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Version 1

GM Covid-19 saliva test (v1) V.1

DOI

<https://dx.doi.org/10.17504/protocols.io.bkgfkttn>

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¹GM Biosciences

Narwhale for XPrize

XPRIZE Rapid Covid Tes...



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Protocol status: Working

We use this protocol and it's working

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Abstract

GM Covid-19 saliva test is a RT-PCR test intended for qualitative detection of nucleic acids from SARS-CoV-2 in saliva specimen. The test is used for screening purpose under class of "research used only" (RUO). The test is not for diagnostic purpose. Positive result would be referred to an official clinical test with appropriate certification (i.e CLIA) required for clinical diagnosis.



Setup reaction

19m

1 Prepare PCR master mix

3m

Squeeze Bottle A to add all of its liquid into Bottle B; Close lid of Bottle B and shake to mix;

Squeeze Bottle B to load one droplet into each PCR tube to setup a 96-well PCR plate.

2 Saliva-Prep

16m

Saliva is self-collected into any sterile tubes with screw cap and wide opening (Sanitize hands before and after saliva collection);

Use disposable transfer pipette with fixed volume to pipett saliva into a Saliva-Prep tube, tightly screw cap, and mix thoroughly;

Heat the Saliva-Prep tube at 70 °C for 00:05:00 by using a dry-bath or equivalent;

Put the tube on ice for 00:10:00 , then at Room temperature on GM-rack for

00:01:00

RT-PCR

50m

3 Load sample

1m

Use disposable GM-stick to slowly insert into Saliva-prep tube and slowly pull it out, then directly dip it into a PCR tube. Close PCR tube. Repeat this step for each sample.

Pulse spin the PCR strip/plate to bring the liquid to bottom.

4 RT-PCR

49m

Put the PCR strip/plate into a thermal cycler, choose and start the program "GM Covid19 Test".

Note: The test is suitable for conventional thermal cyclers. BenchMark's TC32 and Thermofisher's Veriti thermocycler have been tested.

5 Check color

1m

Check color of PCR reactions while keeping PCR tube closed. There are two ways to check color of PCR reactions: