Clinical Evaluation Report

Product: COVID-19 Antigen Rapid Test Device (Colloidal Gold)

Model: COV-201

Test start date: May 20, 2020

End date of test: September 15, 2020

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Test Location: Hubei and Ji'nan

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1. Background

Coronaviruses are enveloped RNA viruses that are distributed broadly among humans, other mammals, and birds and that cause respiratory, enteric, hepatic, and neurologic diseases.[1,2] Six coronavirus species are known to cause human disease.[3] Four viruses — 229E, OC43, NL63, and HKU1 — are prevalent and typically cause common cold symptoms in immunocompetent individuals.[3] The two other strains — severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) — are zoonotic in origin and have been linked to sometimes fatal illness.[4] Given the high prevalence and wide distribution of coronaviruses, the large genetic diversity and frequent recombination of their genomes, and increasing human–animal interface activities, novel coronaviruses are likely to emerge periodically in humans owing to frequent cross-species infections and occasional spillover events.[4,5]
The COVID-19 antigen Rapid Test Device (Colloidal Gold) detects COVID-19 virus in one test within 15 minutes. The test is user friendly, without cumbersome laboratory equipment, and requires minimal staff trainings.

2. Test Purpose

The COVID-19 Antigen Rapid Test Device (Colloidal Gold) detects COVID-19 antigens through visual interpretation of color development on the strip. COVID-19 antibodies are immobilized on the test region of the membrane respectively. During testing, the extracted specimen reacts with anti- COVID-19 antibodies conjugated to colored particles and precoated onto the sample pad of the test. The mixture then migrates through the membrane by capillary action and interacts with reagents on the membrane. If there is sufficient COVID-19 antigens in the specimen, colored band will form at the according test region of the membrane. The presence of a colored band in the test region indicates a positive result for the particular viral antigens, while its absence indicates a negative result. The appearance of a colored band at the control region serves as a procedural control, indicating that the proper volume of specimen has been added and membrane wicking has occurred.

From March to April 2020, we conducted a clinical trial on the COVID-19 Antigen Rapid Test Device (Colloidal Gold), and achieved good results. With the deepening of the understanding of the COVID-19 and the improvement of research and development, the product performance of COVID-19 Antigen Rapid Test Device (Colloidal Gold) has been further improved, and further clinical verification is required.

3. Test Design

All samples were characterized using PCR (Thermofisher 7500 Real-Time PCR) with two PCR reagents:
Sansure Biotech: Novel Coronavirus(2019-nCoV) Nucleic Acid Diagnostic Kit (PCR-Fluorescence Probing);
Bioperfectus: Novel Coronavirus(2019-nCoV) Nucleic Acid Diagnostic Kit (PCR-Fluorescence Probing).

The COVID-19 Antigen Rapid Test Device (Colloidal Gold):
The COVID-19 Antigen Rapid Test Device (Colloidal Gold) is a lateral flow based immunochromatographic rapid test for the qualitative detection of anti-COVID-19 Ag from patient's biological samples (throat swabs and nasopharyngeal swab). The device is designed to detect COVID-19 Ag. The rapid tests were read and interpreted according to the manufacturers' instructions.

4. Materials and Methods

Study Protocol

The Study protocols for human samples were approved by the ethics committee of Hubei CDC and Ji'nan CDC.

A retrospective cross sectional design was used to screen archived single serum samples received in the virology laboratory with a request for COVID-19 testing between May and September 2020. All samples were stored at −70°C after routine diagnostic testing until included in this study for evaluation. The inclusion criteria for the sample selection were: presence of the date of onset of symptoms, presence of the date of collection of specimen. All samples should be from the patients whom be infected in 14 days. A total of 204 of the 248 archived nasopharyngeal swab samples met the inclusion criteria and were selected. Demographic and clinical information were extracted from the hospital records.

Samples

The 204 consecutively archived samples selected for the evaluation were obtained from 105 (51.5.8%) female and 99(48.5 %) males. The median age was 43 years (range, 12 years to 73 years) and the median time between the onset of illness and collection of specimens was 7.9 days (range, 1 to 14 days). The samples were characterized using the reference PCR for COVID-19 and classified initially as 81 (39.7 %) COVID-19 and 123 (60.3 %) non-COVID-19.

Sample Inclusion Criteria:

All age groups and both sexes for archive samples.
Information must be available about symptoms, age, and sex of patient from which samples are collected.
The location of sample collection must be recorded. (Nasopharyngeal swabs/ Oropharyngeal swabs)

Sample Exclusion Criteria:

Archived samples with linked personal identifiers or any sample for which personal information can be discovered.

