FAQs about COVID-19 RT-PCR Ct Values

What is a Real-Time Polymerase Chain Reaction (RT-PCR)?
One of the most common ways to detect SARS-CoV-2, the virus that causes COVID-19, is a test called Real-Time Polymerase Chain Reaction (RT-PCR). RT-PCR is a method that amplifies SARS-CoV-2 genetic material in a sample to a level that is detectable using multiple rounds of copying. It is called real time because the method generates a fluorescent signal while the genetic material is being copied.

What is a Ct Value?
A Ct value is a number that signifies how many rounds of copying are needed to get a detectable amount of SARS-CoV-2 genetic material.

Do all COVID-19 tests generate a Ct Value?
No. Not all COVID-19 tests that have been authorized for the detection of SARS-CoV-2 utilize RT-PCR. If a test uses other nucleic acid amplification methods, then no Ct value will be generated. Furthermore, all COVID-19 tests that have been authorized by the FDA are qualitative tests. This means that the test is reported as either “positive” or “negative”. Several authorized COVID-19 RT-PCR tests are automated, so the laboratory does not know what the Ct value is, just the results are reported based upon the analysis method.

Can a Ct Value determine how infectious a person is?
No. The Ct value is used to determine if a patient specimen contains sufficient SARS-CoV-2 genetic material to generate a test result. The test result is only intended to confirm or rule out a COVID-19 diagnosis at the time of specimen collection.

Are all Ct Values comparable?
No. Ct values are method specific and not directly comparable between different tests. Even though the Ct value is a number, its intended use is to make a qualitative determination for a COVID-19 test.

Additional Information

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