA

131	Site 1	30	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/14	-	2020/3/14	-	NA
132	Site 1	59	Female	Oropharyngeal swab	mild	2020/3/9	6	2020/3/15	+	2020/3/13	+	21
133	Site 1	54	Female	Oropharyngeal swab	mild	2020/3/13	2	2020/3/15	-	2020/3/13	-	NA
134	Site 1	46	Female	Oropharyngeal swab	NA	NA	NA	2020/3/15	-	2020/3/14	-	NA
135	Site 1	46	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/15	-	2020/3/14	-	NA
136	Site 1	46	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/15	-	2020/3/13	-	NA
137	Site 1	12	Female	Oropharyngeal swab	NA	NA	NA	2020/3/15	-	2020/3/14	-	NA
138	Site 1	31	Male	Nasopharyngeal swab	mild	2020/3/5	11	2020/3/16	+	2020/3/15	+	23
139	Site 1	31	Male	Oropharyngeal swab	mild	2020/3/5	11	2020/3/16	+	2020/3/15	+	23
140	Site 1	68	Female	Oropharyngeal swab	mild	2020/3/9	7	2020/3/16	+	2020/3/14	+	23
141	Site 1	68	Female	Nasopharyngeal swab	mild	2020/3/9	7	2020/3/16	+	2020/3/14	+	23
142	Site 1	32	Male	Nasopharyngeal swab	mild	2020/3/10	6	2020/3/16	-	2020/3/14	+	24
143	Site 1	59	Female	Nasopharyngeal swab	mild	2020/3/8	8	2020/3/16	-	2020/3/14	+	35
144	Site 1	54	Female	Nasopharyngeal swab	mild	2020/3/14	2	2020/3/16	-	2020/3/16	-	NA
145	Site 1	67	Female	Nasopharyngeal swab	mild	2020/3/14	2	2020/3/16	-	2020/3/16	-	NA
146	Site 1	27	Male	Oropharyngeal swab	NA	NA	NA	2020/3/16	-	2020/3/15	-	NA
147	Site 1	76	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/16	-	2020/3/16	-	NA
148	Site 1	40	Female	Oropharyngeal swab	NA	NA	NA	2020/3/16	-	2020/3/15	-	NA
149	Site 1	60	Male	Oropharyngeal swab	NA	NA	NA	2020/3/16	-	2020/3/14	-	NA
150	Site 1	65	Female	Nasopharyngeal swab	mild	2020/3/8	9	2020/3/17	+	2020/3/15	+	21
151	Site 1	67	Female	Oropharyngeal swab	mild	2020/3/5	12	2020/3/17	+	2020/3/17	+	22
152	Site 1	56	Male	Oropharyngeal swab	mild	2020/3/3	14	2020/3/17	+	2020/3/15	+	23
153	Site 1	50	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/17	-	2020/3/17	-	NA
154	Site 1	48	Male	Nasopharyngeal swab	severe	2020/3/10	8	2020/3/18	+	2020/3/18	+	20
155	Site 1	64	Male	Oropharyngeal swab	mild	2020/2/29	18	2020/3/18	-	2020/3/16	+	34
156	Site 1	65	Male	Oropharyngeal swab	mild	2020/3/17	1	2020/3/18	-	2020/3/18	-	NA
157	Site 1	48	Female	Nasopharyngeal swab	mild	2020/3/16	2	2020/3/18	-	2020/3/18	-	NA