Subject swab specimens that have undergone more than 2 freeze-thaw cycles or that have not been stored frozen.

Standard of sample collection, processing and storage

The swab sample should be collected and stored in tube, then be stored at -20℃ for long term storage. The samples can be well stored at -20℃ for a long time, but be careful not to freeze thawing (freeze thawed only once).

Execution Period: May.20, 2020 to September.15, 2020

5. Statistical analysis

Microsoft Excel (Microsoft Inc., Redmond, Washington, USA) was used for data entry and data analysis was done using CIC information (Hubei CDC and Ji'nan CDC, China). A probability value (p) of < 0.05 was considered statistically significant. The sensitivity, specificity and 95% CI were calculated as previously described.

6. Clinical study management and quality control

Clinical trials responsibilities

Each clinical test unit shall have the following staffs:

The main research person: Responsible for the implementation of the test, technical guidance and management coordination;

Statistics: Responsible for summary experimental results and statistical analysis;

Report writer: Responsible for clinical summary report writing.

Other test staffs are responsible for the inspection of operations and data records.

Quality Control

The test facility shall have laboratory quality control and management system.

7. Results

A total of 204 samples from susceptible subjects were tested by the COVID-19 Antigen Rapid Test Device (Colloidal Gold) and confirmed by a commercial RT-PCR test. The result is showed in the following table:

COVID-19 Ag Rapid Test:

The specimens obtained from a population of symptomatic and asymptomatic individuals. Results were confirmed by a leading commercial RT-PCR test.

Table 1: COVID-19 Ag Rapid Test vs. RT-PCR test with 7 days infection sample:

Relative Sensitivity: 94.74% (87.64%~100.0%)
Relative Specificity: 100% (100%~100.0%)
Overall Agreement: 98.76% (97.05%~100.0%)
***95% Confidence Interval**

		COVID-19 Ag Rapid Test		
		+	-	Total
PCR	+	36	2	38
	-	0	123	123
		36	125	161

Table 2: COVID-19 Ag Rapid Test vs. RT-PCR test with 7~14 days infection sample:

Relative Sensitivity: 97.67% (93.17%~100.0%)
Relative Specificity: 100% (99.8%~100%)
Overall Agreement: 99.40% (98.22%~100.0%)
***95% Confidence Interval**

		COVID-19 Ag Rapid Test		
		+	-	Total
PCR	+	42	1	43
	-	0	123	123
		42	124	166

Table 3: Total results of COVID-19 Ag Rapid Test vs. RT-PCR test

Relative Sensitivity: 96.29% (92.18%~100%)
Relative Specificity: 100% (100%~100%)
Overall Agreement: 98.53% (96.88%~100%)
***95% Confidence Interval**

		COVID-19 Ag Rapid Test		
		+	-	Total
PCR	+	78	3	81
	-	0	123	123
		78	126	204

8. Conclusion

We conclude that the screening testing for early diagnosis of COVID-19 infections could be accomplished by using the COVID-19 antigen Rapid Test Device (Colloidal Gold) at all heath care settings during 14 days of infection Period.

Moreover, it partially overcomes the limitations associated with RT-PCR like handling of single sample without delay.

After improvement, the performance of the COVID-19 antigen Rapid Test Device (Colloidal Gold) has been further improved.

9. Reference

1. Weiss SR, Leibowitz JL. Coronavirus pathogenesis. Adv Virus Res 2011;81:85-164.
2. Masters PS, Perlman S. Coronaviridae. In: Knipe DM, Howley PM, eds. Fields virology. 6th ed. Lippincott Williams & Wilkins, 2013:825-58.
3. Su S, Wong G, Shi W, et al. Epidemiology, genetic recombination, and pathogenesis of coronaviruses. Trends Microbiol 2016;24:490-502.
4. Cui J, Li F, Shi ZL. Origin and evolution of pathogenic coronaviruses. Nat Rev Microbiol 2019;17:181-192.
5. Wong G, Liu W, Liu Y, Zhou B, Bi Y, Gao GF. MERS, SARS, and Ebola: the role of super-spreaders in infectious disease. Cell Host Microbe 2015;18:398-401.

