



COVID-19 Detection

The World Health Organization (WHO) has declared the 2019-nCoV crisis an international public health emergency. Due to the increase in the number of cases detected of the novel coronavirus, early diagnosis and treatment has become a priority to minimize the spread of the novel coronavirus.

2019-nCoV is mainly transmitted through respiratory droplets and can also be transmitted through contact.

Symptoms of COVID-19 appear 2-14 days after exposure and range from mild symptoms to severe pneumonia and death.

Major symptoms include fever, cough, loss of taste, loss of smell and shortness of breath.

QUALITATIVE COVID-19 DETECTION by RT-PCR

Coronaviruses are positive-sense single-stranded RNA viruses enveloped by a glycoprotein and lipid structure. That means that, unlike the human species, its genetic material is in the form of RNA.

Using a variant of the standard PCR, RT-PCR uses a reverse transcriptase enzyme that converts viral RNA into DNA. In this way we can detect the RNA we are looking for.

The PCR test allows us to detect fragments (genes) of the SARS-CoV-19 virus.

Proper performance of the test requires highly specialized and trained personnel.

Eurofins Megalab staff includes several specialists in Clinical Microbiology who perform this test together with laboratory technicians trained for its implementation.

This technique has three basic characteristics:

High specificity: It can differentiate between very phylogenetically similar viruses.

High sensitivity: It can detect a very low number of virus RNA copies present in the biological sample.

Early detection: It can detect the virus in the initial phase of infection.

Following the analysis in a Clinical Microbiology laboratory of a biological sample of a person suspected of being infected, the PCR test detects the genetic material of the virus. If the result is considered positive it is confirmed that the person is infected with SARS-Cov-19.

Eurofins Megalab has a complete equipment portfolio to carry out the COVID PCR test. This equipment allows a response time from 20 minutes to 3 hours depending on the number of tests to be performed.



Reagents used for the SARS-CoV-2 pathogen detection kit, with 100% stock and supply for high volumes guaranteed:

- GSD NovaPrime® SARS-CoV-2 (COVID-19). Novatec
- Simplexa® COVID-19 Direct Kit - DiaSorin Molecular
- VIASURE Real Time PCR Detection Kits. Certest.
- TaqPath COVID-19 Multiplex. Thermofisher

TAKING A NASOPHARYNGEAL SAMPLE FOR CORONAVIRUS PCR



1. Put on protective PPE
2. Remove sterile swab from the container
3. Position the patient's head with a 45-degree tilt
4. Gently insert the swab through the nose until it reaches the nasopharyngeal area
5. Rotate the swab several times
6. Gently remove the swab from the nose
7. Place the swab inside the tube with the virus transport medium. (It has a cutline to be able to break it easily)
8. Once closed, correctly identify the tube with patient data or barcode label
9. Insert the tube into the container provided for shipment, which complies with the UN 3733 standard for the packaging of hazardous substances.

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