158	Site 1	70	Female	Oropharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/17	-	NA
159	Site 1	70	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/17	-	NA
160	Site 1	71	Male	Oropharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/17	-	NA
161	Site 1	64	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/17	-	NA
162	Site 1	49	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/18	-	NA
163	Site 1	44	Female	Oropharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/18	-	NA
164	Site 1	44	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/18	-	NA
165	Site 1	42	Male	Oropharyngeal swab	NA	NA	NA	2020/3/18	-	2020/3/17	-	NA
166	Site 1	81	Male	Oropharyngeal swab	mild	2020/3/15	4	2020/3/19	+	2020/3/18	+	20
167	Site 1	69	Female	Oropharyngeal swab	mild	2020/3/9	10	2020/3/19	-	2020/3/19	+	23
168	Site 1	49	Male	Nasopharyngeal swab	mild	2020/3/12	7	2020/3/19	-	2020/3/18	+	34
169	Site 1	37	Female	Nasopharyngeal swab	mild	2020/3/16	3	2020/3/19	-	2020/3/18	-	NA
170	Site 1	67	Male	Nasopharyngeal swab	mild	2020/3/16	3	2020/3/19	-	2020/3/17	-	NA
171	Site 1	83	Male	Nasopharyngeal swab	mild	2020/3/16	3	2020/3/19	-	2020/3/18	-	NA
172	Site 1	36	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/19	-	2020/3/19	-	NA
173	Site 1	36	Female	Oropharyngeal swab	NA	NA	NA	2020/3/19	-	2020/3/19	-	NA
174	Site 1	49	Female	Oropharyngeal swab	NA	NA	NA	2020/3/19	-	2020/3/17	-	NA
175	Site 1	51	Female	Nasopharyngeal swab	mild	2020/3/15	5	2020/3/20	+	2020/3/20	+	22
176	Site 1	57	Female	Nasopharyngeal swab	mild	2020/3/9	11	2020/3/20	+	2020/3/19	+	22
177	Site 1	58	Female	Nasopharyngeal swab	mild	2020/3/11	9	2020/3/20	+	2020/3/19	+	20
178	Site 1	59	Male	Oropharyngeal swab	mild	2020/3/3	17	2020/3/20	-	2020/3/19	+	34
179	Site 1	59	Female	Oropharyngeal swab	mild	2020/2/28	21	2020/3/20	-	2020/3/19	+	34
180	Site 1	40	Female	Nasopharyngeal swab	mild	2020/3/13	8	2020/3/21	-	2020/3/20	+	34
181	Site 1	12	Male	Nasopharyngeal swab	mild	2020/3/19	2	2020/3/21	-	2020/3/21	-	NA
182	Site 1	52	Female	Oropharyngeal swab	NA	NA	NA	2020/3/21	-	2020/3/20	-	NA
183	Site 1	57	Female	Oropharyngeal swab	NA	NA	NA	2020/3/21	-	2020/3/21	-	NA
184	Site 1	53	Female	Oropharyngeal swab	NA	NA	NA	2020/3/21	-	2020/3/21	-	NA

185	Site 1	75	Male	Nasopharyngeal swab	mild	2020/3/14	8	2020/3/22	+	2020/3/21	+	23
186	Site 1	75	Male	Nasopharyngeal swab	mild	2020/3/14	8	2020/3/22	+	2020/3/21	+	23
187	Site 1	74	Male	Nasopharyngeal swab	mild	2020/2/20	31	2020/3/22	-	2020/3/20	+	35
188	Site 1	37	Male	Nasopharyngeal swab	mild	2020/3/20	2	2020/3/22	-	2020/3/20	-	NA
189	Site 1	76	Male	Oropharyngeal swab	NA	NA	NA	2020/3/22	-	2020/3/22	-	NA
190	Site 1	40	Female	Oropharyngeal swab	NA	NA	NA	2020/3/22	-	2020/3/21	-	NA
191	Site 1	67	Male	Oropharyngeal swab	NA	NA	NA	2020/3/22	-	2020/3/21	-	NA
192	Site 1	60	Male	Oropharyngeal swab	mild	2020/3/9	14	2020/3/23	+	2020/3/22	+	24
193	Site 1	60	Male	Nasopharyngeal swab	mild	2020/3/9	14	2020/3/23	+	2020/3/22	+	24
194	Site 1	67	Female	Oropharyngeal swab	severe	2020/3/17	6	2020/3/23	+	2020/3/21	+	20
195	Site 1	38	Female	Oropharyngeal swab	mild	2020/3/13	10	2020/3/23	-	2020/3/22	+	36
196	Site 1	82	Female	Oropharyngeal swab	mild	2020/3/21	2	2020/3/23	-	2020/3/23	-	NA
197	Site 1	29	Female	Oropharyngeal swab	mild	2020/3/21	2	2020/3/23	-	2020/3/23	-	NA
198	Site 1	45	Female	Nasopharyngeal swab	mild	2020/3/21	2	2020/3/23	-	2020/3/21	-	NA
199	Site 1	47	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/23	-	2020/3/22	-	NA
200	Site 1	30	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/23	-	2020/3/23	-	NA
201	Site 1	33	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/23	-	2020/3/22	-	NA
202	Site 1	54	Male	Oropharyngeal swab	NA	NA	NA	2020/3/23	-	2020/3/21	-	NA
203	Site 1	74	Female	Oropharyngeal swab	NA	NA	NA	2020/3/23	-	2020/3/21	-	NA
204	Site 1	22	Male	Nasopharyngeal swab	mild	2020/3/12	12	2020/3/24	+	2020/3/23	+	20
205	Site 1	35	Male	Nasopharyngeal swab	mild	2020/3/15	9	2020/3/24	-	2020/3/23	+	32
206	Site 1	38	Female	Nasopharyngeal swab	mild	2020/3/22	2	2020/3/24	-	2020/3/24	-	NA
207	Site 1	30	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/24	-	2020/3/23	-	NA
208	Site 1	40	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/24	-	2020/3/22	-	NA
209	Site 1	50	Female	Oropharyngeal swab	NA	NA	NA	2020/3/24	-	2020/3/24	-	NA
210	Site 1	40	Female	Oropharyngeal swab	NA	NA	NA	2020/3/24	-	2020/3/23	-	NA
211	Site 1	80	Male	Nasopharyngeal swab	mild	2020/3/24	1	2020/3/25	-	2020/3/23	-	NA

