



# Production Solutions

**Plan. Prepare. Protect.**

## Microbial Quality Control

 **fisher** scientific  
part of Thermo Fisher Scientific

# Microbial Quality Control

Analysis and Quality Control (QC) play a critical role in pharma and biopharma production. Throughout every stage of the drug development process they ensure that all manufactured products meet the required standards and are of the highest quality.

[Quality Management](#) is also a core value at the Fisher Scientific channel and we are committed to providing our customers with a superior service and high-quality products, perfectly suited to their needs and exceeding their expectations.

Through this commitment we have developed our [SureTRACE](#) and [SureTRACE+](#) programs. Both programs provide full traceability through lot visibility, guaranteed access to associated certificates and a supplier commitment to notify you of changes impacting quality and supply.

Working closely with our supplier partners is one of our key strengths. They support us as we continue to expand our portfolio of innovative products and services, ensuring, like you, that we are putting our customers first.

In this Microbial QC brochure, let us help you to reduce the risk of contamination with disposable filter funnels for sterility testing, triple wrap plates for environmental monitoring and Quanti-Cult™ kits for microbial verification. Also discover centrifuges, bottles and biological safety cabinets for safe sample handling and storage.

Trust in the Fisher Scientific channel to help you  
**Plan. Prepare. Protect.**

Plan. Prepare. Protect.

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## You may also be interested in:



### Analytical QC Brochure

Discover syringe filters for sample preparation and dissolution testing, liquid handling systems for efficient sample transfers, pH meters for electrochemical analysis as well as products for chromatographic and spectroscopic techniques.

[Learn More](#)



### QC Interactive Workflow

Analytical and Microbial testing is required at all stages of the biopharmaceutical production workflow. Let our interactive workflow guide you through key products for your most sensitive and critical applications.

[Learn More](#)



# Microbial Essentials

We begin with one of the most important commodities used by the pharmaceutical industry – water. Purified water plays a major role in biopharmaceutical quality control testing as it is used not only for a wide range of microbial applications such as buffer preparations, sampling and filtering, it is also used to rinse instruments and equipment.

Also discover in this section liquid handling systems for efficient sample transfers, incubators and water baths for temperature control, as well as pH meters, petri dishes and other essential consumables.



Only freshly purified water should be used to rehydrate culture media and support your microbial analysis. Ensure your water is contaminant free with Type 1 or 2 water produced easily and efficiently from the tap.



Controlling pH is of crucial importance to support consistent performance of your culture media once sterilised. Choose Thermo Scientific™ Orion™ meters and Ross electrodes for improved temperature stability and accuracy.

## Thermo Scientific™ Barnstead™ Smart2Pure™ Pro Water Purification System

- Water purification progresses through independent cartridges with Aqastop quick connects for fast replacement
- Module 1 reverse osmosis cartridges to remove up to 99% of tap water impurities
- Module 2 includes a polishing cartridge that contains high-quality ultrapure resin for consistent purity and long cartridge life
- Easy-to-operate: Dispensing is easy and features variable speed to control flow



All in One! The Smart2Pure™ Pro system is a compact system which converts tap water to into ASTM Type 1. The Smart2Pure Pro UV/UF 16 LPH offers the choice of a 30 L or 60 L reservoir for customizable storage capacity and ability to dispense both ASTM Type 1 and Type II water.

Cat. No	Model	Pack qty
15970206	Smart2Pure Pro 16 UV/UF with 60L Tank - Complete system	1
15980206	Smart2Pure Pro 16 UV/UF with 30L Tank - Complete system	1
15990206	Smart2Pure Pro 16 UV/UF and 60L Tank	1
15900216	Smart2Pure Pro 16 UV/UF and 30L Tank	1

## Thermo Scientific™ Orion Star™ A211 Benchtop pH Meter

- Measure pH, mV, relative mV or ORP with temperature
- Perform up to a 5 point pH calibration using automatic buffer recognition of NIST or DIN buffer groups with choice to manually enter custom buffer values
- Calibration editing option allows individual points to be fixed without a full recalibration
- Informative, easy-to-read backlit graphic display with clear onscreen instructions simplifies operation



Reliably measure pH, mV, ORP and temperature with our benchtop pH meter for advanced lab analysis and printer or computer interfacing.