Item no.	Sample no.	Test no.	sample type	Gender	age	Clinical diagnose background information	LTH	NAT results	samples collected datas	Confirmed cases samples collected stage:: preliminary stage、Medium-stage
							COVID-19 Ag			
1	WHAG0028	A001	Nasopharyngeal swabs	Women	60	COVID-19	POS	POS	2020/5/20	Medium stage
2	WHAG0031	A002	Nasopharyngeal swabs	Women	30	COVID-19	NEG	NEG	2020/5/20	
3	WHAG0033	A003	Nasopharyngeal swabs	Men	62	COVID-19	NEG	POS	2020/5/20	Medium stage
4	WHAG0034	A004	Nasopharyngeal swabs	Men	52	COVID-19	NEG	NEG	2020/5/20	
5	WHAG0035	A005	Nasopharyngeal swabs	Women	63	COVID-19	NEG	NEG	2020/5/20	
6	WHAG0036	A006	Oropharyngeal swabs	Men	28	COVID-19	NEG	NEG	2020/5/20	
7	WHAG0043	A007	Nasopharyngeal swabs	Men	58	COVID-19	POS	POS	2020/5/20	Medium stage
8	WHAG0048	A008	Nasopharyngeal swabs	Women	52	COVID-19	NEG	NEG	2020/5/20	
9	WHAG0052	A009	Nasopharyngeal swabs	Men	62	COVID-19	POS	POS	2020/5/20	Medium stage
10	WHAG0058	A010	Nasopharyngeal swabs	Men	35	COVID-19	NEG	NEG	2020/5/20	
11	WHAG0053	A011	Nasopharyngeal swabs	Women	52	COVID-19	POS	POS	2020/5/20	Medium stage
12	WHAG0062	A012	Nasopharyngeal swabs	Women	34	COVID-19	POS	POS	2020/5/20	Medium stage
13	WHAG0065	A013	Nasopharyngeal swabs	Men	27	COVID-19	NEG	NEG	2020/5/20	
14	WHAG0067	A014	Nasopharyngeal swabs	Men	33	COVID-19	NEG	NEG	2020/5/20	
15	WHAG0079	A015	Oropharyngeal swabs	Women	51	COVID-19	POS	POS	2020/5/20	Preliminary stage
16	WHAG0117	A016	Nasopharyngeal swabs	Men	46	COVID-19	NEG	NEG	2020/5/20	
17	WHAG0072	A017	Nasopharyngeal swabs	Men	47	COVID-19	NEG	NEG	2020/5/20	
18	WHAG0083	A018	Oropharyngeal swabs	Women	32	COVID-19	POS	POS	2020/5/20	Preliminary stage
19	WHAG0112	A019	Oropharyngeal swabs	Women	49	COVID-19	NEG	NEG	2020/5/20	
20	WHAG0085	A020	Nasopharyngeal swabs	Men	55	COVID-19	NEG	NEG	2020/5/20	
21	WHAG0087	A021	Nasopharyngeal swabs	Men	25	COVID-19	POS	POS	2020/5/20	Medium stage
22	WHAG0091	A022	Nasopharyngeal swabs	Women	54	COVID-19	NEG	NEG	2020/5/20	
23	WHAG0095	A023	Nasopharyngeal swabs	Women	42	COVID-19	NEG	NEG	2020/5/20	
24	WHAG0101	A024	Nasopharyngeal swabs	Men	52	COVID-19	POS	POS	2020/5/20	Preliminary stage
25	WHAG0105	A025	Nasopharyngeal swabs	Men	36	COVID-19	NEG	NEG	2020/5/20	
26	WHAG0106	A026	Nasopharyngeal swabs	Women	27	COVID-19	NEG	NEG	2020/5/20	
27	WHAG0109	A027	Nasopharyngeal swabs	Women	57	COVID-19	NEG	NEG	2020/5/20	
28	WHAG0114	A028	Nasopharyngeal swabs	Men	39	COVID-19	POS	POS	2020/5/20	Medium stage
29	WHAG0121	A029	Nasopharyngeal swabs	Women	40	COVID-19	NEG	NEG	2020/5/20	