212	Site 1	65	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/25	-	2020/3/25	-	NA
213	Site 1	57	Male	Oropharyngeal swab	NA	NA	NA	2020/3/25	-	2020/3/25	-	NA
214	Site 1	54	Female	Nasopharyngeal swab	NA	NA	NA	2020/3/25	-	2020/3/23	-	NA
215	Site 2	23	Female	Nasopharyngeal swab	mild	2020/2/26	3	2020/2/29	-	2020/2/29	-	NA
216	Site 2	23	Female	Oropharyngeal swab	mild	2020/2/26	3	2020/2/29	-	2020/2/29	-	NA
217	Site 2	59	Female	Oropharyngeal swab	mild	2020/2/8	22	2020/3/1	-	2020/3/1	+	36
218	Site 2	35	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/1	-	2020/3/1	+	34
219	Site 2	47	Male	Nasopharyngeal swab	mild	2020/2/29	1	2020/3/1	-	2020/3/1	-	NA
220	Site 2	62	Male	Nasopharyngeal swab	mild	2020/2/12	19	2020/3/2	-	2020/3/2	+	36
221	Site 2	60	Female	Nasopharyngeal swab	mild	2020/3/1	1	2020/3/2	-	2020/3/2	-	NA
222	Site 2	56	Female	Nasopharyngeal swab	mild	2020/3/1	2	2020/3/3	-	2020/3/3	-	NA
223	Site 2	47	Male	Oropharyngeal swab	mild	2020/2/22	12	2020/3/5	+	2020/3/5	+	21
224	Site 2	60	Female	Oropharyngeal swab	mild	2020/3/4	1	2020/3/5	-	2020/3/5	-	NA
225	Site 2	42	Male	Nasopharyngeal swab	mild	2020/3/5	1	2020/3/6	-	2020/3/6	-	NA
226	Site 2	42	Male	Oropharyngeal swab	mild	2020/3/5	1	2020/3/6	-	2020/3/6	-	NA
227	Site 2	61	Female	Nasopharyngeal swab	mild	2020/3/5	1	2020/3/6	-	2020/3/6	-	NA
228	Site 2	55	Female	Nasopharyngeal swab	mild	2020/3/7	1	2020/3/8	-	2020/3/8	-	NA
229	Site 2	62	Male	Oropharyngeal swab	mild	2020/3/7	2	2020/3/9	-	2020/3/9	-	NA
230	Site 2	28	Female	Nasopharyngeal swab	mild	2020/3/8	1	2020/3/9	-	2020/3/9	-	NA
231	Site 2	47	Male	Nasopharyngeal swab	mild	2020/3/8	2	2020/3/10	-	2020/3/10	-	NA
232	Site 2	47	Male	Nasopharyngeal swab	mild	2020/3/8	2	2020/3/10	-	2020/3/10	-	NA
233	Site 2	84	Male	Nasopharyngeal swab	mild	2020/3/8	2	2020/3/10	-	2020/3/10	-	NA
234	Site 2	50	Female	Oropharyngeal swab	mild	2020/3/9	2	2020/3/11	-	2020/3/11	-	NA
235	Site 2	26	Female	Oropharyngeal swab	mild	2020/3/1	11	2020/3/12	+	2020/3/12	+	24
236	Site 2	37	Female	Oropharyngeal swab	mild	2020/3/10	4	2020/3/14	+	2020/3/14	+	23
237	Site 2	45	Female	Nasopharyngeal swab	mild	2020/3/6	9	2020/3/15	+	2020/3/15	+	23
238	Site 2	53	Female	Oropharyngeal swab	mild	2020/3/1	14	2020/3/15	+	2020/3/15	+	22

