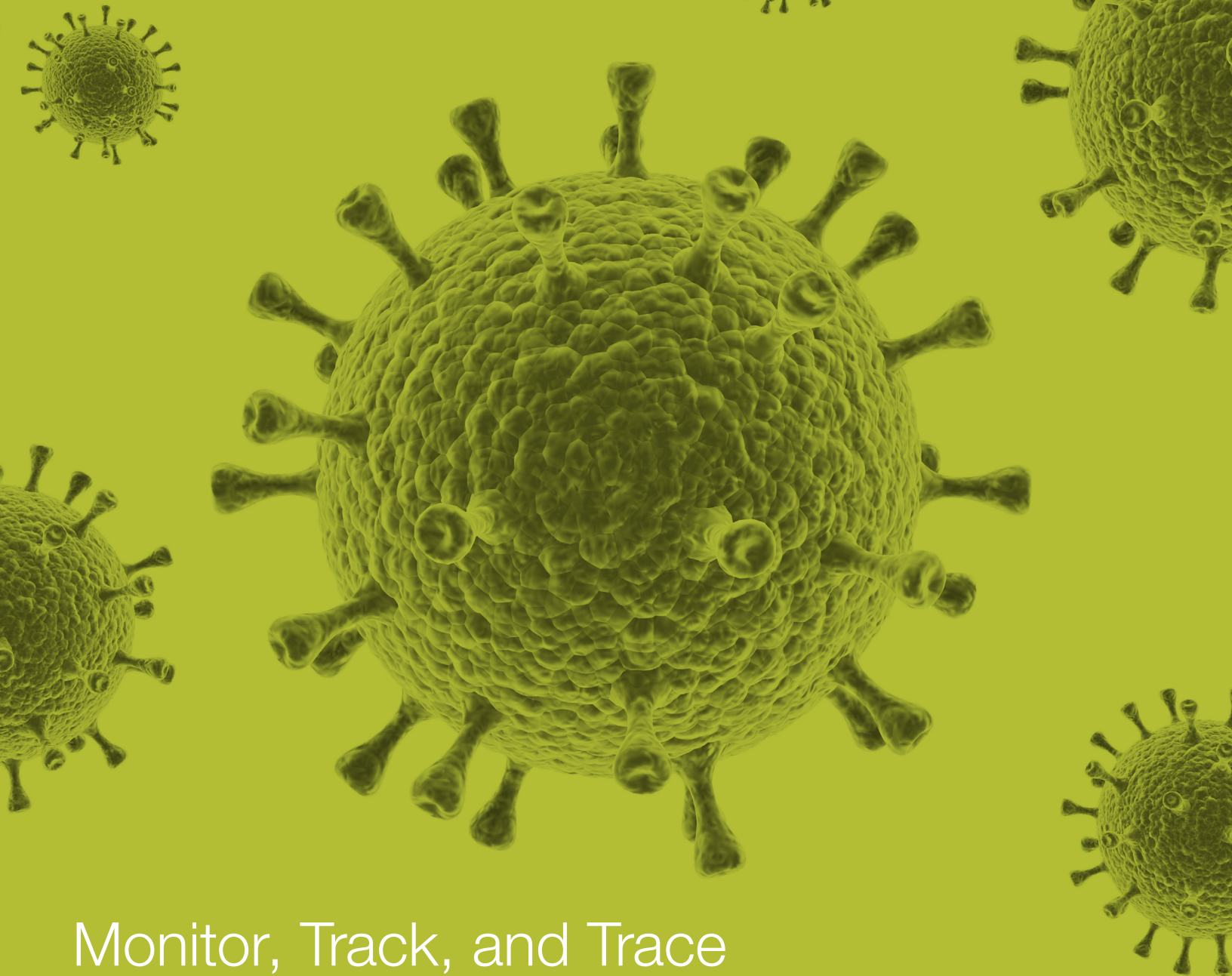


COVID-19

Surveillance Solutions



Monitor, Track, and Trace

The information in this brochure was accurate as of the October 2021 publishing date.



Protect your people and your community with confidence, while maintaining business and operational continuity with surveillance and contact tracing efforts done using air pathogen monitoring, wastewater fecal tracking, or respiratory specimen contact tracing.

