

Smart Notes

SARS-CoV-2 Sample Preparation and Storage

QA

What solutions does Thermo Fisher Scientific provide for SARS-CoV-2 sample preparation and storage?

The SARS-CoV-2 (that causes Covid-19) outbreak that began in December 2019 is spreading rapidly throughout the world, putting pressure on testing laboratories to increase sample preparation and storage capabilities. Thermo Fisher Scientific offers many cold storage and sample preparation devices for processing and storing samples of the SARS-CoV-2 virus. General guidelines or specimen storage include: storage of specimens between +2° to +8°C prior to shipment to a testing lab, and -70°C or colder for samples that cannot be shipped immediately from the collection point to the test facility. For laboratories storing samples longer term, i.e. for future virology studies and research, controlled-rate freezers, cryogenic storage tanks, and water baths are needed in order to preserve and prepare samples.

Laboratory Refrigerators

The storage of vaccines and samples requires precise and reliable refrigeration and freezer solutions to ensure sample integrity. Thermo Scientific™ TSX Series Refrigerators and Freezers are powered by V-Drive, a design feature that delivers precise temperature performance and control between +2° to +8°C, which are critical to producing accurate and repeatable results.



The combination of V-drive technology with a microprocessor control and fan-forced air circulation results in a laboratory refrigerator or freezer that is purpose built to meet the needs of sample processing and testing and vaccine development labs

Ultra-Low Temperature Freezers

Whether it's your daily work or high-stakes research for a global pandemic, swift action is paramount in sample processing. However, the next step is the storage of those samples – for days, years, or even decades. Thermo Scientific™ Ultra-low Temperature (ULT) Freezers are designed for performance and reliability. The temperature of your samples is critical for long-term viability, and Thermo Scientific ULT freezers are designed to deliver the best temperature uniformity and lowest variation possible. Thermo Scientific TSX and STP (Standard Performance) series ULT freezers offer a complete range for sample storage between -10°C and -86°C. With five storage capacities available, Thermo Fisher Scientific has the right ULT freezer for your lab.

Cryopreservation

For long-term storage of samples, Thermo Fisher Scientific offers two LN₂ cryogenic freezer platforms: the Thermo Scientific™ CryoExtra™ High Efficiency LN₂ Storage Tanks

and the Thermo Scientific™ CryoPlus™ LN₂ Storage Devices provide cryogenic storage for samples. Prior to cryogenic storage, laboratories should consider using a Thermo Scientific™ CryoMed™ Controlled-rate Freezer to prepare samples for storage at cryogenic temperatures. The CryoMed is designed to control the rate at which samples are frozen and to usher samples through the latent heat of fusion given off by samples during the freezing process.

Water bath

Thermo Scientific™ Precision™ General Purpose Water Baths are designed to maintain water temperature from ambient to 100°C, ranging in size from 2 L to 28 L, including shallow models. The Precision water baths are ideal for a wide range of applications such as immunological studies, molecular biology, protein analysis, virology research, and sample thawing. Precision water baths are designed to prevent thermal runaway and feature auto-on and auto-off timers to optimize operation schedules.

Conclusion

Thermo Fisher Scientific provides a complete range of cold storage and temperature control products to meet the needs of test sites and test processing facilities managing SARS-CoV-2 samples.

Find out more at thermofisher.com/coronavirus

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