239	Site 2	60	Female	Oropharyngeal swab	mild	2020/3/13	3	2020/3/16	-	2020/3/16	-	NA
240	Site 2	47	Male	Oropharyngeal swab	mild	2020/3/15	1	2020/3/16	-	2020/3/16	-	NA
241	Site 2	60	Female	Nasopharyngeal swab	mild	2020/3/13	3	2020/3/16	-	2020/3/16	-	NA
242	Site 2	47	Male	Nasopharyngeal swab	mild	2020/3/15	1	2020/3/16	-	2020/3/16	-	NA
243	Site 2	30	Female	Nasopharyngeal swab	mild	2020/3/5	12	2020/3/17	+	2020/3/17	+	24
244	Site 2	30	Female	Oropharyngeal swab	mild	2020/3/9	8	2020/3/17	-	2020/3/17	+	35
245	Site 2	49	Male	Oropharyngeal swab	mild	2020/3/14	3	2020/3/17	-	2020/3/17	-	NA
246	Site 2	54	Female	Oropharyngeal swab	mild	2020/3/15	2	2020/3/17	-	2020/3/17	-	NA
247	Site 2	64	Female	Nasopharyngeal swab	mild	2020/3/16	2	2020/3/18	-	2020/3/18	-	NA
248	Site 2	21	Male	Nasopharyngeal swab	mild	2020/3/16	2	2020/3/18	-	2020/3/18	-	NA
249	Site 2	50	Female	Nasopharyngeal swab	mild	2020/3/17	2	2020/3/19	-	2020/3/19	-	NA
250	Site 2	44	Male	Nasopharyngeal swab	mild	2020/3/7	13	2020/3/20	+	2020/3/20	+	22
251	Site 2	53	Female	Oropharyngeal swab	mild	2020/3/6	14	2020/3/20	+	2020/3/20	+	23
252	Site 2	56	Female	Nasopharyngeal swab	mild	2020/3/18	2	2020/3/20	-	2020/3/20	-	NA
253	Site 2	56	Male	Oropharyngeal swab	mild	2020/3/18	2	2020/3/20	-	2020/3/20	-	NA
254	Site 2	74	Male	Nasopharyngeal swab	mild	2020/3/18	2	2020/3/20	-	2020/3/20	-	NA
255	Site 2	74	Male	Oropharyngeal swab	mild	2020/3/18	2	2020/3/20	-	2020/3/20	-	NA
256	Site 2	42	Male	Oropharyngeal swab	mild	2020/3/7	15	2020/3/22	-	2020/3/22	+	37
257	Site 2	40	Female	Oropharyngeal swab	mild	2020/3/19	3	2020/3/22	-	2020/3/22	-	NA
258	Site 2	48	Male	Nasopharyngeal swab	mild	2020/3/10	13	2020/3/23	+	2020/3/23	+	21
259	Site 2	76	Male	Oropharyngeal swab	mild	2020/3/17	13	2020/3/30	+	2020/3/30	+	24
260	Site 2	70	Female	Nasopharyngeal swab	mild	2020/3/20	10	2020/3/30	+	2020/3/30	+	22
261	Site 2	48	Male	Nasopharyngeal swab	mild	2020/3/21	9	2020/3/30	+	2020/3/30	+	20
262	Site 2	45	Female	Nasopharyngeal swab	mild	2020/3/15	15	2020/3/30	+	2020/3/30	+	29
263	Site 2	70	Female	Nasopharyngeal swab	mild	2020/3/2	28	2020/3/30	+	2020/3/30	+	37
264	Site 2	38	Male	Nasopharyngeal swab	mild	2020/3/10	20	2020/3/30	+	2020/3/30	+	33
265	Site 2	59	Female	Nasopharyngeal swab	mild	2020/3/12	18	2020/3/30	+	2020/3/30	+	26