Cat. No	Description	Pack qty
15661717	Orion Star A211 pH benchtop meter difficult sample kit with ROSS Sure-Flow pH electrode and ATC probe	1
15671717	Orion Star A211 pH benchtop meter separate sensor kit with ROSS Ultra pH electrode and ATC probe	1
15681717	Orion Star A211 pH benchtop meter food and beverage kit with Sure-Flow pH electrode and ATC probe	1
11661449	Orion Star A211 pH benchtop meter with stand	1
11671449	Orion Star A211 pH benchtop meter TRIS kit with TRIS-compatible ROSS Ultra pH/ATC electrode	1
12923257	Orion Star A211 pH benchtop meter durable sensor TRIS kit with TRIS-compatible ROSS Ultra epoxy-body pH/ATC electrode	1
16211432	Orion Star A211 pH benchtop meter standard kit with general purpose pH/ATC electrode	1



Offering innovative features for precise, easy-to-use systems for microbial analysis – a wide base for added stability, easy access to 47mm diameter membranes and graduated chambers for quick volume checks.

## Thermo Scientific™ Nalgene™ Sterile Analytical Filter Units

- Gamma-sterilized, individually wrapped
- Upper chamber snaps away from receiver for retrieval of membrane with sterile forceps
- Provides excellent recovery and growth of microorganisms
- Receiver is graduated from 20 to 150mL for easy reading of sample volume



Recover and grow microorganisms for QC testing and analysis of water, food and beverage, raw materials and finished product.

Cat. No	Pore Size	Pack qty
10199840	0.2 µm	12
10780422	0.45 µm	12



ART tips contain a self-sealing barrier that seals in aerosols and liquids, eliminating contamination of pipettes and sample cross-contamination during pipetting. ART universal tips fit almost any brand of pipette.

## Thermo Scientific™ ART™ Barrier Pipette Tips in Hinged Racks

- Stackable hinged racks save space in your lab
  - Sterile tips are certified free from RNase, DNase and pyrogen
- Recommended for:
- Liquid Handling
  - Molecular Biology



Perform pipetting accurately and consistently with these barrier pipette tips in hinged racks, which seal when exposed to potential contaminants. ART hinged racks are available in low retention, micropoint, extended length and other specialty styles.

Cat. No	Description	Volume	Pack qty
12661480	ART 100E, Filtered, Sterile, Hinged Rack	100 µL	960
10746625	ART 100E, Filtered, Sterile, Hinged Rack	100 µL	960
10777385	ART 100, Filtered, Sterile, Hinged Rack	100 µL	960
10768735	ART 200, Filtered, Sterile, Hinged Rack	200 µL	960
10431375	ART 200, Filtered, Sterile, Hinged Rack	200 µL	960
15193606	ART Barrier, Filtered, Sterile, Rack	300 µL	960
15173606	ART Barrier, Filtered, Sterile, Rack	300 µL	960
11942689	ART 10, Filtered, Sterile, Hinged Rack	10 µL	960
10217184	ART 10, Filtered, Sterile, Hinged Rack	10 µL	960
10032874	ART 20E Ultra-micro, Filtered, Sterile, Hinged Rack	10 µL	960
10706815	ART 10, Filtered, Sterile, Hinged Rack	10 µL	960
10276944	ART 20P, Filtered, Sterile, Hinged Rack	20 µL	960
10401755	ART 20P, Filtered, Sterile, Hinged Rack	20 µL	960
10564914	ART Barrier, Filtered, Sterile, Hinged Rack	1000 µL	768



Use the fully autoclavable Thermo Scientific™ FinnpiPETTE™ F2 Multichannel Pipette for highly demanding applications where robustness and durability, combine with accuracy, precision and ergonomic design.

## Thermo Scientific™ FinnpiPETTE™ F2 Multichannel Pipettes

Use this multichannel pipette for highly demanding applications where robustness and durability are essential. For decades, Thermo Scientific FinnpiPETTE pipetting systems have delivered unmatched productivity and ergonomics across thousands of labs and applications worldwide.

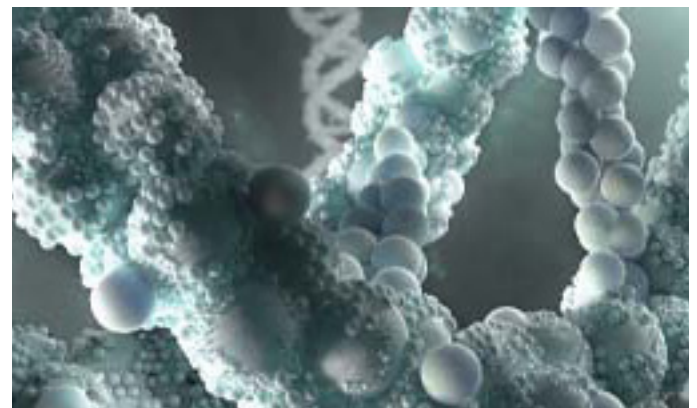


FinnpiPETTE F2: Proven reliable for long-term intensive use

Rugged and Durable

FinnpiPETTE F2 contains tough PVDF components that stand up to harsh chemicals and the damaging effects of UV light.