30	WHAG0135	A030	Nasopharyngeal swabs	Men	62	COVID-19	NEG	NEG	2020/5/20	
31	WHAG0124	A031	Nasopharyngeal swabs	Women	36	COVID-19	POS	POS	2020/5/21	Preliminary stage
32	WHAG0128	A032	Oropharyngeal swabs	Women	63	COVID-19	NEG	NEG	2020/5/21	
33	WHAG0133	A033	Nasopharyngeal swabs	Men	54	COVID-19	NEG	NEG	2020/5/21	
34	WHAG0138	A034	Nasopharyngeal swabs	Women	50	COVID-19	NEG	NEG	2020/5/21	
35	WHAG0145	A036	Nasopharyngeal swabs	Men	48	COVID-19	POS	POS	2020/5/21	Preliminary stage
36	WHAG0156	A037	Nasopharyngeal swabs	Men	43	COVID-19	NEG	NEG	2020/5/21	
37	WHAG0176	A040	Nasopharyngeal swabs	Women	63	COVID-19	POS	POS	2020/5/21	Medium stage
38	WHAG0179	A041	Nasopharyngeal swabs	Men	32	COVID-19	NEG	NEG	2020/5/21	
39	WHAG0189	A042	Oropharyngeal swabs	Women	27	COVID-19	NEG	NEG	2020/5/21	
40	WHAG0196	A044	Nasopharyngeal swabs	Men	55	COVID-19	POS	POS	2020/5/21	Medium stage
41	WHAG0251	A045	Nasopharyngeal swabs	Women	60	COVID-19	NEG	NEG	2020/5/21	
42	WHAG0208	A046	Nasopharyngeal swabs	Men	21	COVID-19	NEG	NEG	2020/5/21	
43	WHAG0223	A047	Nasopharyngeal swabs	Women	53	COVID-19	NEG	NEG	2020/5/21	
44	WHAG0227	A048	Nasopharyngeal swabs	Men	52	COVID-19	POS	POS	2020/5/21	Preliminary stage
45	WHAG0247	A049	Nasopharyngeal swabs	Women	48	COVID-19	NEG	NEG	2020/5/21	
46	WHAG0278	A052	Oropharyngeal swabs	Men	43	COVID-19	NEG	NEG	2020/5/21	
47	WHAG0286	A053	Nasopharyngeal swabs	Men	40	COVID-19	NEG	NEG	2020/5/21	
48	WHAG0283	A054	Nasopharyngeal swabs	Women	53	COVID-19	NEG	NEG	2020/5/21	
49	WHAG0291	A057	Nasopharyngeal swabs	Women	26	COVID-19	POS	POS	2020/5/21	Preliminary stage
50	WHAG0313	A058	Nasopharyngeal swabs	Men	36	COVID-19	NEG	NEG	2020/5/21	
51	WHAG0326	A059	Nasopharyngeal swabs	Men	37	COVID-19	NEG	NEG	2020/5/21	
52	WHAG0337	A060	Nasopharyngeal swabs	Women	21	COVID-19	POS	POS	2020/5/21	Preliminary stage
53	WHAG0343	A061	Nasopharyngeal swabs	Men	85	COVID-19	NEG	NEG	2020/5/21	
54	WHAG0389	A062	Nasopharyngeal swabs	Women	27	COVID-19	POS	POS	2020/5/22	Preliminary stage
55	WHAG0408	A063	Nasopharyngeal swabs	Women	37	COVID-19	NEG	NEG	2020/5/22	
56	WHAG0409	A064	Oropharyngeal swabs	Men	12	COVID-19	NEG	NEG	2020/5/22	
57	WHAG0431	A065	Nasopharyngeal swabs	Men	40	COVID-19	POS	POS	2020/5/22	Medium stage
58	WHAG0435	A066	Nasopharyngeal swabs	Women	60	COVID-19	NEG	NEG	2020/5/22	
59	WHAG0437	A067	Nasopharyngeal swabs	Men	18	COVID-19	NEG	NEG	2020/5/22	
60	WHAG0438	A069	Nasopharyngeal swabs	Men	33	COVID-19	POS	POS	2020/5/22	Preliminary stage
61	WHAG0454	A070	Nasopharyngeal swabs	Women	24	COVID-19	NEG	NEG	2020/5/22	
62	WHAG0293	A071	Nasopharyngeal swabs	Men	31	COVID-19	POS	POS	2020/5/22	Medium stage

