

Effectivity Test of SAN-AIR: Household Grade Disinfectant in Eradicating SARS- CoV-2

KALGen Innolab – April, 2021



**THRIVE
THROUGH INNOVATION**



SAN-AIR V3R Commercial/Household Grade Disinfectant



- SAN-AIR V3R Commercial/Household Grade Disinfectant produced by San-Air
- Disinfects surfaces
- Claimed to targets mold, bacteria and effective against COVID-19

Materials and Tools



SAN-AIR
Household Grade
Disinfectant



1.5ml microcentrifuge tube



15 mL falcon tube

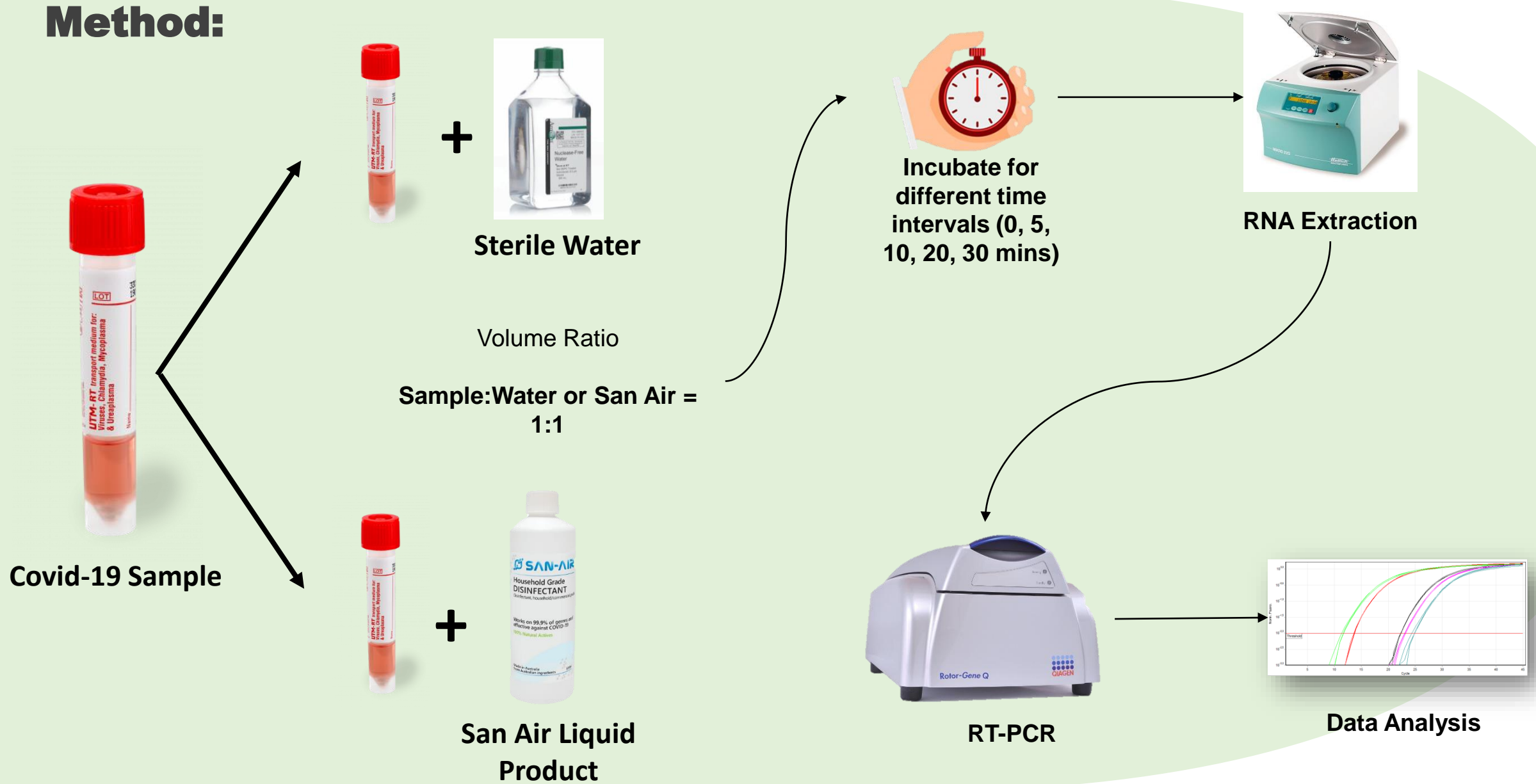


Confirmed COVID
positive sample



Nuclease Free Water

Method:



