CerTest BIOTEC

VIASURE
Real Time PCR Detection Kits

VIASURE *SARS-CoV-2* Real Time PCR Detection Kit

Human-to-human transmission of the **SARS-CoV-2** has been confirmed, even in the incubation period without symptoms, and the virus causes severe respiratory illness like those SARS-CoV produced. Although the pneumonia is the principal illness associated, a few patients have developed severe pneumonia, pulmonary edema, acute respiratory distress syndrome, or multiple organ failure and death.

Centers of Disease Control and Prevention (CDC) believes that symptoms of **SARS-CoV-2** may appear in as few as 2 days or as long as 14 days after exposure, being the most common fever, cough, myalgia and dyspnea. Less common symptoms are sore throat, headache, diarrhea and vomiting. It seems that older males with comorbidities have been more affected.

Diagnosis of **SARS-CoV-2** is performed detecting conventional causes of pneumonia early and detected by next-generation sequencing or real-time RT-PCR methods. Several assays that detect the **SARS-CoV-2** have been are currently available, such as China CDC (gene targets, ORF1ab and N), Charité – Germany (gene targets, RdRP, E, N) or US CDC (gene targets, three N primers, RdRP).

In December 2019, some people that worked at or lived around the Huanan seafood market in Wuhan, Hubei Province, China, have presented pneumonia of unknown cause.
Deep sequencing analysis of the respiratory samples indicated a novel coronavirus, which was named firstly 2019 novel coronavirus (2019-nCoV) and lately SARS-CoV-2.

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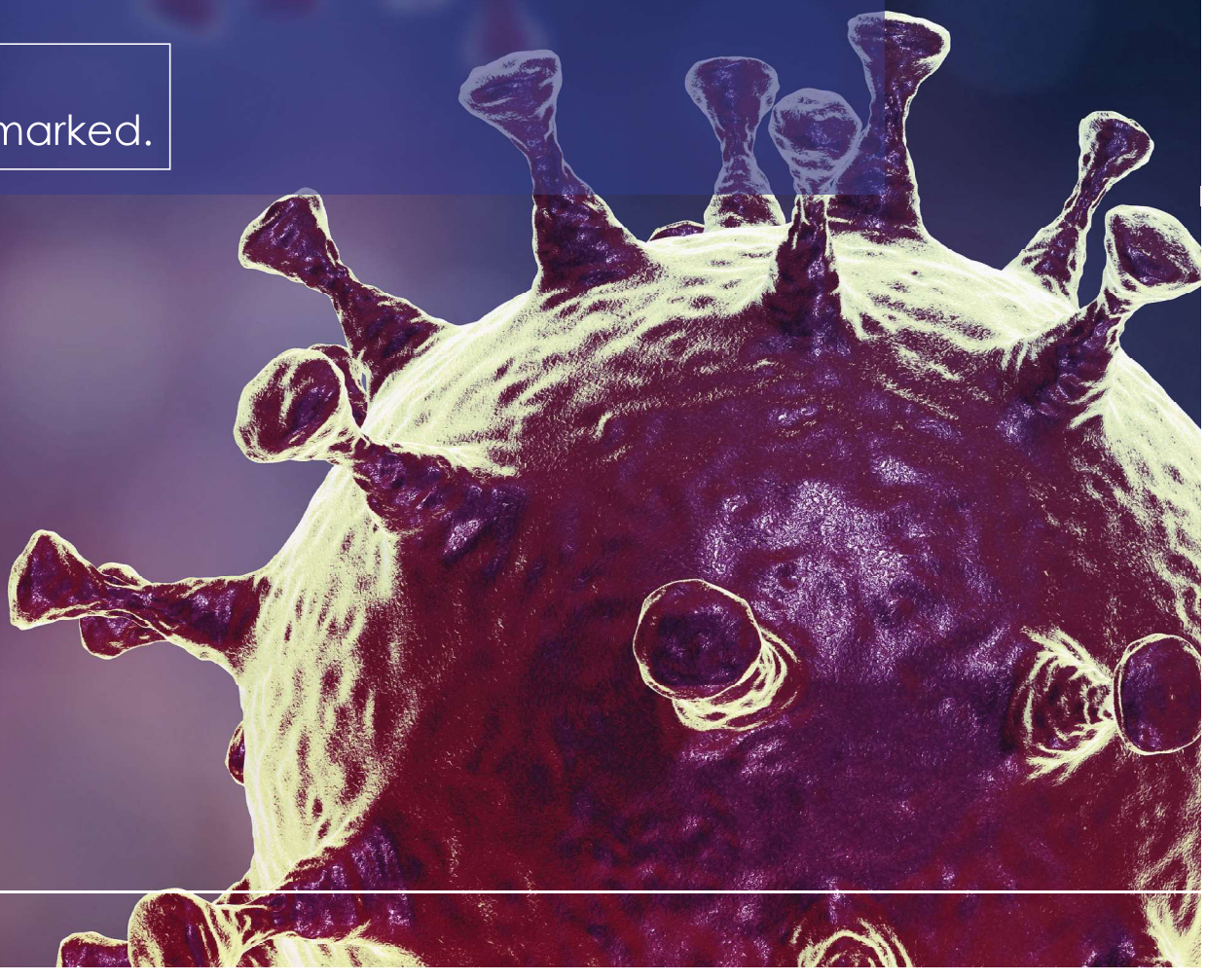