266	Site 2	45	Female	Nasopharyngeal swab	mild	2020/2/29	30	2020/3/30	+	2020/3/30	+	28
267	Site 2	25	Male	Nasopharyngeal swab	mild	2020/3/4	26	2020/3/30	+	2020/3/30	+	25
268	Site 2	58	Male	Oropharyngeal swab	mild	2020/3/13	17	2020/3/30	+	2020/3/30	+	36
269	Site 2	57	Male	Nasopharyngeal swab	NA	NA	NA	2020/3/30	-	2020/3/30	+	35
270	Site 2	30	Female	Oropharyngeal swab	mild	2020/3/18	13	2020/3/31	+	2020/3/31	+	21
271	Site 2	47	Female	Oropharyngeal swab	mild	2020/3/22	9	2020/3/31	+	2020/3/31	+	22
272	Site 2	71	Female	Oropharyngeal swab	mild	2020/3/19	12	2020/3/31	+	2020/3/31	+	22
273	Site 2	39	Female	Oropharyngeal swab	mild	2020/3/19	12	2020/3/31	+	2020/3/31	+	32
274	Site 2	38	Male	Oropharyngeal swab	mild	2020/3/13	18	2020/3/31	+	2020/3/31	+	37
275	Site 2	10	Male	Oropharyngeal swab	mild	2020/3/18	13	2020/3/31	+	2020/3/31	+	37
276	Site 2	43	Female	Oropharyngeal swab	mild	2020/3/16	15	2020/3/31	-	2020/3/31	+	33
277	Site 2	64	Female	Oropharyngeal swab	mild	2020/3/21	11	2020/4/1	+	2020/4/1	+	22
278	Site 2	55	Female	Oropharyngeal swab	mild	2020/3/18	14	2020/4/1	+	2020/4/1	+	21
279	Site 2	67	Female	Nasopharyngeal swab	mild	2020/3/27	5	2020/4/1	+	2020/4/1	+	24
280	Site 2	28	Male	Nasopharyngeal swab	mild	2020/3/23	9	2020/4/1	+	2020/4/1	+	20
281	Site 2	11	Male	Nasopharyngeal swab	mild	2020/3/18	14	2020/4/1	+	2020/4/1	+	31
282	Site 2	59	Male	Nasopharyngeal swab	mild	2020/3/21	11	2020/4/1	+	2020/4/1	+	36
283	Site 2	28	Male	Nasopharyngeal swab	NA	NA	NA	2020/4/1	+	2020/4/1	+	29
284	Site 2	49	Male	Nasopharyngeal swab	mild	2020/3/20	12	2020/4/1	+	2020/4/1	+	30
285	Site 2	73	Male	Oropharyngeal swab	mild	2020/3/4	28	2020/4/1	+	2020/4/1	+	27
286	Site 2	55	Female	Oropharyngeal swab	mild	2020/3/14	18	2020/4/1	+	2020/4/1	+	36
287	Site 2	69	Male	Oropharyngeal swab	mild	2020/3/19	13	2020/4/1	-	2020/4/1	+	34
288	Site 2	49	Male	Oropharyngeal swab	mild	2020/3/1	31	2020/4/1	-	2020/4/1	+	36
289	Site 2	28	Female	Nasopharyngeal swab	mild	2020/3/27	6	2020/4/2	+	2020/4/2	+	24
290	Site 2	80	Female	Oropharyngeal swab	mild	2020/3/21	12	2020/4/2	+	2020/4/2	+	21
291	Site 2	30	Female	Oropharyngeal swab	mild	2020/3/19	14	2020/4/2	+	2020/4/2	+	21
292	Site 2	40	Female	Nasopharyngeal swab	mild	2020/3/15	18	2020/4/2	+	2020/4/2	+	34