63	WHAG0318	A072	Nasopharyngeal swabs	Women	29	COVID-19	NEG	NEG	2020/5/22	
64	WHAG0427	A073	Nasopharyngeal swabs	Men	37	COVID-19	NEG	NEG	2020/5/22	
65	WHAG0462	A074	Nasopharyngeal swabs	Women	15	COVID-19	POS	POS	2020/5/22	Medium stage
66	WHAG0467	A075	Nasopharyngeal swabs	Men	56	COVID-19	NEG	NEG	2020/5/27	
67	WHAG0488	A076	Nasopharyngeal swabs	Women	62	COVID-19	POS	POS	2020/5/27	Preliminary stage
68	WHAG0533	A077	Nasopharyngeal swabs	Women	57	COVID-19	NEG	NEG	2020/5/27	
69	WHAG0496	A078	Nasopharyngeal swabs	Men	41	COVID-19	POS	POS	2020/5/27	Medium stage
70	WHAG0522	A080	Oropharyngeal swabs	Women	21	COVID-19	NEG	NEG	2020/5/27	
71	WHAG0576	A081	Nasopharyngeal swabs	Men	43	COVID-19	NEG	NEG	2020/5/27	
72	WHAG0579	A082	Nasopharyngeal swabs	Women	29	COVID-19	POS	POS	2020/5/27	Medium stage
73	WHAG0580	A083	Nasopharyngeal swabs	Men	40	COVID-19	NEG	NEG	2020/5/27	
74	WHAG0611	A084	Nasopharyngeal swabs	Women	63	COVID-19	NEG	NEG	2020/5/28	
75	WHAG0613	A085	Nasopharyngeal swabs	Women	58	COVID-19	NEG	NEG	2020/5/28	
76	WHAG0667	A086	Nasopharyngeal swabs	Men	61	COVID-19	POS	POS	2020/5/28	Preliminary stage
77	WHAG0778	A087	Nasopharyngeal swabs	Men	57	COVID-19	NEG	NEG	2020/6/2	
78	WHAG0754	A088	Nasopharyngeal swabs	Women	47	COVID-19	NEG	NEG	2020/6/2	
79	WHAG0780	A089	Nasopharyngeal swabs	Women	26	COVID-19	POS	POS	2020/6/2	Medium stage
80	WHAG0731	A090	Nasopharyngeal swabs	Men	44	COVID-19	NEG	NEG	2020/6/2	
81	WHAG0726	A091	Oropharyngeal swabs	Women	45	COVID-19	NEG	NEG	2020/6/2	
82	WHAG0751	A092	Nasopharyngeal swabs	Men	62	COVID-19	POS	POS	2020/6/2	Preliminary stage
83	WHAG0804	A093	Nasopharyngeal swabs	Women	61	COVID-19	NEG	NEG	2020/6/2	
84	WHAG0757	A094	Nasopharyngeal swabs	Men	44	COVID-19	NEG	NEG	2020/6/3	
85	WHAG0807	A095	Nasopharyngeal swabs	Women	60	COVID-19	POS	POS	2020/6/3	Medium stage
86	WHAG0952	A097	Nasopharyngeal swabs	Men	43	COVID-19	NEG	NEG	2020/6/3	
87	WHAG0933	A098	Nasopharyngeal swabs	Women	28	COVID-19	POS	POS	2020/6/3	Preliminary stage
88	WHAG0951	A099	Nasopharyngeal swabs	Men	36	COVID-19	POS	POS	2020/6/3	Medium stage
89	WHAG0863	A100	Nasopharyngeal swabs	Women	48	COVID-19	POS	POS	2020/6/3	Medium stage
90	WHAG1091	A102	Nasopharyngeal swabs	Men	30	COVID-19	NEG	NEG	2020/6/3	
91	WHAG0969	A104	Nasopharyngeal swabs	Women	51	COVID-19	POS	POS	2020/6/4	Medium stage
92	WHAG1008	A105	Nasopharyngeal swabs	Women	19	COVID-19	NEG	NEG	2020/6/4	
93	WHAG1078	A106	Nasopharyngeal swabs	Women	32	COVID-19	NEG	NEG	2020/6/4	
94	WHAG1053	A107	Nasopharyngeal swabs	Men	36	COVID-19	NEG	NEG	2020/6/8	
95	WHAG0996	A109	Oropharyngeal swabs	Women	31	COVID-19	NEG	POS	2020/6/8	Preliminary stage