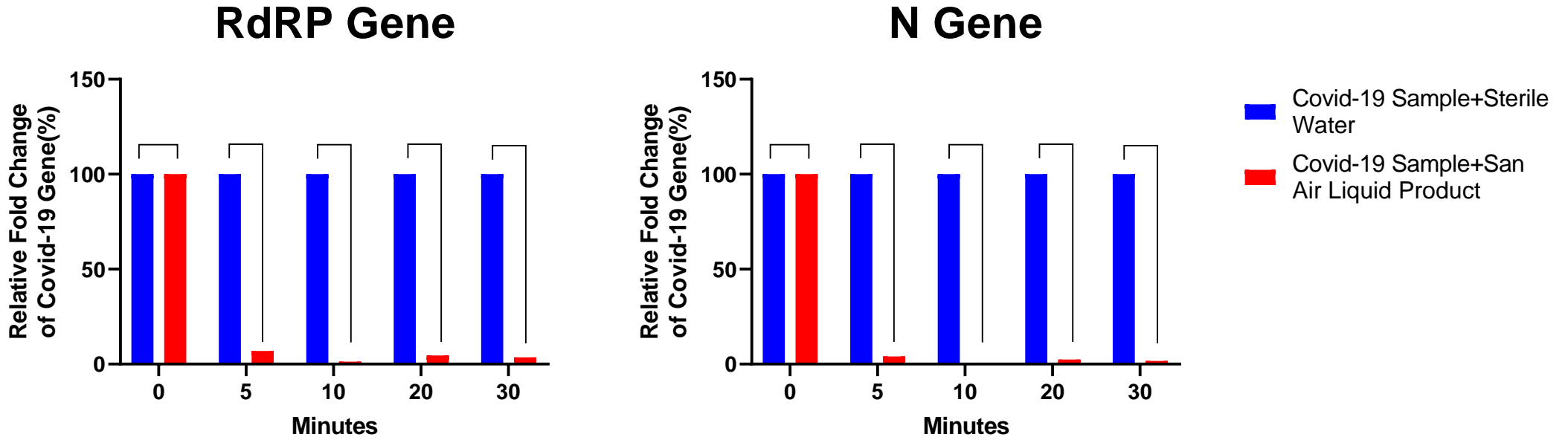
Result

- In this PCR test, two genes of Covid-19 were used as target; RdRP gene and N gene. In addition there is an internal control (IC) acting as quality control of each sample. The covid-19 genes will act as indirect measurement to see the effectivity of this disinfectant agent
- 5 interval time points were taken for each group: 0, 5, 10, 20, 30
- CT values for each group and each treatment were summarized in the table bellow:

Incubation Time	Water			San Air Liquid Product		
	CT RdRP	CT N	IC	CT RdRP	CT N	IC
0 min	14.27	12.45	13.43	12.91	13.38	12.59
5 min	13.78	12.00	12.84	16.27	17.54	13.38
10 min	13.09	11.28	13.06	17.99	19.55	12.91
20 min	13.14	11.32	12.69	16.24	17.59	13.1
30 min	13.85	12.00	13.01	17.29	18.78	13.33

Result

- Converting CT Value into relative fold change of covid-19 genes:



- In both covid-19 genes, significant reduction has been seen in the first 5 minutes of treatment with San Air Liquid Product
- There is not much difference in percent reduction after 5 min treatment with San Air Liquid Product

Conclusion

- San Air Liquid Product seems to be very effective in eradicating Sars-CoV-2 virus within first 5 minutes. However, we did not see significant difference of treatment effect after 5 min time point.
- In comparison to san air gel product, the liquid product showed better efficacy of disinfection. This discrepancy may due to the liquid properties itself. Liquid product was mixed to the sample so that the sample was homogenously exposed to the active compound. Meanwhile, sample added onto gel product only get exposed to the disinfectant agent in its surface portion.
- Overall, the product showed high efficacy to degrade Sars-CoV-2 virus particle when applied correctly. Further tests may be set to explore the efficacy of the product in different time points (shorter than 5 min), different sample-disinfectant volume ratio, or to compare with other disinfectant product.

THANK YOU