Cat. No	Compatible Tips	Number of Channels	Pack qty
11897371	Finntip 10 Micro, Filter 10 Micro, Flex 10, Flex Filter 10	8	1
11807381	Finntip 250, Filter 100, Flex 200, Flex Filter 100, 200 Ext, Filter 100 Ext	8	1
10125483	Finntip 250, Filter 100, Flex 200, Flex Filter 100, 200 Ext, Filter 100 Ext, 250 Wide	8	1
10339263	Finntip 300, Filter 300, Flex 300, Flex Filter 300	8	1
11847381	Finntip 10 Micro, Filter 10 Micro, Flex 10, Flex Filter 10	12	1
10305854	Finntip 250, Filter 100, Flex 200, Flex Filter 100, 200 Ext, Filter 100 Ext	12	1
11867381	Finntip 250, Filter 100, Flex 200, Flex Filter 100, 200 Ext, Filter 100 Ext, 250 Wide	12	1
11877381	Finntip 300, Filter 300, Flex 300, Flex Filter 300	12	1
11887381	Finntip 20 Micro, Filter 20 Micro	16	1
10598554	Finntip 50 Micro, Filter 50 Micro	16	1



Products for your Microbiology Workflow

Learn More

fisher scientific





# Microbial Essentials



To maximise incubator space, Thermo Scientific Sterilin Petri dishes come in a range of sizes matched to the filter discs you are using.

## Thermo Scientific™ Sterilin™ 30 to 140mm Petri Dishes

- Aseptically manufactured
- 50mm diameter dish is over 20mm deep and designed for use with liquid media to aid handling
- 55mm dish accommodates 47mm membrane filters making it suitable for water testing
- 140mm dish is produced and tested in accordance with the EN ISO 24998 Petri dish standard which includes stringent dimensional controls



Save incubator space with Thermo Scientific™ Sterilin™ 30 to 140mm Petri Dishes. These small dishes are suitable for most applications.

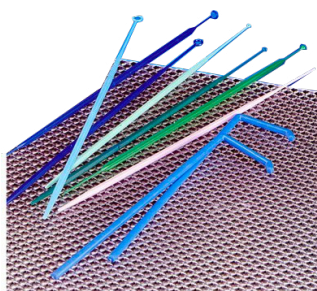
Cat. No	Diameter	Height	Vent	Pack qty
11329283	35 mm	11 mm	3	800
11359273	50 mm	14 mm	1	700
11369273	60 mm	15 mm	1	540
10655821	50 mm	20.3 mm	1	500
11339283	139 mm	21.1 mm	3	80
11749242	55 mm	12 mm	No	1620



Thermo Scientific Sterilin Loops and Spreaders provide innovative features to bring accuracy, precision and ease-of-use to your plating.

## Thermo Scientific™ Sterilin™ Loops and Spreaders

- For inoculation, dilution streaking, spreading and picking isolated colonies
- Eliminate the need for flaming and the subsequent risk of aerosols
- Inoculation loop for fixed sample volumes with choice of sphere for dilution streaking, or needle for picking colonies and stab cultures
- Choice of rigid or flexible loops to suit different applications and user preferences
- Hexagonal shaft improves grip and assists orientation



Simplify your culture work with Thermo Scientific™ Sterilin™ Loops and Spreaders. Choices for inoculation, dilution streaking, spreading and colony picking.

Cat. No	Volume	Color	Pack qty
11778858	1µL	Green	1000
11788858	10µL	Blue	1000



Offered in both graduated and ungraduated formats with integral bulbs or accessory bulbs, dispense accurate volumes of liquids quickly and easily with Thermo Scientific™ Samco™ transfer pipettes.

## Thermo Scientific™ Samco™ Transfer Pipettes

Prevent cross-contamination with these transfer pipettes, which have a built-in bulb that eliminates the need for plugging.

Recommended for:

Tissue culture and applications, routine sampling of serum and plasma, blood culture, urine analysis.



