

Promega launches XpressAmp™ Direct Amplification Reagents

April 2, 2021 by Lucy Shaw

COVID-19 testing labs can now skip RNA extraction, simplifying and accelerating workflows

Promega Corporation has released XpressAmp™ Direct Amplification Reagents that facilitate RNA extraction-free sample preparation that is automation-friendly. With this innovation, laboratories testing for COVID-19 have a new tool that enables them to skip the potentially bottlenecked RNA extraction step of the workflow and move directly to polymerase chain reaction (PCR) amplification.

The simple, direct amplification workflow involves three key steps:

1. Collect and store sample – use common nasopharyngeal swabs in transport media.
2. Lyse sample – mix sample and XpressAmp™ Lysis Buffer (1:1) and incubate for 10 minutes at room temperature.
3. Amplify and analyze – add lysed sample to RT-qPCR containing XpressAmp™ Solution.

Viral inactivation studies were performed on behalf of Promega Corporation by Dr. Thomas Klimkait from the Molecular Virology Group, Department of Biomedicine, University of Basel, Switzerland. The studies found that the XpressAmp™ Lysis Buffer successfully inactivated the SARS-CoV-2 virus and the results were presented at the 2020 American Society of Human Genetics (ASHG) virtual meeting.

Promega, a global manufacturer of reagents, assays, and benchtop instruments essential for COVID-19 research, drug development and diagnostic testing, including RNA extraction, increased production dramatically since the start of the pandemic to address a 10-fold increase in demand. Reagent manufacturers worldwide responded similarly. Still, supply and demand gaps remain, particularly around RNA extraction. Promega sought a solution that leverages the company's more than 40 years of experience in both sample preparation and amplification, especially its work with challenging samples such as forensic crime scene evidence. The result is a direct amplification method that simplifies and accelerates time to qPCR results.

“We are constantly exploring ways to apply our scientific and manufacturing expertise to help labs address the unprecedented demands they are facing for COVID-19 testing,” says Promega Chief Medical Officer Ashley Anderson. “Offering an option to skip RNA extraction and move directly to PCR amplification not only saves time, but it also addresses potential supply constraints since the many buffers and optimization reagents needed for extraction and wash steps in a typical PCR workflow are no longer needed.”

XpressAmp™ Direct Amplification Reagents are also available as a custom product that can be adjusted in numerous ways to suit a laboratory’s specific needs. Options include purchasing in bulk, changing the dispense size or reformatting and relabeling.

Since January 2020, the company has provided enough reagents and enzymes to enable testing an estimated 700 million samples for SARS-CoV-2 worldwide. Promega components currently support approximately 30 COVID-19 test kits around the world.

- Promega Maxwell® RSC 48 and CSC 48 instruments and the Promega Maxwell® RSC Viral Total Nucleic Acid Purification Kit are in the US Centers for Disease Control’s (CDC) Influenza SARS-CoV-2 (Flu SC2) Multiplex Assay for emergency use.
- These same products, along with the Promega GoTaq® Probe 1-Step RT-qPCR System, are also in the CDC 2019-Novel Coronavirus Real-Time RT-PCR Diagnostic Panel for emergency use.

Promega tools used for COVID-19 applications are a small subset of the 4,000 products Promega manufactures and distributes globally, serving research, pharma, clinical, forensic, and applied markets. These tools are used for a myriad of applications in human health, disease, genetic identity, drug development, clinical diagnostics and more.

To learn more about Promega XpressAmp™ Direct Amplification Reagents, visit <https://www.promega.com/products/clinical-laboratoryproducts/amplification/xpressamp-direct-amplification-reagents/>

About Promega Corporation

Promega Corporation is a leader in providing innovative solutions and technical support to the life sciences industry. Our product portfolio of over 4,000 products supports a range of life science work across areas such as cell biology; DNA, RNA, and protein analysis; drug development; human identification and molecular diagnostics. For over 40 years these tools and technologies have grown in their application and are used today by scientists and technicians in labs for academic and government research, forensics, pharmaceuticals, clinical diagnostics, and agricultural and environmental testing. Promega is headquartered in Madison, WI, USA with branches in 16 countries and over 50 global distributors. For more information, visit www.promega.com.