96	WHAG0973	A110	Nasopharyngeal swabs	Men	62	COVID-19	NEG	NEG	2020/6/8	
97	WHAG1041	A111	Nasopharyngeal swabs	Men	43	COVID-19	NEG	NEG	2020/6/8	
98	WHAG1065	A112	Nasopharyngeal swabs	Women	28	COVID-19	POS	POS	2020/6/8	Medium stage
99	WHAG1141	A114	Nasopharyngeal swabs	Men	53	COVID-19	NEG	NEG	2020/6/8	
100	WHAG1167	A115	Nasopharyngeal swabs	Women	25	COVID-19	NEG	NEG	2020/6/10	
101	WHAG1189	A117	Oropharyngeal swabs	Men	57	COVID-19	POS	POS	2020/6/10	Preliminary stage
102	WHAG1196	A118	Nasopharyngeal swabs	Women	45	COVID-19	NEG	NEG	2020/6/10	
103	WHAG1104	A119	Oropharyngeal swabs	Women	37	COVID-19	NEG	NEG	2020/6/10	
104	WHAG1187	A120	Nasopharyngeal swabs	Men	26	COVID-19	NEG	NEG	2020/6/11	
105	WHAG1173	A121	Nasopharyngeal swabs	Women	38	COVID-19	POS	POS	2020/6/11	Preliminary stage
106	WHAG1222	A122	Nasopharyngeal swabs	Men	55	COVID-19	POS	POS	2020/6/12	Medium stage
107	WHAG1278	A123	Nasopharyngeal swabs	Women	27	COVID-19	NEG	NEG	2020/6/12	
108	WHAG1354	A124	Nasopharyngeal swabs	Women	38	COVID-19	NEG	NEG	2020/6/15	
109	WHAG1467	A126	Nasopharyngeal swabs	Men	36	COVID-19	POS	POS	2020/6/16	Preliminary stage
110	WHAG1564	A127	Nasopharyngeal swabs	Women	48	COVID-19	NEG	NEG	2020/6/18	
111	WHAG1568	A128	Nasopharyngeal swabs	Men	35	COVID-19	NEG	NEG	2020/6/18	
112	WHAG1579	A129	Nasopharyngeal swabs	Women	52	COVID-19	POS	POS	2020/6/18	Medium stage
113	WHAG1662	A130	Nasopharyngeal swabs	Women	46	COVID-19	POS	POS	2020/6/20	Preliminary stage
114	WHAG1715	A131	Nasopharyngeal swabs	Men	35	COVID-19	NEG	NEG	2020/6/21	
115	WHAG1856	A132	Nasopharyngeal swabs	Women	56	COVID-19	POS	POS	2020/6/27	Medium stage
116	WHAG1883	A133	Nasopharyngeal swabs	Women	60	COVID-19	NEG	NEG	2020/6/27	
117	WHAG2130	A136	Nasopharyngeal swabs	Men	25	COVID-19	POS	POS	2020/6/30	Preliminary stage
118	WHAG2147	A137	Oropharyngeal swabs	Men	17	COVID-19	NEG	NEG	2020/6/30	
119	WHAG2311	A139	Nasopharyngeal swabs	Men	38	COVID-19	NEG	NEG	2020/7/5	
120	WHAG2371	A140	Nasopharyngeal swabs	Men	41	COVID-19	POS	POS	2020/7/5	Medium stage
121	WHAG2389	A141	Nasopharyngeal swabs	Women	45	COVID-19	NEG	NEG	2020/7/5	
122	WHAG2689	A142	Nasopharyngeal swabs	Men	36	COVID-19	POS	POS	2020/7/17	Preliminary stage
123	WHAG2703	A143	Nasopharyngeal swabs	Women	26	COVID-19	NEG	NEG	2020/7/17	
124	WHAG2825	A144	Oropharyngeal swabs	Men	58	COVID-19	POS	POS	2020/7/23	Preliminary stage
125	WHAG3026	A145	Nasopharyngeal swabs	Men	59	COVID-19	NEG	NEG	2020/7/26	
126	WHAG3252	A146	Nasopharyngeal swabs	Women	35	COVID-19	POS	POS	2020/7/29	Preliminary stage
127	WHAG3288	A147	Nasopharyngeal swabs	Women	54	COVID-19	NEG	NEG	2020/7/29	
128	WHAG3530	A148	Nasopharyngeal swabs	Men	55	COVID-19	NEG	NEG	2020/8/2	