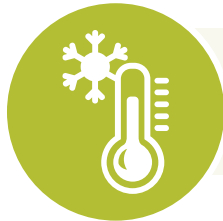
These virus tracking methods follow similar workflow steps within unique sample types, but you can trust the Fisher Scientific channel to provide diverse solutions to help with each step of the process.



Biosafety



Sample Collection



Cold Storage



Sample Preparation
and Concentration



RNA Extraction and Isolation



RNA Measurement
and Detection Methods



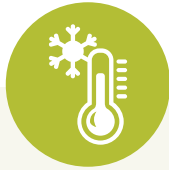
Sample Collection

Find a wide range of collection options for multiple sample types, including air filtration, manual grab collection, or automated composite collection in wastewater, as well as sterile swabs, tubes, and collection kits for respiratory specimens.



RNA Extraction and Isolation

Several methods are employed to lyse, purify, and elute the desired active biomaterials for extraction.



Cold Storage

Proper storage and preparation can help ensure that SARS-CoV-2 RNA measurements are accurate. Refrigerate samples at 4°C immediately after wastewater collection and process them within 24 hours to reduce SARS-CoV-2 RNA degradation and increase surveillance utility.¹

Store respiratory specimens at 2-8°C for up to 72 hours after collection. If a delay in testing or shipping is expected, store specimens at -70°C or below is recommended by the CDC.



RNA Measurement and Detection Methods

These methods typically fall in three categories of testing: nucleic acid testing that detects viral RNA, antigen testing that detect viral proteins, and serological testing to detect antibodies. WHO recommends nucleic testing and antigen testing for active COVID-19 diagnosis, whereas serological testing is more useful in epidemiological studies.³



Sample Preparation and Concentration

Homogenizing, clarifying, and concentrating products may differ based on the sample type, but filtering and concentration are necessary steps and can range from: ultrafiltration, electronegative membrane or acidification, polyethylene glycol (PEG) precipitation, centrifugation, ultracentrifugation, or clarifying with filtration methods.



Biosafety

In accordance with CDC guidance, biosafety recommendations will depend on site-specific risk assessments. They can vary based on diagnostic testing, anatomic pathology, point-of-care testing sites, environmental testing, and specimen packing and shipping needs.

The Fisher Scientific channel offers a diverse range of biosafety products for controlled environments, cabinets and laminar flow solutions, personal protective equipment (PPE), and disinfectants in accordance with EPA and OSHA safety standards.

Visit fishersci.com/safetyspecialist to contact a Fisher Scientific safety specialist today.

¹www.cdc.gov/healthywater/surveillance/wastewater-surveillance/testing-methods.html

²www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html

³www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance



Air Surveillance

The world's most contagious diseases are spread by in-air transmission. According to WHO, this is defined as "The dissemination of droplet nuclei that remain infectious when suspended in air over long distances and time."

In other words, it's the sneezing, coughing, talking, or breathing from one infected person that releases pathogens into the air to then be inhaled by another person. Examples include influenza, tuberculosis, and coronavirus. Start monitoring today with these sampling and monitoring products.

Air Sampler and Air Monitoring Solutions



Thermo Scientific™ AerosolSense™ Sampler

Designed to deliver timely and highly reliable insight into in-air pathogen presence for monitoring and improving facility safety protocol.

Description	Quantity	Cat. No.
AerosolSense Sampler	Each	2900AA



Sartorius MD8 Airport Portable Air Sampler

This air sampler is suitable for impaction measurements and background monitoring with gelatin membranes.

Description	Quantity	Cat. No.
MD8 Portable Air Sampler	Each	14-555-867



Sartorius Accessories for the MD8 Airscan™ Air Sampler

Choose from hoses, plates, connectors, and more.

Description	Quantity	Cat. No.
Airscan to Isolator Via Flexible PVC Hose, Adapter	Each	14-555-869
Culture Media Plates for MD8 Airscan Air Sampler, Adapter	Each	14-555-876
PC for MD8 Airscan Air Sampler, Remote Control	Each	14-555-877
MD8 for Airscan Air Samplers, Aluminum Stack	Each	14-555-878
Adapter for Delatin Disposables, Filter Holder	Each	14-555-884
MD8 Airscan Air Sampler, Aluminum Connector	Each	14-555-910
Air Sampler Inlet to Flexible Hose for MD8, Aluminum Connector	Each	14-555-909
MD8 Airscan Air Sampler, Connector	Each	14-555-911
MD8 Airscan Air Sampler, O-Ring	Each	14-555-922



Sartorius Environmental Air Monitoring Gelatin Membranes

These membranes are sterile and water soluble with a high retention rate. Choose from a wide range of sizes in single-wrapped, disposable filters with holders or packs of filter disks.

