Because of its extreme precision and accuracy, RT-Quic PCR technology has completely changed traditional PCR procedures for the diagnosis of a wide range of illnesses.This indicates that environmental contamination and residual products are significant problems that limit the use of conventional PCR in clinical settings.This essay will focus on explaining the fundamentals of both PCR and reverse transcription, the components of the reaction mixture, the procedures involved, and the reasons that the development of RT-Quic PCR technology represents such a significant breakthrough in the field of molecular diagnostics.On the other hand, the accuracy issues brought on by the conventional PCR's end-point detection are successfully eliminated by the combination of contemporary reverse transcription techniques with the real-time detection capabilities of RT-Quic PCR technology.Since its introduction, this contemporary molecular biology technique has been quickly adopted by the medical research community because of its much greater sensitivity and specificity profile when compared to other testing technologies like culture testing, immunoassays, and conventional PCR.Reverse transcriptase and real-time PCR are creatively combined in this technology to enable speedier detection of viruses and other pathogens in the affected tissue.It is hoped that readers would have a better understanding of the advantages of adopting this cutting-edge technology in research and clinical settings by reading about its many technical features and comparing it with antiquated approaches later in this paper.In addition to providing a precise measurement of the target viral load in the tissue, RT-Quic PCR facilitates the investigation of the disease's course.For the Hepatitis C virus, for instance, a quantifiable viral load assay is essential to assessing the effectiveness of antiviral medication and the virus's development.It should come as no surprise that RT-Quic PCR is becoming more and more useful in medical research and illness detection given its substantial advancements over existing .methodologies