Cat. No	Volume	Bulb Draw	Sterility	Pack qty
15307813	7.7 mL	3.5 mL	Non-sterile	500
10354470	8.6 mL	6.0 mL	Non-sterile	400
15252089	1.8 mL	0.9 mL	Non-sterile	4000
15337893	9.5 mL	6.2 mL	Non-sterile	250
15778257	7.7 mL	3.2 mL	Sterile	4000
15317813	7.7 mL	3.5 mL	Sterile	500
15327813	7.7 mL	3.5 mL	Sterile	500
11661839	7.7 mL	3.2 mL	Non-sterile	500
11367873	7.7 mL	3.2 mL	Sterile	500
15337813	8.6 mL	6.0 mL	Sterile	400
15357813	8.6 mL	6.0 mL	Sterile	400
12394508	8.0 mL	4.6 mL	Non-sterile	400
15317863	1.8 mL	0.9 mL	Sterile	500
15327863	1.8 mL	0.9 mL	Sterile	500
15307873	0.6 mL	0.3 mL	Non-sterile	500
15307883	13.7 mL	7.4 mL	Non-sterile	500
15317883	3.1 mL	2.2 mL	Non-sterile	400
15327883	3.1 mL	2.2 mL	Non-sterile	400
15337883	7.5 mL	2.8 mL	Non-sterile	400
15357883	7.5 mL	2.8 mL	Sterile	400
15367883	7.5 mL	2.8 mL	Sterile	500
15397883	4.9 mL	1.8 mL	Sterile	500
15307893	4.9 mL	1.8 mL	Sterile	500
15347893	9.5 mL	6.2 mL	Sterile	250
15357893	9.5 mL	6.2 mL	Sterile	400
15307913	5.5 mL	2.4 mL	Non-sterile	500



- Perfect distribution of temperature, humidity and CO<sub>2</sub>
- Long-time stable and repetitively accurate
- Sterile within 60 minutes at +180 °C
- Diverse alarm and monitoring functions



To improve consistency between analyses and reduce errors, define and automate sample mixing parameters with accurate, stable and easy-to-use Thermo Scientific Digital Vortex Mixers.

## Memmert™ CO<sub>2</sub> Incubator ICO

- Model sizes: 50, 105, 150, 240
- Temperature adjustment range: +18 °C to +50 °C
- CO<sub>2</sub> adjustment range: 0 to 20 %
- Humidity adjustment ranges: 40 to 97 % rh (with option K7)



Ideal for incubation with CO<sub>2</sub>, biosynthesis and cell incubation in the laboratory.

Cat. No	Capacity	Pack qty
15682244	107 L	1
15578675	156 L	1
15692244	241 L	1
15516425	56 L	1

## Thermo Scientific™ Digital Vortex Mixers

- Digital display of speed and time
- Continuous and touch modes
- Speed range: 200 to 3000 rpm
- Precise speed control: ±5% rpm



Get accurate and efficient sample mixing

Cat. No	Voltage	Plug Type	Pack qty
16826061	120 V	US, JP Plug	1
16534622	230 V	EU, UK, CN Plug	1

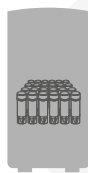
## Discover Sample Prep Made Easier Than Ever Before

thermo scientific

Save time and enjoy more convenience

Unparalleled ease, flexibility, and performance for consistent purification for DNA, RNA, proteins, or cells for almost all applications

Learn More



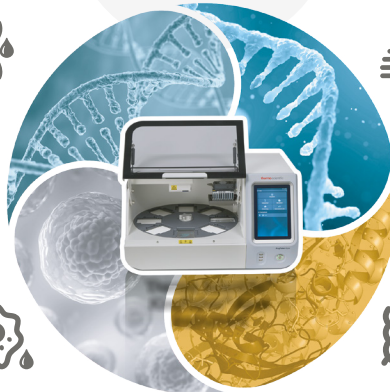
### Long-term biobanking

Elute right into the storage tubes



4–100°C

Temperature range for ultimate performance



>50 validated preprogrammed protocols

Available right at your fingertips



2 UV lamps

For effortless decontamination



Dual magnet heads

Unrivalled flexibility and convenience from start to finish

Visit [eu.fishersci.com/go/kingfisherapex](http://eu.fishersci.com/go/kingfisherapex) for more information.