293	Site 2	38	Male	Oropharyngeal swab	mild	2020/3/10	23	2020/4/2	+	2020/4/2	+	25
294	Site 2	55	Female	Nasopharyngeal swab	mild	2020/3/8	25	2020/4/2	+	2020/4/2	+	37
295	Site 2	40	Male	Nasopharyngeal swab	mild	2020/3/22	11	2020/4/2	+	2020/4/2	+	30
296	Site 2	40	Male	Nasopharyngeal swab	mild	2020/3/15	18	2020/4/2	+	2020/4/2	+	30
297	Site 2	40	Female	Oropharyngeal swab	mild	2020/3/15	18	2020/4/2	+	2020/4/2	+	34
298	Site 2	31	Male	Oropharyngeal swab	mild	2020/3/10	23	2020/4/2	+	2020/4/2	+	30
299	Site 2	79	Male	Nasopharyngeal swab	mild	2020/3/13	20	2020/4/2	+	2020/4/2	+	33
300	Site 2	63	Male	Nasopharyngeal swab	mild	2020/3/23	10	2020/4/2	-	2020/4/2	+	37
301	Site 2	81	Male	Oropharyngeal swab	mild	2020/3/28	6	2020/4/3	+	2020/4/3	+	22
302	Site 2	38	Male	Oropharyngeal swab	mild	2020/3/21	13	2020/4/3	+	2020/4/3	+	22
303	Site 2	52	Male	Nasopharyngeal swab	mild	2020/3/21	13	2020/4/3	+	2020/4/3	+	23
304	Site 2	40	Female	Nasopharyngeal swab	mild	2020/3/25	9	2020/4/3	+	2020/4/3	+	21
305	Site 2	37	Male	Nasopharyngeal swab	mild	2020/3/5	29	2020/4/3	+	2020/4/3	+	37
306	Site 2	44	Female	Nasopharyngeal swab	mild	2020/3/21	13	2020/4/3	+	2020/4/3	+	32
307	Site 2	46	Female	Nasopharyngeal swab	mild	2020/3/23	11	2020/4/3	+	2020/4/3	+	25
308	Site 2	37	Male	Oropharyngeal swab	mild	2020/3/5	29	2020/4/3	+	2020/4/3	+	37
309	Site 2	56	Female	Nasopharyngeal swab	mild	2020/3/20	14	2020/4/3	+	2020/4/3	+	37
310	Site 2	48	Female	Oropharyngeal swab	mild	2020/3/13	21	2020/4/3	+	2020/4/3	+	27
311	Site 2	70	Male	Oropharyngeal swab	mild	2020/3/25	10	2020/4/4	+	2020/4/4	+	21
312	Site 2	38	Female	Oropharyngeal swab	mild	2020/3/23	12	2020/4/4	+	2020/4/4	+	21
313	Site 2	38	Male	Nasopharyngeal swab	mild	2020/3/20	15	2020/4/4	+	2020/4/4	+	28
314	Site 2	68	Female	Nasopharyngeal swab	mild	2020/3/15	20	2020/4/4	+	2020/4/4	+	34
315	Site 2	38	Male	Oropharyngeal swab	mild	2020/3/20	15	2020/4/4	+	2020/4/4	+	28
316	Site 2	10	Female	Nasopharyngeal swab	mild	2020/3/16	19	2020/4/4	+	2020/4/4	+	32
317	Site 2	71	Male	Nasopharyngeal swab	mild	2020/3/19	16	2020/4/4	+	2020/4/4	+	32
318	Site 2	79	Male	Oropharyngeal swab	NA	NA	NA	2020/4/4	-	2020/4/4	+	36
319	Site 2	52	Female	Oropharyngeal swab	mild	2020/4/1	4	2020/4/5	+	2020/4/5	+	24