129	WHAG3610	A150	Nasopharyngeal swabs	Men	60	COVID-19	POS	POS	2020/8/4	Preliminary stage
130	WHAG3619	A151	Nasopharyngeal swabs	Women	22	COVID-19	POS	POS	2020/8/4	Medium stage
131	WHAG3713	A152	Nasopharyngeal swabs	Men	29	COVID-19	NEG	NEG	2020/8/6	
132	WHAG3733	A153	Nasopharyngeal swabs	Men	30	COVID-19	NEG	NEG	2020/8/6	
133	WHAG3734	A154	Nasopharyngeal swabs	Women	44	COVID-19	POS	POS	2020/8/6	Medium stage
134	WHAG3935	A155	Nasopharyngeal swabs	Men	43	COVID-19	POS	POS	2020/8/13	Preliminary stage
135	WHAG4036	A156	Oropharyngeal swabs	Women	50	COVID-19	NEG	NEG	2020/8/17	
136	WHAG4037	A157	Nasopharyngeal swabs	Women	16	COVID-19	NEG	NEG	2020/8/17	
137	WHAG4048	A159	Nasopharyngeal swabs	Men	33	COVID-19	POS	POS	2020/8/17	Preliminary stage
138	WHAG4073	A160	Nasopharyngeal swabs	Men	38	COVID-19	NEG	NEG	2020/8/17	
139	WHAG4336	A162	Nasopharyngeal swabs	Women	29	COVID-19	NEG	NEG	2020/8/28	
140	WHAG5841	A163	Nasopharyngeal swabs	Women	13	COVID-19	POS	POS	2020/9/13	Medium stage
141	WHAG5862	A165	Nasopharyngeal swabs	Men	18	COVID-19	NEG	NEG	2020/9/13	
142	WHAG6223	A171	Nasopharyngeal swabs	Women	26	COVID-19	NEG	NEG	2020/9/15	
143	JNAG0105	B001	Nasopharyngeal swabs	Men	55	COVID-19	NEG	NEG	2020/5/25	
144	JNAG0106	B002	Nasopharyngeal swabs	Women	58	COVID-19	POS	POS	2020/5/25	Medium stage
145	JNAG0107	B003	Nasopharyngeal swabs	Men	71	COVID-19	POS	POS	2020/5/25	Preliminary stage
146	JNAG0123	B004	Oropharyngeal swabs	Women	65	COVID-19	NEG	NEG	2020/5/25	
147	JNAG0126	B005	Nasopharyngeal swabs	Women	31	COVID-19	POS	POS	2020/5/25	Medium stage
148	JNAG0139	B006	Nasopharyngeal swabs	Men	29	COVID-19	NEG	NEG	2020/5/25	
149	JNAG0147	B008	Nasopharyngeal swabs	Men	59	COVID-19	POS	POS	2020/5/25	Medium stage
150	JNAG0153	B009	Nasopharyngeal swabs	Women	66	COVID-19	NEG	NEG	2020/5/25	
151	JNAG0156	B010	Nasopharyngeal swabs	Women	54	COVID-19	POS	POS	2020/5/25	Medium stage
152	JNAG0158	B011	Nasopharyngeal swabs	Men	73	COVID-19	NEG	NEG	2020/5/25	
153	JNAG0164	B012	Nasopharyngeal swabs	Women	55	COVID-19	NEG	NEG	2020/5/25	
154	JNAG0168	B013	Nasopharyngeal swabs	Women	61	COVID-19	NEG	NEG	2020/5/25	
155	JNAG0217	B014	Nasopharyngeal swabs	Men	65	COVID-19	POS	POS	2020/5/26	Medium stage
156	JNAG0226	B015	Nasopharyngeal swabs	Women	66	COVID-19	NEG	NEG	2020/5/26	
157	JNAG0228	B016	Nasopharyngeal swabs	Men	39	COVID-19	NEG	NEG	2020/5/26	
158	JNAG0232	B018	Nasopharyngeal swabs	Women	57	COVID-19	NEG	NEG	2020/5/26	
159	JNAG0233	B019	Nasopharyngeal swabs	Women	47	COVID-19	NEG	POS	2020/5/26	Preliminary stage
160	JNAG0241	B020	Nasopharyngeal swabs	Women	34	COVID-19	NEG	NEG	2020/5/26	
161	JNAG0245	B021	Nasopharyngeal swabs	Men	33	COVID-19	NEG	NEG	2020/5/26	