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part of Thermo Fisher Scientific



Click on a product to access a full detailed product selection

[eu.fishersci.com/go/analysis-qc](http://eu.fishersci.com/go/analysis-qc)

# Microbial Essentials



Ensure your culture media is ready to use by controlling the temperature with Thermo Scientific Precision Water Baths. Thermal beads are an innovative alternative to water and can reduce the potential for contamination.

## Thermo Scientific™ Precision™ Coliform Water Baths

- Temperature controller provides  $\pm 0.05^{\circ}\text{C}$  uniformity and  $\pm 0.1^{\circ}\text{C}$  stability with stainless-steel gable cover
- Achieve outstanding temperature uniformity with perimeter-directed water flow
- Easily clean and maintain bath with coil-free design
- Optimize scheduling with auto-on and auto-off timers



Support your fecal coliform testing with coliform water baths, designed specifically for this application. Baths are preset to optimal temperatures for easy use.

Cat. No	Model	Description	Capacity	Pack qty
15305877	Precision COL 19	19L Coliform Water Bath	19 L	1
15315877	Precision COL 35	35L Coliform Water Bath	35 L	1
10120988	Precision COL 35	Thermal Beads 4L	4L	1



Control incubation time, temperature and sterility conditions with a reduced footprint design and enhanced energy efficiency.

## Thermo Scientific™ Heratherm™ General Protocol Microbiological Incubators

- Gravity convection provides gentle air flow and minimal drying out
- Temperature range from ambient  $5^{\circ}$  to  $75^{\circ}\text{C}$
- Temperature uniformity of  $\pm 0.6^{\circ}\text{C}$  (measured at  $37^{\circ}\text{C}$ )
- Temperature stability of  $\pm 0.2^{\circ}\text{C}$  (measured at  $37^{\circ}\text{C}$ )



Perform a range of general applications with these general protocol incubators.

Cat. No	Capacity	Pack qty
10529070	75 L	1
10839810	117 L	1
10744262	194 L	1
12625306	405 L	1
12635306	747 L	1

# Meet Wastewater Regulations By Choosing The Correct Filter

Wastewater treatment is expensive, time-consuming, and labor-intensive. Without these treatments and wastewater regulations, people are at risk of contracting water-borne diseases.

Water testing laboratories need new ways to boost productivity and generate high quality, reproducible results. Filtration is an overlooked step that can be key in reaching these goals.

## Quality monitoring

Monitoring general water quality relies on the measurement of different parameters, including total suspended solids (TSS) and total dissolved solids (TDS), which are the molecules and ions that remain in a water sample after filtration.

Regulations on workflows and thresholds vary depending on country, region, or city. Regardless of the location, wastewater quality testing is a long, manual process. Proper filtration is vital in this process.

## Choosing the right filter

Laboratories can generate reliable results by working with a trusted brand with a proven track record of quality. Cytiva has been making high-quality Whatman™ filters for more than 100 years. By generating consistent results, organizations avoid unnecessary retests, saving both time and money.

### GF/C™ glass fiber filters

- Certified mass loss of  $0.017\text{ mg/cm}^2$  after washing
- Binder-free, in line with European standard EN872 regulations



### GF/C™ RTU glass fiber filters

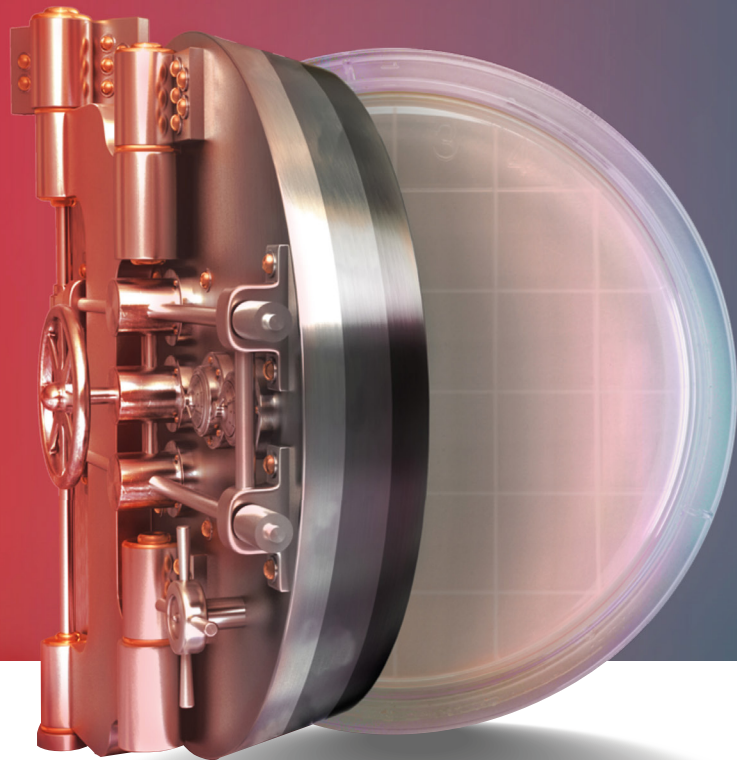
- Same benefits GF/C™ glass fiber filters
- Ready-to-use format saves time
- Pre-washed, dried and weighed
- Barcoded aluminium pan with filter weight



[Learn More](#)







Environmental monitoring

# Make it better

## Thermo Scientific™ Triple Wrap Plates - Sealed, Sterile, Secure

Designed to support the most sterile environments, the Thermo Scientific Triple Wrap Plates feature the latest in quality-assurance technology.



### Confidence in results

Unique VHP indicator confirms integrity of the see-through triple wrapping, which is designed to keep media in optimal condition.



### Innovative technology

Available with 2D barcoding for sampling accuracy with full traceability, while sanitized polypropylene storage boxes ensure sterility every time.



### High volume that lasts

Not only do our plates have improved shelf-life and room temperature storage, they're also available in high volume single lots.

[Learn More](#)



Click on a product to access a full detailed product selection

# Sterility Testing



Sterility testing is one of the most established microbiological tests currently being used in pharmaceutical manufacture. It is used at every stage of the production workflow to test for possible sources of contamination, from initial raw materials through to the final drug product.

It is vital that testing is carried out under strict aseptic conditions and here again the Fisher Scientific channel can support with a wide range of apparel, as well as cleaning equipment and disinfectants.



316L stainless steel construction, interchangeable parts and customisability, with the option of a coupling adapter to allow assembly of a 6-place manifold; equipment that takes directions from you.



Gamma irradiated and double bagged to ensure easy travel through airlock. An ideal alternative to closed-system sterility testing. Meets requirements of U.S., Japan, and European pharmacopoeias for sterility testing

## Pall 3-Place 316SS Laboratory Manifold with Manifold Valves, End Cap, and Hose Barb Cap



- Multiple adapters available, designed to fit the range of Pall filter funnels and the reusable magnetic filter funnel
- No more dirty manifolds: The manifold is designed to fit most laboratory autoclaves by separating into manageable components
- Double testing capacity: Modular design allows two manifolds to combine yielding a standard 6-place manifold which can be easily separated for disinfection and/or sterilization
- Manifolds that adapt to you: Whether you are right or left handed, setting up your test workflow is second nature. The components are interchangeable and designed with a simple slip fit to the manifold. Adapters are sold separately

Unique microbiology manifold designed for flexibility and reduction in cross-contamination. 316L stainless steel construction, interchangeable parts and customisability, with the option of a coupling adapter to allow assembly of a 6-place manifold; equipment that takes directions from you.

## Pall MicroFunnel™ ST Filter Funnels with GN-6 Membrane



- For research use only

Microfunnel ST filter funnels are available in gamma-irradiated, double-bagged packaging saving valuable time during entry into cleanrooms and hoods.

Cat. No	Volume	Pack qty
17164411	100 mL	40
17174411	300 mL	20

Cat. No	Pack qty
17104441	1SET



# Thermo Scientific™ Heratherm™ Refrigerated and Microbiological Incubators

## Sterility Testing for Robust Quality

Successful quality control relies upon the ability of the manufacturer to quickly and repeatably obtain the right information to enable key process decisions to uphold product quality, including the decision to release raw materials and final product batches for use. The individual quality parameters necessary for a full Quality Control plan will be determined by the nature of the product, local legislation, and consumer expectations. This means the analytical methods and necessary instruments required to test the desired quality parameters need to be carefully chosen to ensure data is trustworthy, reliable, and reproducible. For drug products intended for human use, microbial sterility testing will be necessary to help ensure products are safe.

Microbial sterility testing, carried out under aseptic conditions, is commonly required for a drug product formulation as part of a robust, recurring quality test procedure. The methods for sterility testing utilize two growth media, chosen to promote the growth of different types of mold, bacteria, and fungi. The incubation conditions associated with each media type are also selected to fit the ideal growth conditions of the microbe culture. Tryptic Soy Broth and Fluid Thioglycolate Medium, incubated at 20-25°C and 30-35°C respectively, are inoculated and incubated for at least 14 days before assessing for microbial growth. After testing, a product is certified sterile if no microbes are found under the tested conditions, with the caveat that the sterility rating is restricted to those specific conditions tested.

At Thermo Fisher Scientific, we help quality control groups protect against customer complaints and operate more efficiently by providing a range of laboratory products for fast, accurate, and reliable data collection for microbial and sterility analysis.

At the heart of many microbial sterility protocols are Microbiological and Refrigerated Incubators

- Thermo Scientific™ Heratherm™ Advanced Protocol Security Microbiological Incubators offer unique dual convection technology and additional alarm systems for superior sample protection to provide additional peace-of-mind for all users. An independently certified 140°C decontamination routine eliminates the need for separate autoclaving of interior fittings, providing confidence in the aseptic testing procedure. With a wide operating temperature range from 5°C above ambient to 105°C, and a spatial temperature deviation of less than  $\pm 0.6^\circ\text{C}$  at 37°C, these units are designed to provide a safe and controlled environment for microbial growth. A choice of stainless-steel exterior is available for a robust, corrosion-resistant surface, perfect for high usage areas.
- Thermo Scientific™ Heratherm™ Refrigerated Incubators, refrigerated by energy efficient Peltier electronic cooling technology instead of a conventional compressor, provide outstanding temperature uniformity and stability with an automatic fan that adapts speed to achieve optimal temperature performance. Heratherm refrigerated incubators contain no hazardous refrigerants or substances and require low energy consumption specifically in the temperature range of 15°C to 25°C, ideal for use with Tryptic Soy Broth sterility incubation. Outfitted with visual and audible alarms in case of temperature deviations, a RS232 interface for direct data logging, and an access port for independent data monitoring, the Heratherm Refrigerated Incubator is available in two sizes with a wide range of optional accessories, including additional access ports, a stainless-steel exterior, or a left-handed door.

Microbial sterility analysis is one of the most important elements of a robust quality control plan. The risks associated with microbial contamination are pronounced in terms of potential impact to product efficacy, consumer protection, and revenue loss. Incubators designed to provide a safe, controlled environment for consistent microbe growth are of particular significance to maintaining firm control of product quality during bioproduction. Thermo Fisher Scientific offers a wide range of microbiological and refrigerated incubators to meet the needs of your specific microbial analysis protocols.



[Learn More](#)



Click on a product to access a full detailed product selection

[eu.fishersci.com/go/analysis-qc](http://eu.fishersci.com/go/analysis-qc) 11

# Sterility Testing



Thermo Scientific™ Heratherm™ Refrigerated Incubators are equipped with Peltier technology to reach and maintain the precise ambient temperatures you need for reliable results.

## Thermo Scientific™ Heratherm™ IMP180 Refrigerated Incubator

- 178L / 6.3 cu. ft
- Temperature range +5 to +70°C
- Electrical requirements 100/230 V, 50/60 Hz

Heratherm Refrigerated Incubator IMP180, 178L, Peltier technology, 5-70 °C, programmable, timer, adjustable OTP, table top, 2 perforated SS shelves, energy efficient design, no refrigerants, internal US electrical socket, 100/230 V, 50/60 Hz



Cat. No	Temperature Range	Capacity	Pack qty
17406922	+5 to +70°C	178L	1



## Less background DNA for lower-level microbial detection

With the ability to quickly and reproducibly detect microbial targets at the lowest limits, even in the presence of common inhibitors.

The Applied Biosystems™ TaqPath™ BactoPure Microbial Detection Master Mix is widely used across all the biologic modalities, including monoclonal antibodies (mAbs), vaccines, cell and gene therapies, large molecule injectables, and other IV drug substances, as well as in drug product development and manufacturing steps, supporting microbe-free production of drug products.



[Learn More](#)



Provides completely closed system sterility testing of pharmaceuticals, open containers, closed containers, pre-filled syringes, powders, and medical devices. Sartorius Sterisart™ NF Sterility Testing System is optimal for use with isolators.

## Sartorius Sterisart™ NF Sterility Testing System

- Reliable Sartochem™ membrane
- High retention of microbes
- Low adsorption
- High mechanical stability
- Pre-installed color-coded tube clamps
- Easy-to-read graduated marks
- User-friendly (several practical adapters available)
- Product-/lot number identification
- Gas-impermeable packaging for protection against sterilants



International pharmacopoeias require the complete sterility of pharmaceutical products that are injected into the blood stream or that otherwise enter the body below the skin surface. As a manufacturer of such products, you are required to supply proof of sterility of the final product batch. Sterisart™ NF is a completely closed system for the sterility testing of pharmaceutical products. It is based on the membrane filter method, however it eliminates the procedure of manipulating the filters. By this the main risk of a secondary contamination and false positive results is eliminated. A peristaltic pump transfers the sample into the filtration units, and after rinsing, the filtration units are filled with media and used for incubation of the filters without any contact to the environment.