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VIASURE *SARS-CoV-2* Real Time PCR Detection Kit is designed for the specific identification and differentiation of 2019 Novel Coronavirus (**SARS-CoV-2**) in respiratory samples from patients with signs and symptoms of COVID-19 infection.

This test is intended for use as an aid in the diagnosis of **SARS-CoV-2** in combination with clinical and epidemiological risk factors. RNA is extracted from respiratory specimens, amplified using RT-PCR and detected using fluorescent reporter dye probes specific for SARS-CoV-2.

The detection is done in one step real time RT format where the reverse transcription and the subsequent amplification of specific target sequence occur in the same reaction well. The isolated RNA target is transcribed generating complementary DNA by reverse transcriptase which is followed by the amplification of a conserved region of ***ORF1ab* and *N* genes** for **SARS-CoV-2** using specific primers and a fluorescent-labeled probe.

It has a detection limit of ≥10 RNA copies per reaction for ***ORF1ab* and *N* genes** (Figures 1 and 2).

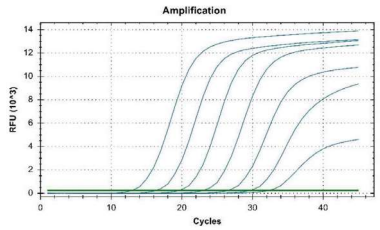

Figure 1.

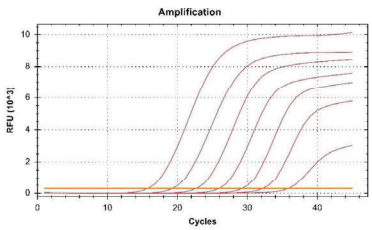

Figure 2.

Figure 1. Dilution series of ORF1ab gene (10^7-10^1 copies/rxn) template run on the Bio-Rad CFX96™ Real-Time PCR Detection System (FAM channel).

Figure 2. Dilution series of N gene (10^7-10^1 copies/rxn) template run on the Bio-Rad CFX96™ Real-Time PCR Detection System (ROX channel).

VIASURE *SARS-CoV-2* Real Time PCR Detection Kit contains in each well all the components necessary for real time PCR assay (specific primers/probes, dNTPS, buffer, polymerase and retrotranscriptase) in an stabilized format, as well as an internal control to monitor PCR inhibition.

References:

VIASURE *SARS-CoV-2* Real Time PCR Detection Kit:	6 x 8-well strips, low profile_____VS-NCO206L
	6 x 8-well strips, high profile_____VS-NCO206H
	12 x 8-well strips, low profile_____VS-NCO212L
	12 x 8-well strips, high profile_____VS-NCO212H
	96-well plate, low profile_____VS-NCO213L
	96-well plate, high profile_____VS-NCO213H
	9 x 4-well strips, Rotor-Gene®_____VS-NCO236
	18 x 4-well strips, Rotor-Gene®_____VS-NCO272

For more information and use procedure,
read the instructions for use included in this product.

CerTest BIOTEC

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