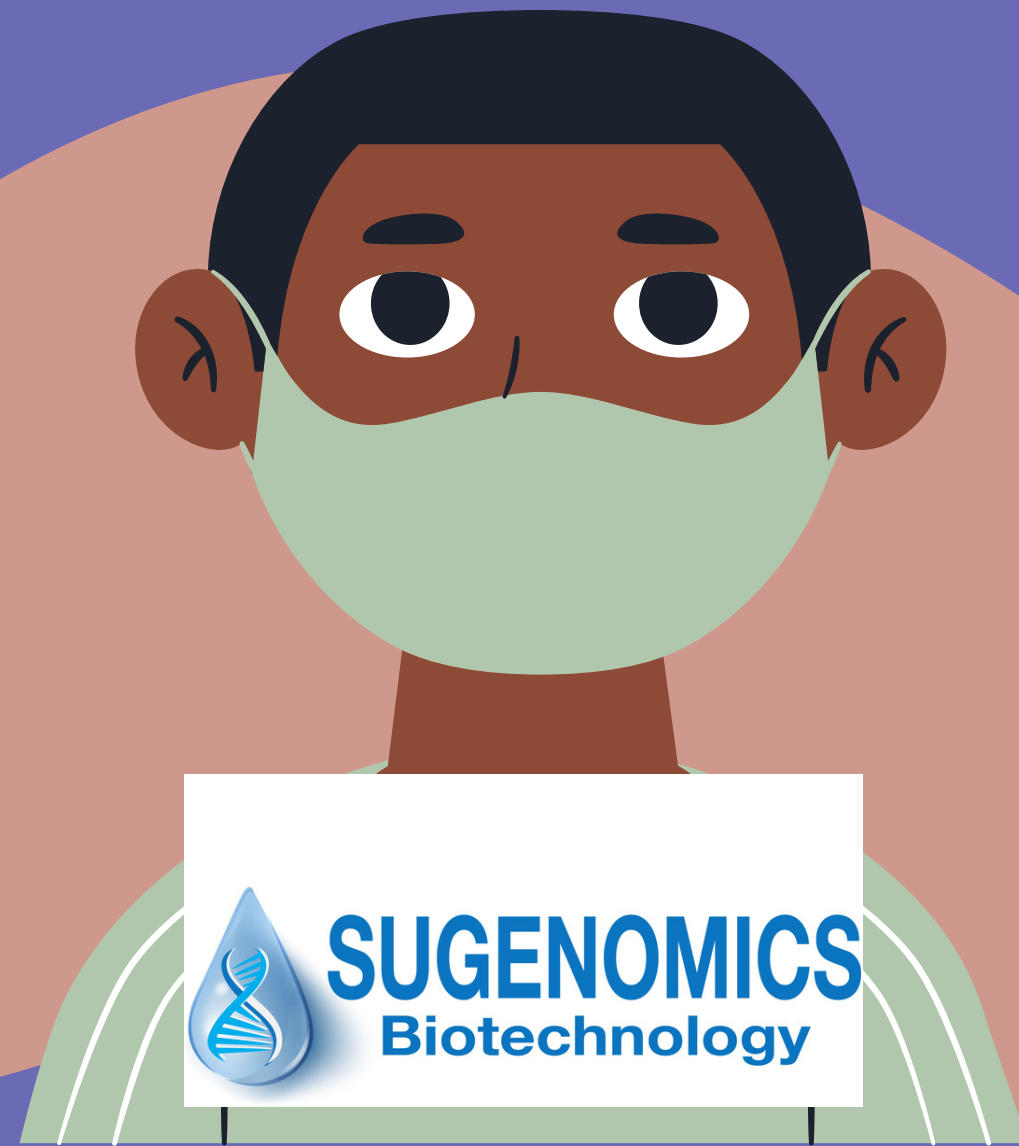


# SUGENOMICS COVID DETECTION KITS

FAST, RELIABLE, ACCURATE AND  
FLEXIBLE NUCLEIC ACID  
AMPLIFICATION (NAAT) KITS



# WHAT IS COVID TEST? (ACCORDING TO FDA)

	MOLECULAR TEST	ANTIGEN TEST	ANTIBODY TEST
<b>Also known as...</b>	Diagnostic test, viral test, molecular test, nucleic acid amplification test (NAAT), RT-PCR test, LAMP test	Diagnostic test	Serological test, serology blood test, serology test
<b>How the sample is taken...</b>	Nasopharyngeal (the part of the throat behind the nose), nasal or throat swab (most tests) Saliva (a few tests)	Nasal or nasopharyngeal swab (most tests)	Finger stick or blood draw
<b>How long it takes to get results...</b>	Same day (some locations) or up to a week (longer in some locations with many tests)	Some may be very fast (15 – 30 minutes), depending on the test	Same day (many locations) or 1-3 days
<b>Is another test needed...</b>	This test is typically highly accurate and usually does not need to be repeated.	Positive results are usually highly accurate, but false positives can happen, especially in areas where very few people have the virus. Negative results may need to be confirmed with a molecular test.	Sometimes a second antibody test is needed for accurate results.
<b>What it shows...</b>	Diagnoses active coronavirus infection	Diagnoses active coronavirus infection	Shows if you've been infected by coronavirus in the past
<b>What it can't do...</b>	Show if you ever had COVID-19 or were infected with the virus that causes COVID-19 in the past	Antigen tests are more likely to miss an active COVID-19 infection compared to molecular tests. Your health care provider may order a molecular test if your antigen test shows a negative result but you have symptoms of COVID-19.	Diagnose COVID-19 at the time of the test or show that you do not have COVID-19.

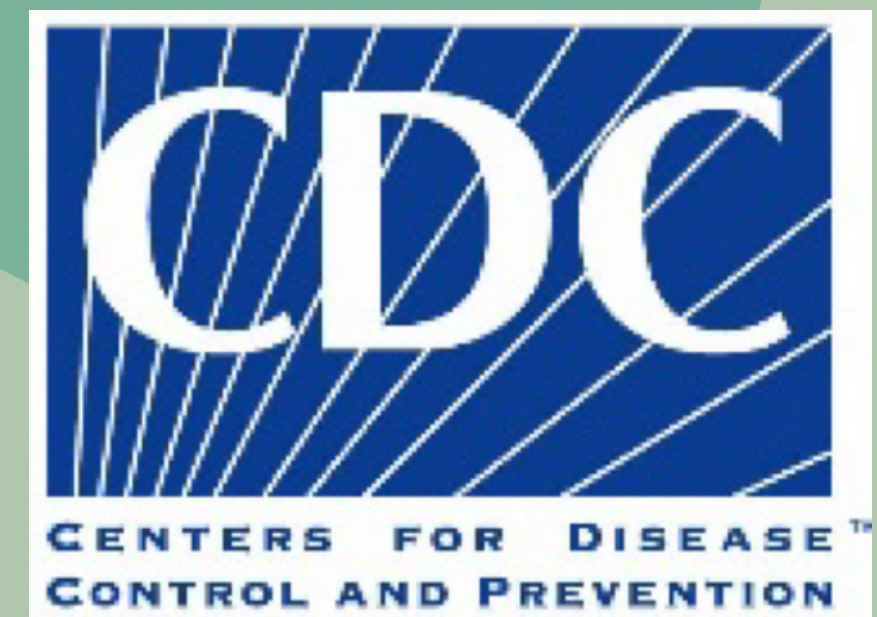


GOLD STANDART IS PCR

This test is typically highly accurate and usually does not need to be repeated



SUGENOMICS COVID TEST SOLUTIONS



SUGENOMICS DEVELOPED COVID NAAT TESTS



**GISAID**

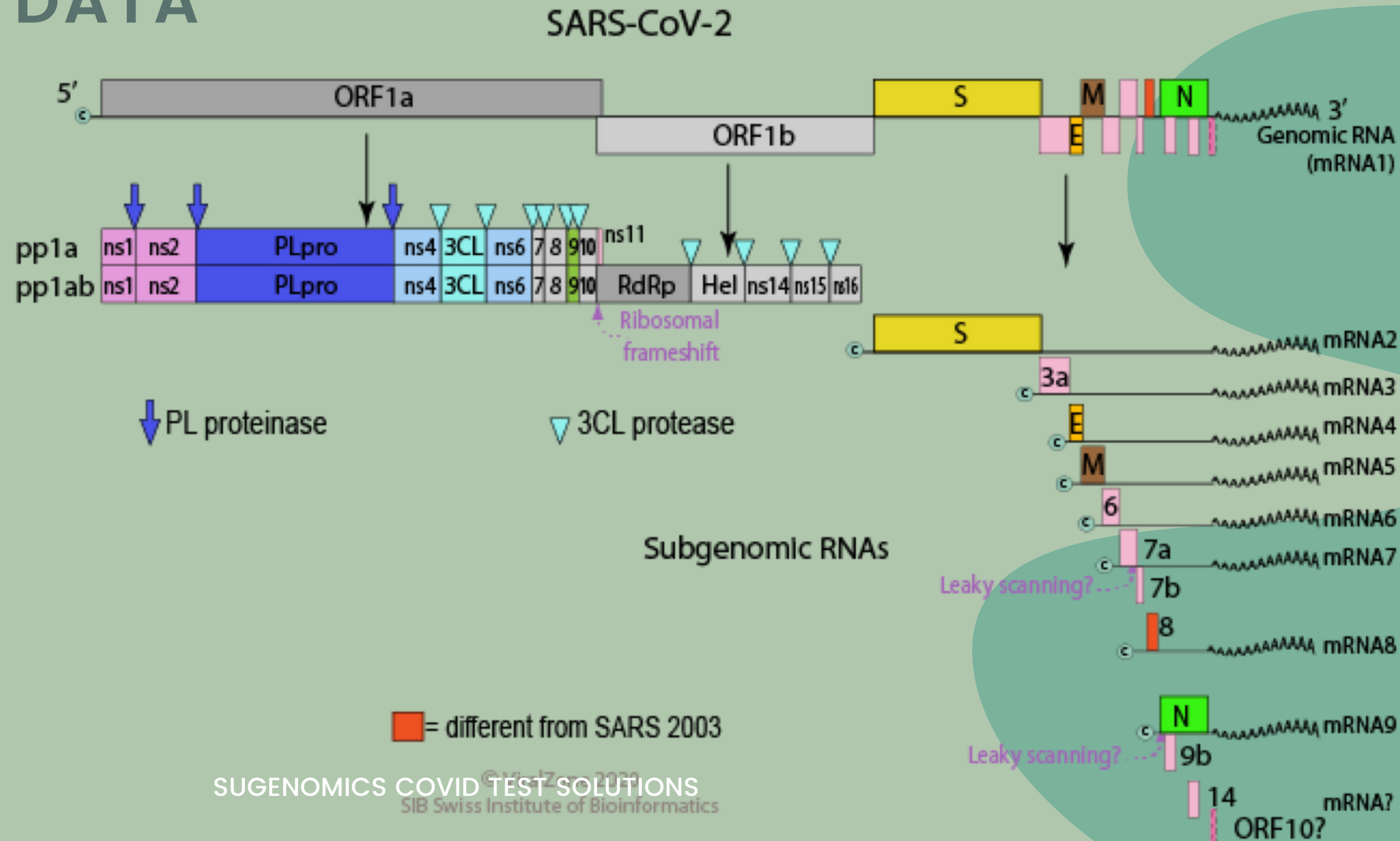
## REAL TIME PCR & LAMP KITS



We analyzed thousands of sequenced SARSnCOV Genomes

- Selected best regions for reliable detection
- Designed best multiplex combinations

# SUGENOMICS UTILIZES THE GENOMICS BIG DATA



# ADVANTAGES



Developed by the bioinformatics analysis of thousands of the high-quality SARS nCoV-19 genomes published in GISAID and NCBI.



Appropriate to World Health Organization (WHO) and Centers of Disease Control of USA (USA-CDC).



Includes synthetic SARS nCoV-19 RNAs developed and certified by European Union Commission Joint Research Centre (Geel, Belgium) called EURM-19.



Includes an internal human control Ribonuclease P (RNase P) gene to check RNA isolation and reverse transcription success.



Targets RNA-Dependent RNA Polymerase (RdRp) and Nucleocapsid (N) genes specific to SARS nCoV-19.

SHOWS EXCELLENT CONCORDANCE OF RESULTS IN MULTIPLEX REACTIONS.

# ADVANTAGES



Formulated to amplify two target genes in a single reaction.



Can scan up to 96 samples in a 96-well plate qPCR machine.



Detects two viral genes in a single tube with short time (<45 minutes).



Limit of detection (LoD) is 10 copies/reaction.

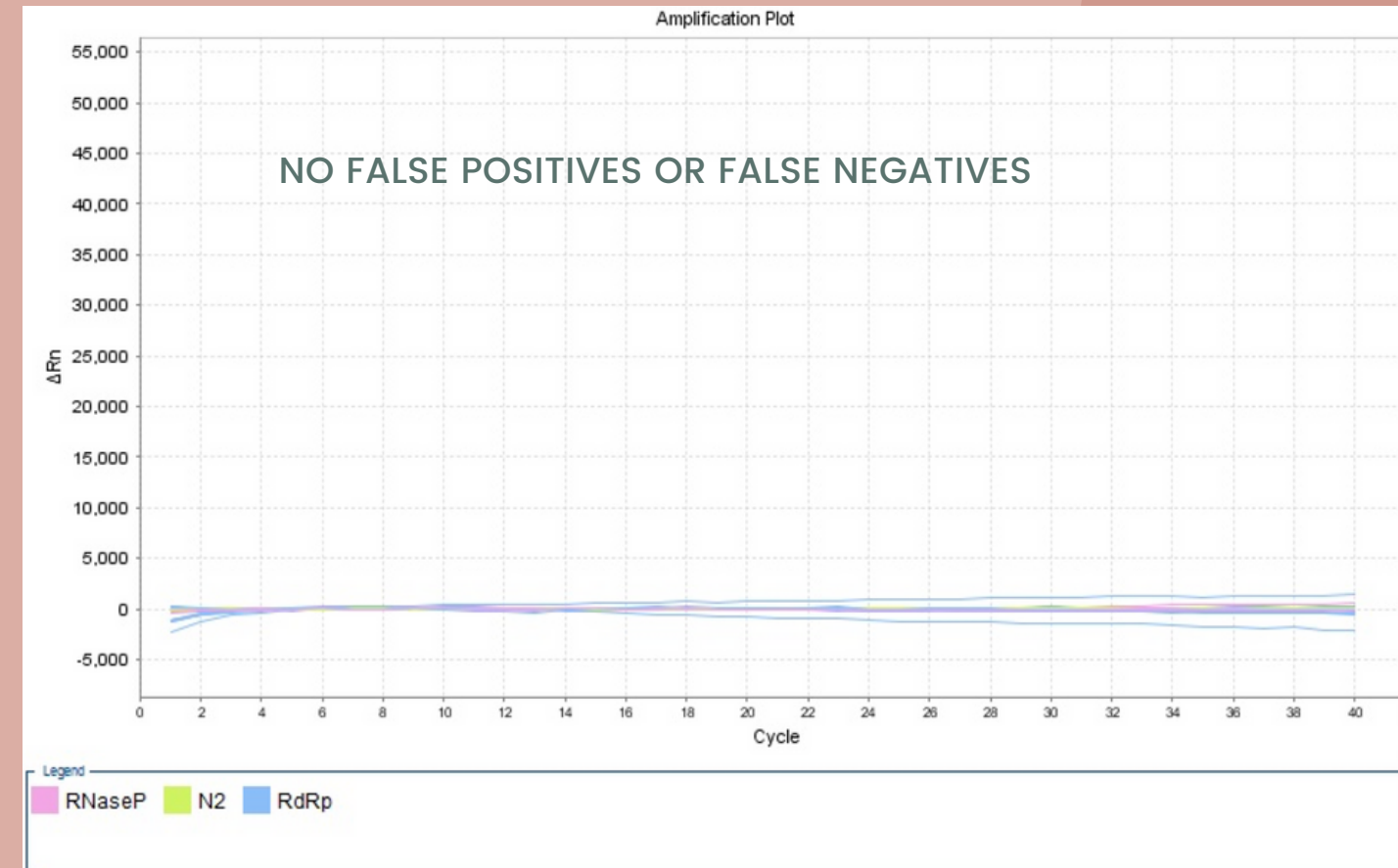
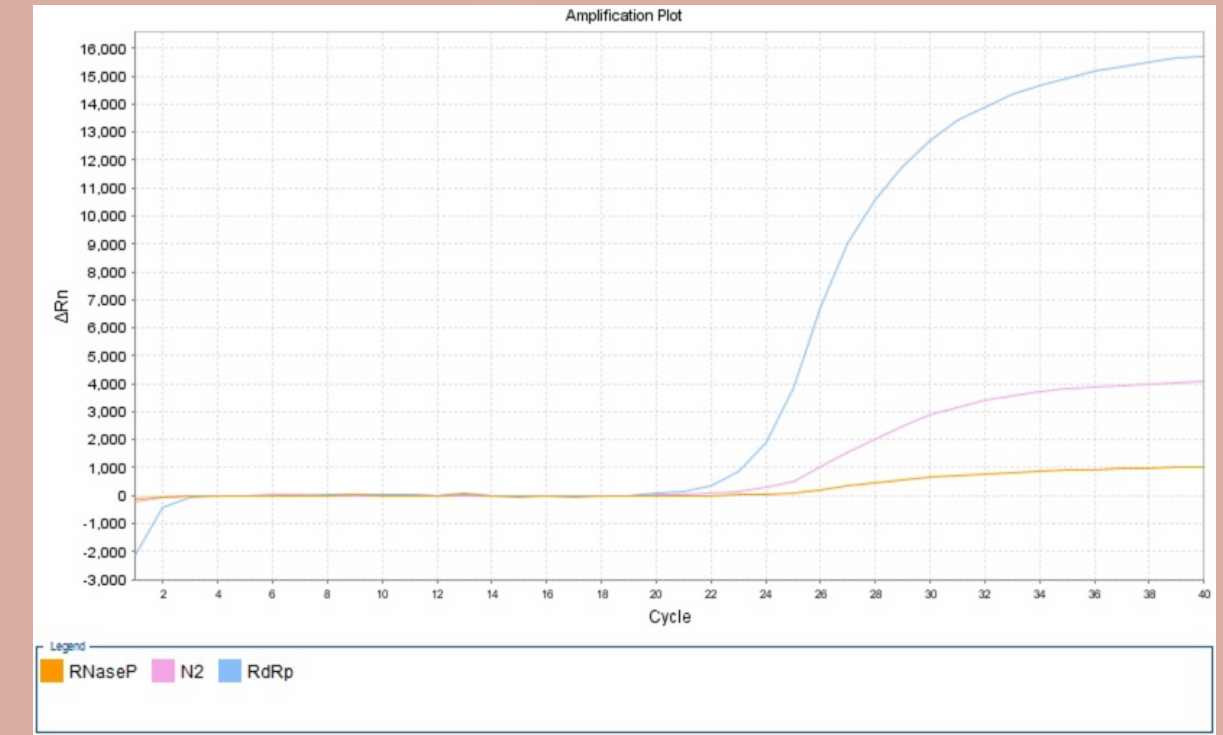


Validated on ABI StepOnePlus system and compatible with standard RT-PCR machines (such as ABI 7000, 7300, 7500, Roche 480, MX3000P, MX3005P, Rotorgene TM6000, Icyler IQTM4/5, and Bio-Rad CFX96).

SHOWS EXCELLENT CONCORDANCE OF RESULTS IN MULTIPLEX REACTIONS.

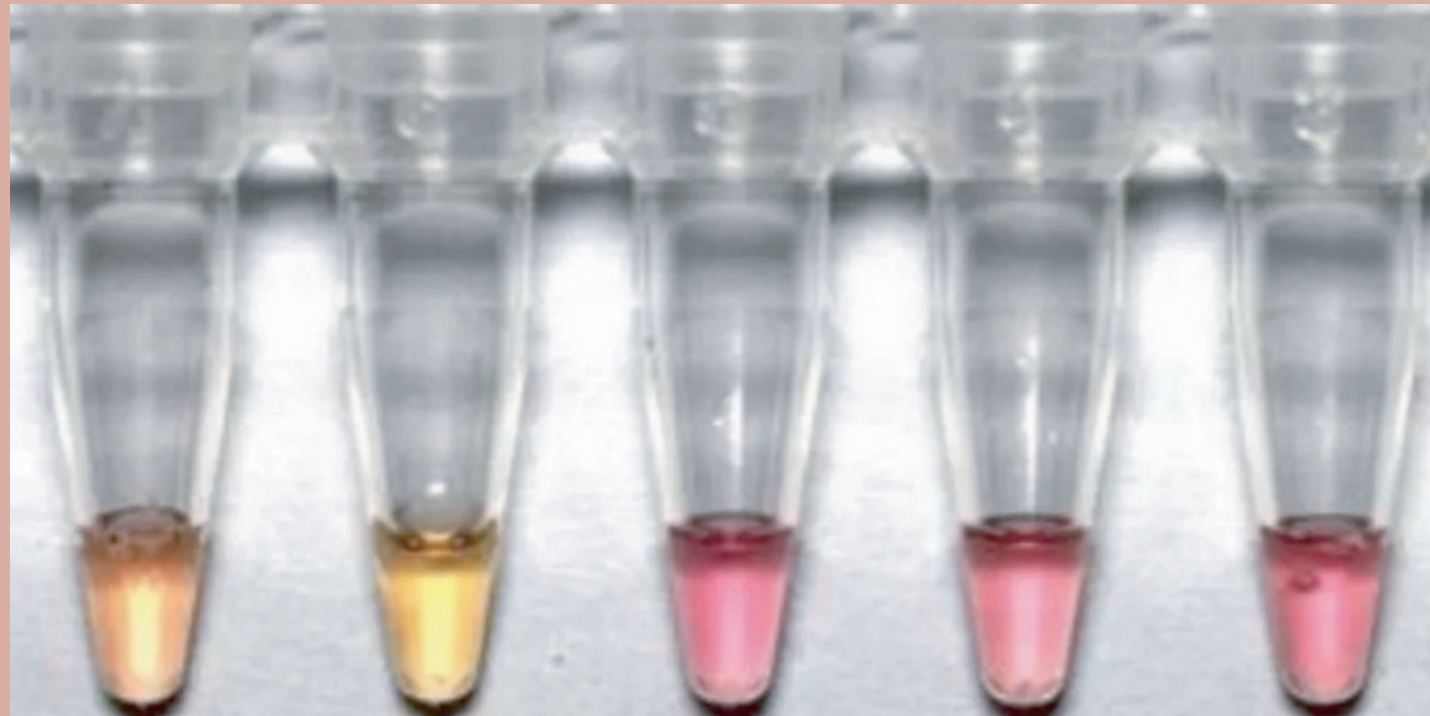
# SUGENOMICS PCR COVID DETECTION KIT:

Detects RdRP & N genes in a single tube with multiplex reaction and an internal RNase P gene in separate tube.





## LAMP also known as RAPID PCR



**Detects SARS-CoV-2 RNA in 15 minutes**

- Ready to use formulation.
- Simplified procedure.

# OPERATION OF VIROLAMP KIT



**Extracted RNA specimen**

5 ul



**Primer Mix**

**LAMP Mix**

2.5 ul

17.5 ul



# OPERATION OF ORSALAMP KIT

MIX SOLUTION AND THEN SPIN DOWN TUBES.

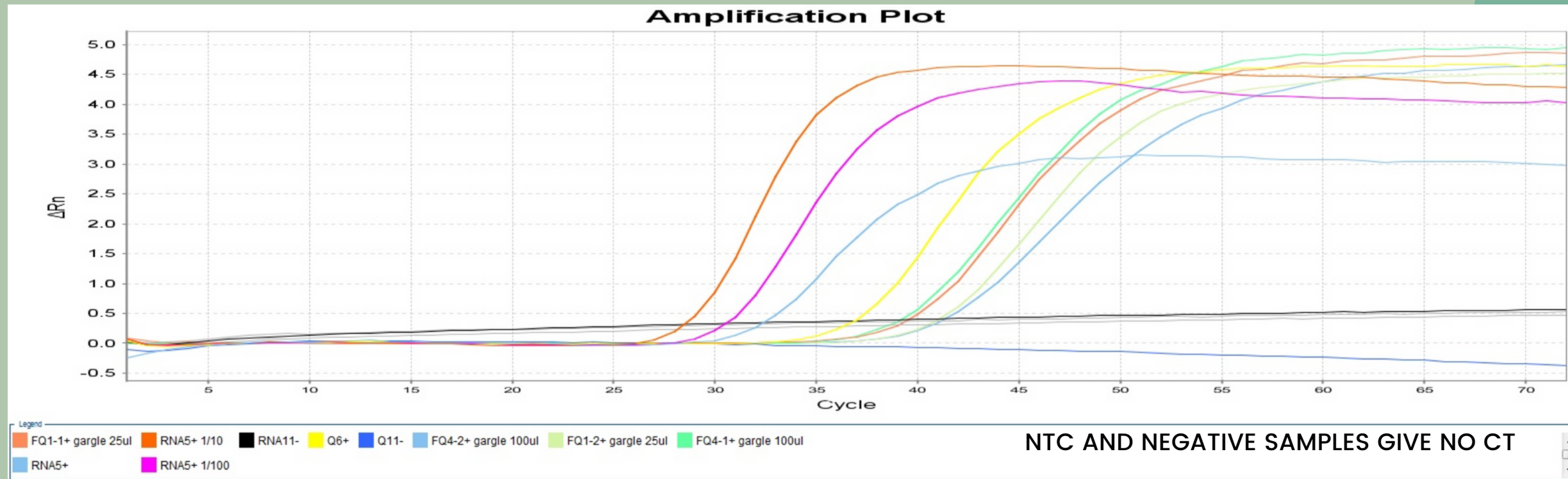
- 1- Setup a Real-Time PCR for detection with this product. FAM channel should be used for data collection.
- 2- Load the reaction tubes and incubate them as follows in a real-time detection



VIROLAMP

# OPERATION OF VIROLAMP KIT

QPCR MEASURES AS QUICK AS 15 MINUTES



# OPERATION OF VIROLAMP KIT

WAIT 35 MINUTES AT 70 °C.  
DETECT BY NAKED EYE.  
PINK IS POSITIVE.  
YELLOW IS NEGATIVE.



SET THE REACTION TUBES INTO A HEAT BLOCK OR AN INCUBATOR



# SUGENOMICS COVID TEST SOLUTIONS

## SUGENOMICS TEST SCHEMA

1-SAMPLE COLLECTION

2-RNA EXTRACTION

3-PCR OR LAMP TEST

SUGENOMICS OFFERS FLEXIBLE SOLUTIONS

SUGENOMICS COVID TEST SOLUTIONS

**Fast COVID-19 Test Schema:**  
Everything You Need to Follow

Sampling: Just 1 minute gargling with PainlessGargleSolution

1 min

RNA extraction

5 min 95°C

20 µl Gargle solution is used with 20 µl ViroQuick solution incubated with 95 Celcius for 5 minutes.

**Isothermal COVID PCR Detection**

It is possible to detect the Sars nCOV virus in minutes. The ViroLAMP COVID Detection kit allows to detect both colorimetric and fluorimetric manner.

15 MINUTES  
Fluorimetric detection

35MINUTES  
Colorimetric detection

Extracted RNA specimen

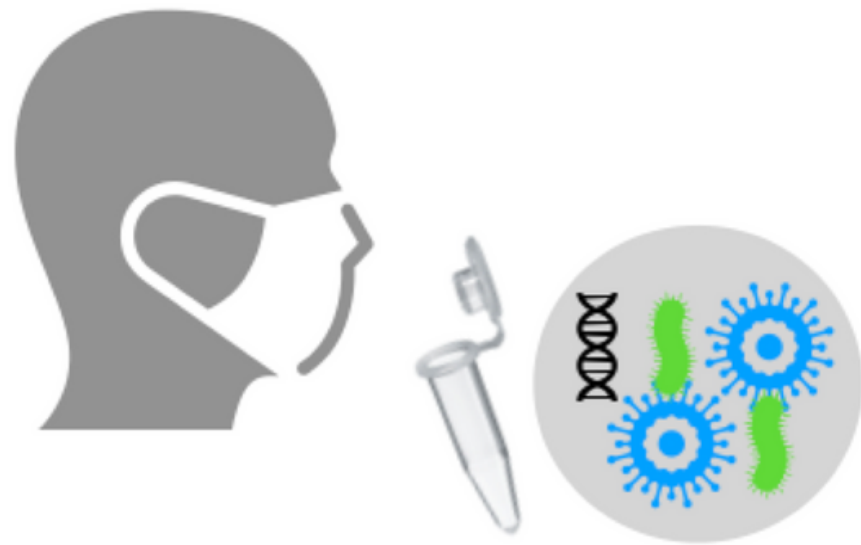
Primer Mix LAMP Mix

2.5 µl 17.5 µl

5 µl

Dispense 17.5 µl of ViroLAMP RT-Mastermix into reaction tubes by pipette. Use orange capped OrsaLAMP RT-Mastermix for visual colorimetric detection or blue capped ViroLAMP RT-Mastermix for fluorimetric detection by a real-time PCR system.

## SAMPLE COLLECTION



For the validation of COVID positive samples, the RNA extraction will be followed according to CDC procedure



SUGENOMICS COVID TEST SOLUTIONS

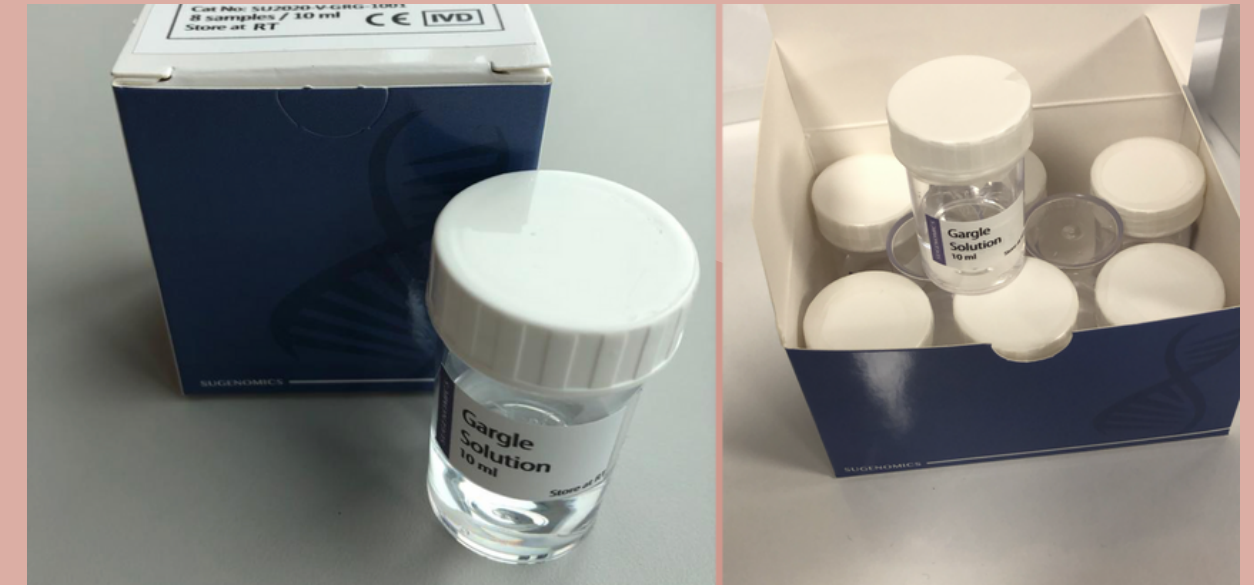
## SAMPLE COLLECTION

SUGENOMICS OFFERS OPTIONAL PAINLESS GARGLE SOLUTION

ALLOWS MOUTH WASH SAMPLING

**NO PAIN**  
**NOT REQUIRED HEALTH PROFESSIONALS**  
**1 MINUTE GARGLING**  
**EASY TO USE AND TRANSPORT**

SUGENOMICS COVID TEST SOLUTIONS



**Fast  
COVID-19  
Test  
Schema:**

Everything You  
Need to Follow



Sampling: Just 1 minute gargling  
with PainlessGargleSolution






## RNA EXTRACTION



RNA extraction process includes isolation kits or extraction process for 5-30 minutes

The illustration shows two microcentrifuge tubes with blue liquid, a black mug, an hourglass, and a thermometer, representing the components and time of the RNA extraction process.

WE DEVELOPED VIROQUICK SOLUTION TO EASILY EXTRACT THE VIRAL RNA IN JUST 5 MINUTES




**RNA extraction**

20 µl Gargle solution is used with 20 µl Orsa Quick solution Incubated with 95 °C for 5 minutes.

The diagram features a female doctor icon, a circular icon with an hourglass and '5 min', and a thermometer icon with '95 °C'.

IT IS POSSIBLE TO DETECT CORONA VIRUS BY VIROLAMP KIT IN MINUTES. FLUORIMETRIC DETECTION OPTION PROVIDES VIRAL DETECTION IN JUST 15 MINUTES. ADDITIONALLY YOU CAN DETECT THE VIRUS IN 35 MINUTES WITHOUT ANY COMPLICATED PCR INSTRUMENT.

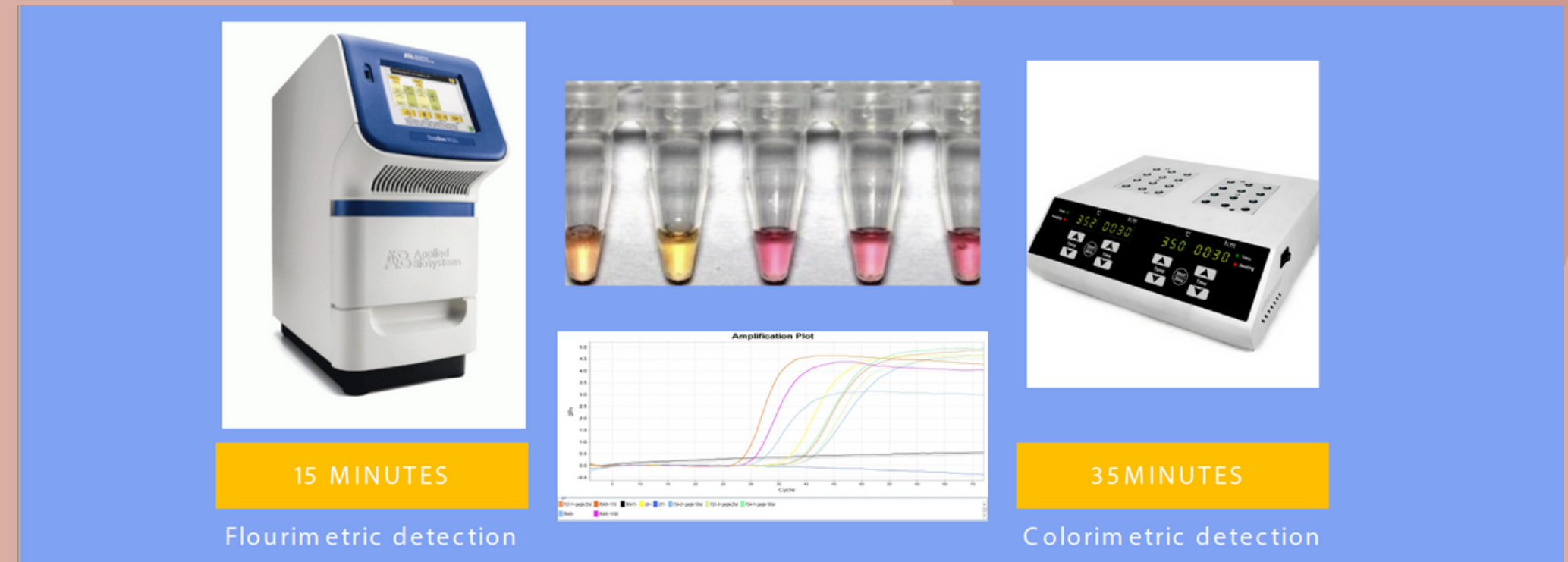
## LAMP REACTION



RT-LAMP Mixture

Negative Positive

Isothermal amplification coupled with reverse transcription at 70 oC for 35 minutes



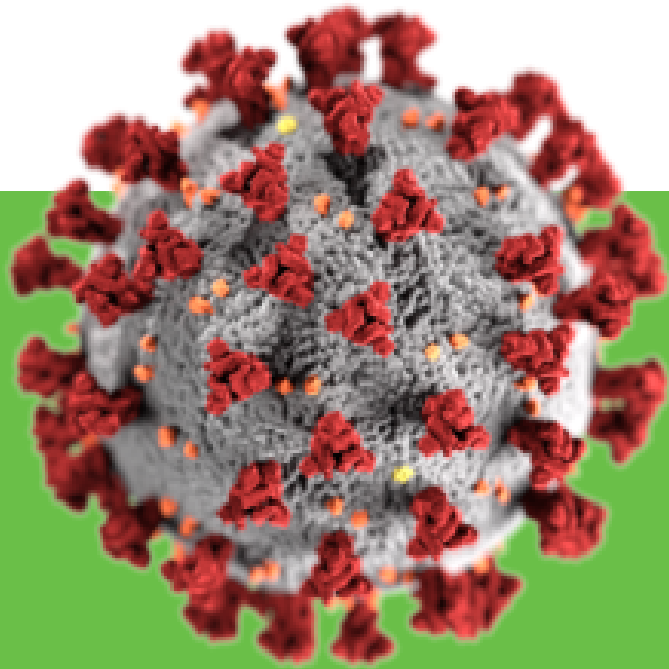
15 MINUTES  
Fluorimetric detection

35 MINUTES  
Colorimetric detection

## SUGENOMICS OFFERS;

- Delta K417N Kit
- UK Variant N501Y Kit
- Delta+ K417 and N501Y Kit
- Flu+COVID (Influenza A , B and N2 of SARS nCOV) Kit





# Tests were done

We are continually progressing for development of our kits.

In Germany, we are performing daily tests!

HIGHLIGHT  
**+12000**

PCR tests in Germany, Azerbaijan, and Saudi Arabia with >99% success

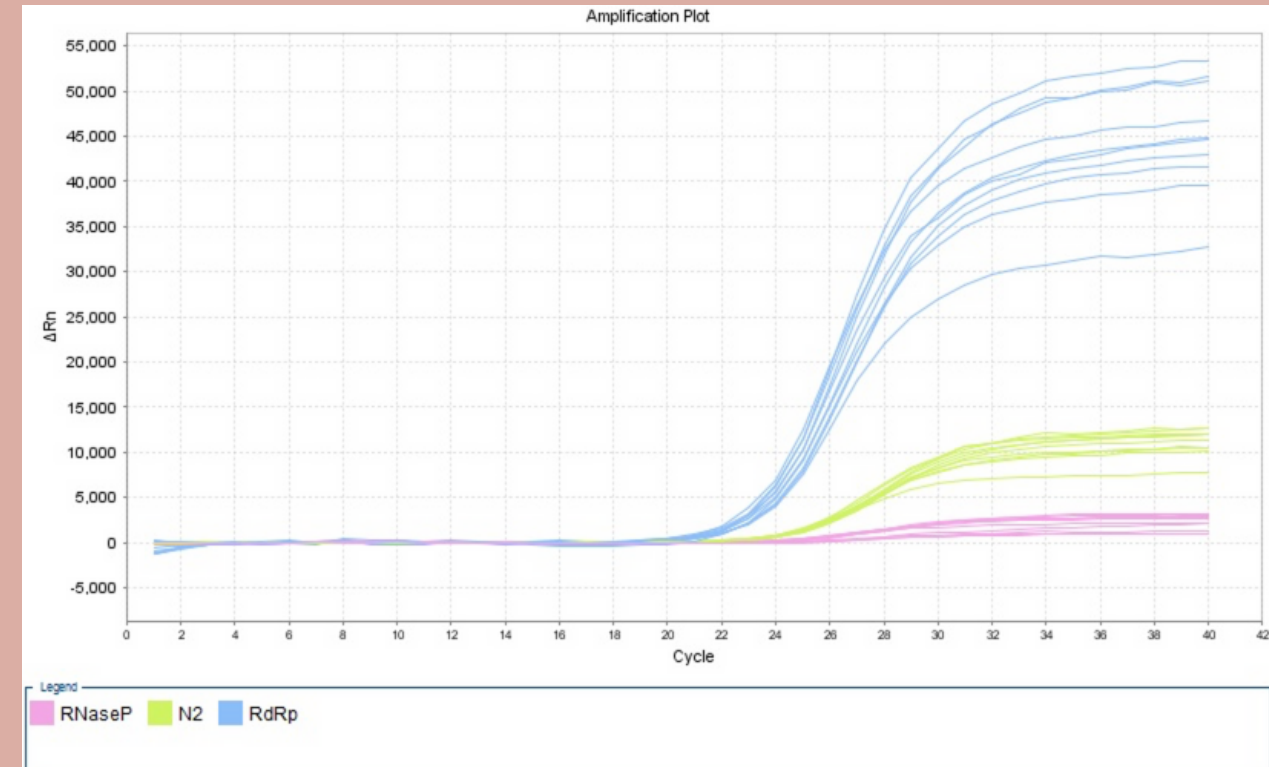
HIGHLIGHT  
**+5000**

LAMP tests with >99% success in Germany, Austria, and Saudi Arabia

HIGHLIGHT  
**>5**

Companies in France, UK, US, and Afghani contacted for OEM (agreement in progress)

# SUGENOMICS COVID TEST SOLUTIONS



[WWW.SUGENOMICS.COM](http://WWW.SUGENOMICS.COM)