Description	Quantity	Cat. No.
Diameter: 25 mm, 5 Filters/Bag, Not Individually Wrapped	50/Pack	14-555-659
Diameter: 37 mm, 5 Filters/Bag, Not Individually Wrapped	50/Pack	14-555-660
Diameter: 47 mm, 5 Filters/Bag, Not Individually Wrapped	50/Pack	14-555-661
Diameter: 80 mm, 5 Filters/Bag, Not Individually Wrapped	50/Pack	14-555-664
Diameter: 80 mm, 3 PE Bags, Individually Wrapped	10/Pack	14-555-667
Diameter: 80 mm, 3 PE Bags (Label on Innermost Bag), Individually Wrapped	10/Pack	14-555-668
Diameter: 80 mm, 1 PE Bag, Individually Wrapped	10/Pack	14-555-881
Diameter: 25 mm, 5 Filters/Bag, Not Individually Wrapped	50/Pack	14-555-663



Water Surveillance

According to CDC guidelines, multiple testing methods and laboratory workflows are used to quantify SARS-CoV-2 in wastewater across the United States. Laboratory controls can help ensure results are comparable by accounting for method performance and data quality.

Based on the levels of SARS-CoV-2 in wastewater, methods can be adapted to higher or lower detection limits as needed. For example, if levels of SARS-CoV-2 RNA are sufficiently high in wastewater, small volumes of wastewater (e.g., 1 mL) can be tested without additional concentration processes. Testing methods include sample processing steps, use of laboratory controls, and implementation of biosafety measures.

Wastewater Testing Solutions

Thermo Scientific™ Narrow-Mouth Closed-Top VOA Bottles

Conduct EPA Volatile Organic Analysis (VOA) analysis using these narrow-mouth glass bottles featuring closed caps, for VOA testing where a pierceable closure is not required.

Description	Quantity	Cat. No.
Narrow-Mouth Closed-Top VOA Bottles, Capacity: 1000 mL, Certified, Closure Size: 33 to 430 mm	12/Case	05-719-489



Thermo Scientific™ I-Chem™ Wide-Mouth Short-Profile Amber Glass Jars with Closure

Choose these wide-mouth, short-profile amber glass jars with closure for collecting soil, sludge, and waste samples for a variety of organic and inorganic target analytes where light protection is required.

Description	Quantity	Cat. No.
Wide-Mouth Short-Profile Amber Glass Jars with Closure, Capacity: 250 mL, Unprocessed, Closure Size: 70 to 400 mm	24/Case	05-721-104



Don't see what you're looking for?

Shop our full line of [environmental testing bottles](#).



DWK Life Sciences WHEATON™ Sub-Surface Grab Sampler™ I System

For convenient gathering of subsurface water samples for pollution testing from spillways, boats, or docks without entering the water.

Description	Quantity	Cat. No.
Sub-Surface Sampling System, Dimensions: 72 in. x 0.75 in. (183 cm x 2 cm), Capacity: 1000 mL	Each	15-437



Hach™ AS950 Portable Compact Sampler

Typically used in pre-treatment water sampling or for compliance in wastewater, this product is also capable of monitoring SARS-CoV-2 (COVID-19) in sewage.

Description	Quantity	Cat. No.
Portable Compact Sampler Bundle (12 V), Capacity: 575 mL	Each	02-938-0013
Portable Compact Sampler Bundle (12 V), Capacity: 9.46 L	Each	02-938-0012
Portable Compact Sampler Bundle (115 V), Capacity: 575 mL	Each	02-938-0015
Portable Compact Sampler Bundle (115 V), Capacity: 9.46 L	Each	02-938-0014



Thermo Scientific™ Nalgene™ Settrometer Kit

Analyze the activated sludge process using this all-plastic tool for wastewater treatment plant operators, a cost-effective alternative when compared to glass equivalents.

Description	Quantity	Cat. No.
Outer Diameter: 133 mm, Height: 191 mm, Polycarbonate Construction	Each	15-443-35



Don't see what you're looking for?

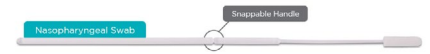
Shop our full line of [sampling tools](#).



Human Contact Surveillance

Foamtec Nasopharyngeal Diagnostic Swabs

Polyurethane foam technology provides an exceptional surface area to capture a maximum quantity of target fluids.



Description	Quantity	Cat. No.
Nasopharyngeal Diagnostic Swabs	1,000/Case	19-304-884

Quidel QuickVue™ Influenza Transport Swabs

Sterile nasal swabs are packaged inside plastic transport tubes.



Description	Quantity	Cat. No.
Influenza Transport Swabs	25/Pack	23-043-049

Thermo Scientific™ ESwab™

Expand testing capabilities and save money by replacing multiple products with ESwab, a liquid transport swab system compatible with automated specimen processing.

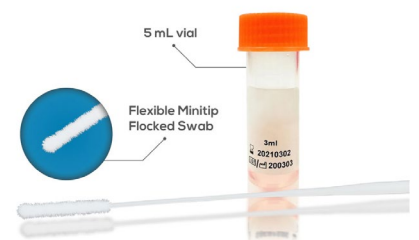
Description	Quantity	Cat. No.
ESwab Minitip Flocked Collection Kit	50/Pack	R723481
ESwab NPG Flocked Collection Kit	50/Pack	R723482
ESwab Regular Flocked Collection Kit	50/Pack	R723480



LabAid Universal Viral Collection Kit

Designed to collect and transport viruses, chlamydiae, mycoplasmas, and urea plasmas at ambient temperature.

Description	Quantity	Cat. No.
Viral Collection Kit, Volume: 5 mL	1,200/Case	22-363-001
Viral Collection Kit, Volume: 10 mL	1,000/Case	22-363-009





Sample Collection and Sampling Tools



Hardy Diagnostics™ Viral Transport Medium

Suitable for the collection and transport of clinical specimens.

Description	Quantity	Cat. No.
Viral Transport Medium, Fill Volume: 3 mL	20/Pack	23-001-726

BD Veritor™ SARS-CoV-2 Control Swabs

For rapid detection of SARS-CoV-2. Designed for use with the BD Veritor System.



Description	Quantity	Cat. No.
SARS-CoV-2 Control Swabs	10/Pack	B256087



Don't see what you're looking for?

Shop our full line of [nasal swabs and collection kits](#).



Refrigerators

Thermo Scientific™ TSX Series High-Performance Undercounter Lab Refrigerators

Designed to support sample protection and sustainability objectives for the storage of media, reagents, chemotherapy, pharmaceutical, and other research and medical products.

Description	Quantity	Cat. No.
Undercounter Lab Refrigerator, Single Glass Door	Each	TSX505GA
Undercounter Lab Refrigerator, Single Solid Door	Each	TSX505SA



Thermo Scientific™ TSX Series High-Performance Lab Refrigerators

Features support sample protection and sustainability objectives for the storage of media, reagents, chemotherapy, pharmaceutical and other storage requiring 2° to 8°C.

Description	Quantity	Cat. No.
Glass Door, Capacity: 23 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX2305GA
Sliding Glass Door, Capacity: 45.8 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX4505GA
Sliding Glass Door, Capacity: 45.8 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX4505GD
Double Glass Door, Capacity: 51.1 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX5005GA
Double Glass Door, Capacity: 51.1 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX5005GD
Double Solid Door, Capacity: 51.1 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX5005SA
Double Solid Door, Capacity: 51.1 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX5005SD
Glass Door, Capacity: 11.5 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX1205GA
Glass Door, Capacity: 11.5 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX1205GD
Glass Door, Capacity: 11.5 cu. ft., Plug Type: CEE 7/7, 115 V, 60 Hz	Each	TSX1205GV
Solid Door, Capacity: 11.5 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX1205SA
Solid Door, Capacity: 11.5 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX1205SD
Solid Door, Capacity: 11.5 cu. ft., Plug Type: CEE7/7, 208-230 V, 60 Hz	Each	TSX1205SV
Glass Door, Capacity: 29.2 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX3005GA
Glass Door, Capacity: 29.2 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX3005GD
Glass Door, Capacity: 29.2 cu. ft., Plug Type: CEE7/7, 115 V, 60 Hz	Each	TSX3005GV
Solid Door, Capacity: 29.2 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX3005SA
Solid Door, Capacity: 29.2 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX3005SD
Solid Door, Capacity: 29.2 cu. ft., Plug Type: CEE7/7, 208-230 V, 60 Hz	Each	TSX3005SV
Glass Door, Capacity: 23 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX2305GD
Glass Door, Capacity: 23 cu. ft., Plug Type: CEE7/7, 208-230 V, 60 Hz	Each	TSX2305GV
Solid Door, Capacity: 23 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX2305SA
Solid Door, Capacity: 23 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX2305SD
Solid Door, Capacity: 23 cu. ft., Plug Type: CEE7/7, 208-230 V, 60 Hz	Each	TSX2305SV





Thermo Scientific™ TSX Series High-Performance Chromatography Refrigerators

Designed for a variety of applications requiring precise temperature control, full access to chromatography instrumentation, and easy setup.

Description	Quantity	Cat. No.
Single Glass Door, Capacity: 23 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX2305CA
Single Glass Door, Capacity: 23 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 50/60 Hz	Each	TSX2305CD
Single Glass Door, Capacity: 23 cu. ft., Plug Type: CEE 7.7, 208-230 V, 50/60 Hz	Each	TSX2305CV
Sliding Glass Door, Capacity: 45 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX4505CA
Sliding Glass Door, Capacity: 45 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX4505CD
Sliding Glass Door, Capacity: 45 cu. ft., Plug Type: CEE 7/7, 208-230 V, 50 Hz	Each	TSX4505CV
Double Glass Door, Capacity: 50 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX5005CA
Double Glass Door, Capacity: 50 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX5005CD
Double Glass Door, Capacity: 50 cu. ft., Plug Type: CEE7/7, 208-230 V, 50 Hz	Each	TSX5005CV
Glass Door, Capacity: 30 cu. ft., Plug Type: NEMA 6-15, 208-230 V, 60 Hz	Each	TSX3005CD
Glass Door, Capacity: 30 cu. ft., Plug Type: NEMA 5-15, 115 V, 60 Hz	Each	TSX3005CA
Glass Door, Capacity: 30 cu. ft., Plug Type: CEE 7/7.5, 208-230 V, 50 Hz	Each	TSX3005CV



Thermo Scientific™ TSG Series General Purpose Laboratory Refrigerators

Suited for the demanding requirements of daily use in research, clinical, and industrial laboratories storing non-critical products.

Description	Quantity	Cat. No.
Capacity: 12 cu. ft., Glass Door, White Cabinet, Painted White Steel Interior	Each	TSG12RPGA
Capacity: 25 cu. ft., Glass Door, White Cabinet, Painted White Steel Interior	Each	TSG25RPGA
Capacity: 25 cu. ft., Solid Stainless Steel Door, White Cabinet, Painted White Steel Interior	Each	TSG25RPSA
Capacity: 25 cu. ft., Glass Door, Gray Cabinet, Stainless Steel Interior	Each	TSG25RSGA
Capacity: 25 cu. ft., Solid Stainless Steel Door, Gray Cabinet, Stainless Steel Interior	Each	TSG25RSSA
Capacity: 30 cu. ft., Glass Door, White Cabinet, Painted White Steel Interior	Each	TSG30RPGA
Capacity: 30 cu. ft., Solid Stainless Steel Door, White Cabinet, Painted White Steel Interior	Each	TSG30RPSA
Capacity: 30 cu. ft., Glass Door, Gray Cabinet, Stainless Steel Interior	Each	TSG30RSGA
Capacity: 30 cu. ft., Solid Stainless Steel Door, Gray Cabinet, Stainless Steel Interior	Each	TSG30RSSA
Capacity: 45 cu. ft., Sliding Glass Door, White Exterior, Painted White Steel Interior	Each	TSG45RPLA
Capacity: 45 cu. ft., Sliding Glass Door, Gray Exterior, Stainless Steel Interior	Each	TSG45RSLA
Capacity: 49 cu. ft., Glass Door, White Exterior, Painted White Steel Interior	Each	TSG49RPGA
Capacity: 49 cu. ft., Solid Stainless Steel Door, White Exterior, Painted White Steel Interior	Each	TSG49RPSA
Capacity: 49 cu. ft., Glass Door, Gray Exterior, Stainless Steel Interior	Each	TSG49RSGA
Capacity: 49 cu. ft., Solid Stainless Steel Door, Gray Exterior, Stainless Steel Interior	Each	TSG49RSSA
Capacity: 72 cu. ft., Glass Door, White Exterior, Painted White Steel Interior	Each	TSG72RPGA
Capacity: 72 cu. ft., Glass Door, Gray Exterior, Stainless Steel Interior	Each	TSG72RSGA





Temperature Controls and Dataloggers

Fisherbrand™ Nonmercury Verification Thermometers

To verify sample temperatures in freezers, refrigerators, and incubators with traceability to NIST.

Description	Quantity	Cat. No.
Verification Thermometer: Refrigerator, Accuracy: $\pm 0.75^{\circ}\text{C}$, Temperature Range: -5°C to 15°C , Length: 125 mm	Each	13-202-631
Verification Thermometer: Freezer, Accuracy: $\pm 0.5^{\circ}\text{C}$, Temperature Range: -30°C to 1°C , Length: 135 mm	Each	13-202-632
Verification Thermometer: Incubator, Accuracy: $\pm 0.75^{\circ}\text{C}$, Temperature Range: 15°C to 50°C , Length: 135 mm	Each	13-202-630
Verification Thermometer: Oven, Accuracy: $\pm 1.5^{\circ}\text{C}$ and $\pm 2^{\circ}\text{C}$ above 100°C , Temperature Range: 20°C to 130°C , Length: 145 mm	Each	13-202-635



Fisherbrand™ TraceableLIVE™ Ultra-Low Temperature WiFi Datalogging Thermometers with Remote Notification

A simple, efficient, and reliable way to stay connected to your critical environments with smartphone, tablet, or personal computer.

Description	Quantity	Cat. No.
2 Stainless Steel 316 Probes, Quick Start Guide, Batteries, Magnets, Velcro, Wall Mount, and Traceable™ Certificate	Each	15-079-627
1 Stainless Steel 316 Probe, Quick Start Guide, Batteries, Magnets, Velcro, Wall Mount, and Traceable™ Certificate	Each	15-079-626



Fisherbrand™ Traceable™ Memory-Loc™ Ultra-Low Temperature USB Datalogging Refrigerator/Freezer Thermometers

High-accuracy thermometer that's suitable for monitoring temperatures in refrigerators, freezers, water baths, heating blocks, and incubators.

Description	Quantity	Cat. No.
1 Probe	Each	15-079-622
2 Probes	Each	15-079-623





Thermo Scientific™ Smart-Vue Pro Modules

Help increase efficiency with multi-sensor wireless monitoring.

Description	Quantity	Cat. No.
Smart-Vue Pro Duo	Each	SVHWRMOD002
Smart-Vue Pro Quatro	Each	SVHWRMOD004

Thermo Scientific™ InSight Kits

Wirelessly monitor your cold storage equipment's temperature, energy consumption, and other parameters.



Description	Quantity	Cat. No.
InSight Kit for ULT and Freezers	Each	11-676-377
InSight Kit for Cryogenic Storage (LN2)	Each	11-676-380
InSight Kit for Walk-In Freezer (Single Refrigeration System)	Each	11-676-378
InSight Kit for Walk-In Freezer (Dual Refrigeration System)	Each	11-676-379



Don't see what you're looking for?

Shop our full line of [cold storage solutions](#).