320	Site 2	48	Male	Nasopharyngeal swab	mild	2020/3/30	6	2020/4/5	+	2020/4/5	+	21
321	Site 2	38	Male	Nasopharyngeal swab	mild	2020/3/23	13	2020/4/5	+	2020/4/5	+	20
322	Site 2	56	Male	Oropharyngeal swab	mild	2020/3/24	12	2020/4/5	+	2020/4/5	+	21
323	Site 2	45	Male	Oropharyngeal swab	mild	2020/3/21	15	2020/4/5	+	2020/4/5	+	33
324	Site 2	66	Female	Nasopharyngeal swab	mild	2020/3/18	18	2020/4/5	+	2020/4/5	+	27
325	Site 2	41	Female	Oropharyngeal swab	mild	2020/3/18	18	2020/4/5	+	2020/4/5	+	33
326	Site 2	13	Male	Nasopharyngeal swab	mild	2020/3/16	20	2020/4/5	+	2020/4/5	+	36
327	Site 2	58	Female	Nasopharyngeal swab	mild	2020/3/19	17	2020/4/5	+	2020/4/5	+	29
328	Site 2	60	Male	Oropharyngeal swab	mild	2020/3/19	17	2020/4/5	+	2020/4/5	+	27
329	Site 2	72	Female	Oropharyngeal swab	mild	2020/3/21	15	2020/4/5	-	2020/4/5	+	36
330	Site 2	45	Male	Oropharyngeal swab	mild	2020/4/2	4	2020/4/6	+	2020/4/6	+	22
331	Site 2	39	Male	Nasopharyngeal swab	mild	2020/3/28	9	2020/4/6	+	2020/4/6	+	21
332	Site 2	40	Female	Oropharyngeal swab	mild	2020/3/31	6	2020/4/6	+	2020/4/6	+	24
333	Site 2	49	Male	Oropharyngeal swab	mild	2020/3/22	15	2020/4/6	+	2020/4/6	+	36
334	Site 2	67	Female	Nasopharyngeal swab	mild	2020/3/23	14	2020/4/6	+	2020/4/6	+	33
335	Site 2	30	Male	Nasopharyngeal swab	NA	NA	NA	2020/4/6	+	2020/4/6	+	31
336	Site 2	29	Male	Oropharyngeal swab	mild	2020/3/10	27	2020/4/6	+	2020/4/6	+	27
337	Site 2	79	Female	Nasopharyngeal swab	mild	2020/4/1	6	2020/4/7	+	2020/4/7	+	22
338	Site 2	65	Male	Oropharyngeal swab	mild	2020/3/24	14	2020/4/7	+	2020/4/7	+	21
339	Site 2	48	Female	Oropharyngeal swab	mild	2020/3/26	12	2020/4/7	+	2020/4/7	+	23
340	Site 2	34	Female	Oropharyngeal swab	mild	2020/3/26	12	2020/4/7	+	2020/4/7	+	24
341	Site 2	83	Male	Oropharyngeal swab	severe	2020/3/31	7	2020/4/7	+	2020/4/7	+	20
342	Site 2	49	Male	Oropharyngeal swab	mild	2020/3/26	12	2020/4/7	+	2020/4/7	+	31
343	Site 2	38	Male	Nasopharyngeal swab	mild	2020/3/18	20	2020/4/7	+	2020/4/7	+	29
344	Site 2	70	Male	Nasopharyngeal swab	mild	2020/3/27	11	2020/4/7	+	2020/4/7	+	35
345	Site 2	27	Male	Nasopharyngeal swab	mild	2020/3/23	15	2020/4/7	+	2020/4/7	+	30
346	Site 2	48	Female	Oropharyngeal swab	mild	2020/3/12	26	2020/4/7	+	2020/4/7	+	34

347	Site 2	57	Male	Oropharyngeal swab	mild	2020/3/22	16	2020/4/7	+	2020/4/7	+	34
348	Site 2	30	Male	Nasopharyngeal swab	mild	2020/3/15	23	2020/4/7	+	2020/4/7	+	26

b) Data analysis

Clinical Summary of COVID-19 Antigen Rapid Test Device

RT-PCR

		+	-	Total
COVID-19 Antigen Rapid Test	+	150	0	150
	-	37	161	198
Total		187	161	348

Relative Sensitivity: 80.2 % (73.9%~85.3%) *

Sensitivity threshold 97.0% on samples with Ct < 25 (91.6% ~99.0 %)*

Relative Specificity: 100 % (97.7% ~100%)*

Overall Agreement: 89.4 % (85.7 %~92.2 %)*

*95% Confidence Interval

6. Conclusion

By the data obtained from these clinical investigations. It is a fast and convenient rapid test, which requires only room temperature storage conditions. It does not need any instrument to read the result. The background of the test is clean and the interpretation of test result is clear-cut. The test has been determined to be effective and safe.

Scientist: *Echo Ge*

R & D Manager: *Alex Dang*

Date: 06-18-2020

Date: 06-18-2020