162	JNAG0252	B022	Nasopharyngeal swabs	Men	32	COVID-19	POS	POS	2020/5/26	Medium stage
163	JNAG0257	B023	Nasopharyngeal swabs	Women	14	COVID-19	NEG	NEG	2020/5/26	
164	JNAG0324	B024	Nasopharyngeal swabs	Women	44	COVID-20	POS	POS	2020/5/28	Preliminary stage
165	JNAG0326	B025	Oropharyngeal swabs	Men	34	COVID-21	NEG	NEG	2020/5/28	
166	JNAG0331	B027	Nasopharyngeal swabs	Women	68	COVID-22	NEG	NEG	2020/5/28	
167	JNAG0337	B028	Nasopharyngeal swabs	Men	50	COVID-23	NEG	NEG	2020/5/28	
168	JNAG0342	B029	Nasopharyngeal swabs	Women	26	COVID-24	POS	POS	2020/5/28	Medium stage
169	JNAG0347	B030	Nasopharyngeal swabs	Men	40	COVID-25	POS	POS	2020/5/28	Preliminary stage
170	JNAG0352	B031	Nasopharyngeal swabs	Women	25	COVID-26	NEG	NEG	2020/5/28	
171	JNAG0358	B032	Nasopharyngeal swabs	Women	45	COVID-27	POS	POS	2020/5/28	Preliminary stage
172	JNAG0362	B033	Nasopharyngeal swabs	Women	25	COVID-28	NEG	NEG	2020/5/28	
173	JNAG0371	B035	Nasopharyngeal swabs	Men	57	COVID-29	NEG	NEG	2020/5/28	
174	JNAG0377	B036	Nasopharyngeal swabs	Women	31	COVID-30	NEG	NEG	2020/5/28	
175	JNAG0523	B037	Nasopharyngeal swabs	Men	31	COVID-31	POS	POS	2020/6/3	Preliminary stage
176	JNAG0531	B038	Nasopharyngeal swabs	Men	56	COVID-32	NEG	NEG	2020/6/3	
177	JNAG0547	B039	Nasopharyngeal swabs	Women	19	COVID-33	NEG	NEG	2020/6/3	
178	JNAG0553	B040	Nasopharyngeal swabs	Men	53	COVID-34	NEG	NEG	2020/6/3	
179	JNAG0563	B041	Nasopharyngeal swabs	Women	45	COVID-35	POS	POS	2020/6/3	Medium stage
180	JNAG0569	B042	Nasopharyngeal swabs	Men	30	COVID-36	NEG	NEG	2020/6/3	
181	JNAG0803	B043	Nasopharyngeal swabs	Women	49	COVID-37	POS	POS	2020/6/13	Preliminary stage
182	JNAG0997	B044	Nasopharyngeal swabs	Women	35	COVID-38	NEG	NEG	2020/6/14	
183	JNAG1017	B045	Nasopharyngeal swabs	Men	53	COVID-39	POS	POS	2020/6/14	Medium stage
184	JNAG1347	B047	Nasopharyngeal swabs	Women	32	COVID-40	NEG	NEG	2020/6/18	
185	JNAG1352	B048	Oropharyngeal swabs	Women	57	COVID-41	POS	POS	2020/6/18	Preliminary stage
186	JNAG1368	B050	Nasopharyngeal swabs	Men	56	COVID-42	NEG	NEG	2020/6/18	
187	JNAG1463	B051	Nasopharyngeal swabs	Men	44	COVID-43	NEG	NEG	2020/6/23	
188	JNAG1491	B053	Nasopharyngeal swabs	Women	59	COVID-44	POS	POS	2020/6/23	Medium stage
189	JNAG1551	B054	Nasopharyngeal swabs	Men	39	COVID-45	NEG	NEG	2020/6/25	
190	JNAG1562	B055	Nasopharyngeal swabs	Women	38	COVID-46	POS	POS	2020/6/25	Medium stage
191	JNAG1716	B056	Nasopharyngeal swabs	Women	48	COVID-47	NEG	NEG	2020/7/5	
192	JNAG1727	B057	Nasopharyngeal swabs	Men	46	COVID-48	POS	POS	2020/7/5	Preliminary stage
193	JNAG1773	B058	Nasopharyngeal swabs	Men	39	COVID-49	NEG	NEG	2020/7/5	
194	JNAG1783	B060	Nasopharyngeal swabs	Women	33	COVID-50	POS	POS	2020/7/9	Medium stage

195	JNAG1921	B061	Nasopharyngeal swabs	Women	46	COVID-51	NEG	NEG	2020/7/19	
196	JNAG2158	B062	Oropharyngeal swabs	Men	49	COVID-52	NEG	NEG	2020/7/28	
197	JNAG2319	B063	Nasopharyngeal swabs	Women	71	COVID-53	POS	POS	2020/7/29	Preliminary stage
198	JNAG2560	B064	Nasopharyngeal swabs	Women	68	COVID-54	POS	POS	2020/8/5	Medium stage
199	JNAG2742	B067	Nasopharyngeal swabs	Men	65	COVID-55	NEG	NEG	2020/8/13	
200	JNAG2967	B068	Nasopharyngeal swabs	Men	44	COVID-56	NEG	NEG	2020/8/19	
201	JNAG3063	B073	Nasopharyngeal swabs	Women	36	COVID-57	NEG	NEG	2020/8/22	
202	JNAG3178	B074	Nasopharyngeal swabs	Men	39	COVID-58	POS	POS	2020/8/25	Medium stage
203	JNAG3351	B076	Nasopharyngeal swabs	Men	52	COVID-59	NEG	NEG	2020/8/26	
204	JNAG3566	B077	Nasopharyngeal swabs	Women	32	COVID-19	NEG	NEG	2020/8/28	