Sample Preparation

Filtration and Clarification

- Filters
- Funnels
- Filtering Flasks
- Thimble

Centrifugation

- Micro, Compact, Benchtop, and Specialty Centrifuges

Ultrafiltration and Protein Concentration

- Ultrafiltration
- Protein Concentrators
- Tangential Flow Filtration

Liquid Handling

- Pipettes
- Tips

Temperature Regulation

- Thermal Cyclers

Consumables

- Well Plates
- PCR Tubes
- PCR Regents and Kits



RNA Extraction, Isolation, and Detection

RNA Extraction, Isolation, and Detection

Applied Biosystems™ MagMAX™ Viral/Pathogen Ultra Nucleic Acid Isolation Kit

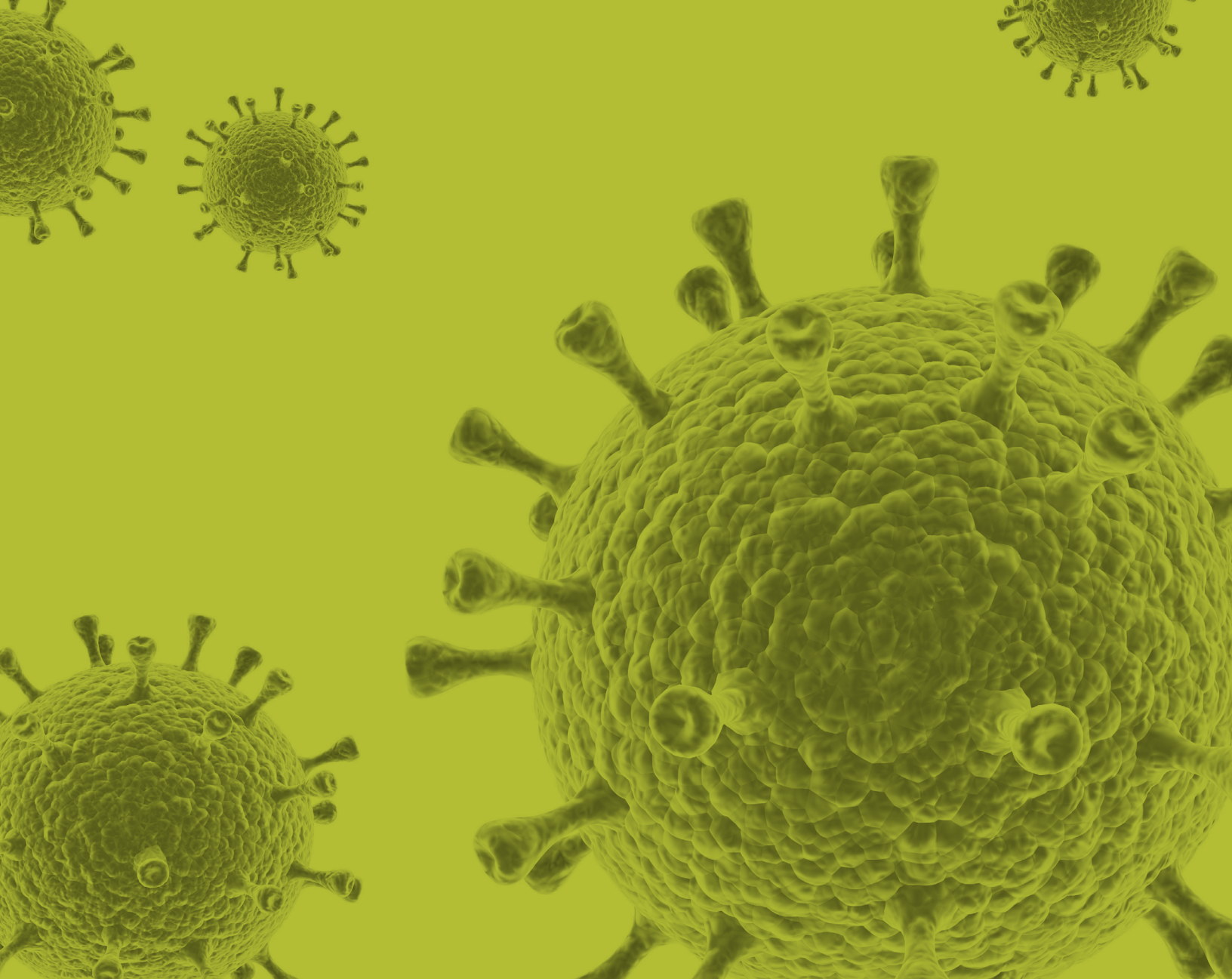
Recover nucleic acid from viral particles and gram-negative bacteria and enable lysis and nucleic acid recovery from tough pathogens.

Description	Quantity	Cat. No.
Viral/Pathogen Ultra Nucleic Acid Isolation Kit	Each	A42356



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Visit fishersci.com/research-essentials or fishersci.com/vaccinesolutions to browse a wide selection of industry-leading COVID-19 testing products. Choose from molecular methods, antigen detection, or serological tests, which are CLIA-waived, moderate, or high-complexity assays.

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