Cat. No	Sample Composition	Sampling Option	Pack qty
10687683	Liquids	No Septum	10
11700965	Liquids	Septum	10
11790955	Liquids	No Septum	10
11720965	Liquids	No Septum	10
11740965	Liquids	No Septum	10
11730975	Liquids	No Septum	10
11750965	Liquids	No Septum	10
11770965	Liquids	No Septum	10
11720975	Liquids	No Septum	10
11790965	Liquids	No Septum	10
11710975	Liquids	No Septum	10
11730965	Easily dissolved powders	Septum	10
15972530	Liquids	Septum	10
11760965	Liquids	Septum	10
11700975	Easily dissolved powders	Septum	10



# Microbial Identification & Enumeration

In the pharmaceutical industry, regulatory compliance is paramount. When it comes to pharmaceutical quality control, growth promotion, method suitability, microbial enumeration and microbial absence testing, robust, validated protocols are key in order to ensure safe release of high-performing pharmaceutical products.



★ Microsart™ filter 100 mL PVDF Filter Units consist of a funnel, membrane filter, and base support. Put on a stainless steel manifold to directly filter the sample. Easy removal via click-fit closure.

★ Sartorius Microsart™ Manifold the filtration stand that adapts to your need. Choose between various sizes from single branch to multi-branch, easily connectable and reusable with single-use funnels or filtration units.

## Sartorius™ Microsart™ @Filter 100 PVDF Filter Units

- Microbial enumeration
- Bioburden testing
- Microbial limit testing
- Other microbial tests of liquid samples



Microsart™ @filter 100 PVDF Filter Units consist of a funnel, membrane filter, and base support. Put on a stainless steel manifold in order to directly filter the sample. After filtration, the funnel is easy to remove via its click-fit closure.

Cat. No	Description	Pack qty
17188504	27 sterile individually wrapped filters	27
17168504	6 sterile bags of 10 filters each	60
17178504	3 sterile trays of 8 filters each	24

## Sartorius 3 Branch Microsart™ Manifolds

- 100% stainless steel for minimized cleaning effort
- Full autoclavability without disassembly
- Sterile venting in critical applications
- Reduced risk of secondary contamination



Filtration stand designed to adapt to a variety of different needs.

Cat. No	For Use With	Pack qty
16478193	Biosart™ 100 Monitors	1
16488193	Biosart™ 250 Funnels	1
16498193	Microsart™ Funnels and Microsart™ @Filter	1



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# Microbial Identification & Enumeration



Sartorius Microsart™ e.jet Transfer Vacuum Pump. A new vacuum laboratory pump able to create sufficient vacuum for vacuum filtration and simultaneous transfer of the filtered liquid to waste



TaqPath™ 1-Step RT-qPCR Master Mix is designed for robust and reproducible one-step pathogen detection and gene expression workflows. The single-tube formulation facilitates easy reaction set up: just add your assay and sample

## Sartorius Microsart™ e.jet Transfer Vacuum Pump

- Ideal for sample filtration in microbiology
- Achieves a trans membrane pressure of 600 mbar and a flow rate of >4.0L/min.
- Constant flow rates
- Defined maximum vacuum



A new vacuum laboratory pump able to create sufficient vacuum for vacuum filtration and simultaneous transfer of the filtered liquid to waste

Cat. No	Pack qty
13129065	1



Sartorius Microsart™ Media dish, sterile packed and ready to use together with Microsart™ filter units. Active lid enables touch-free transfer of membrane

## Sartorius Microsart™ @Media

- Ready-to-use agar media dish (prefilled with different agar media types) with active lid
- Sterile packaged and ready to use together with Microsart filter units
- Active lid enables touch-free transfer of membrane, without using any tweezers and reduces the risk of secondary contamination
- Lifiable interior lid provides easy access to select colonies after incubation for further analysis



Enhance the safety of microbiological quality control in the pharmaceutical and biotech industries for microbial limits testing according to the USP and EP

Cat. No	Product Type	Pack qty
15932510	TSA	100
15942510	SDA	100
15952510	R2A	100

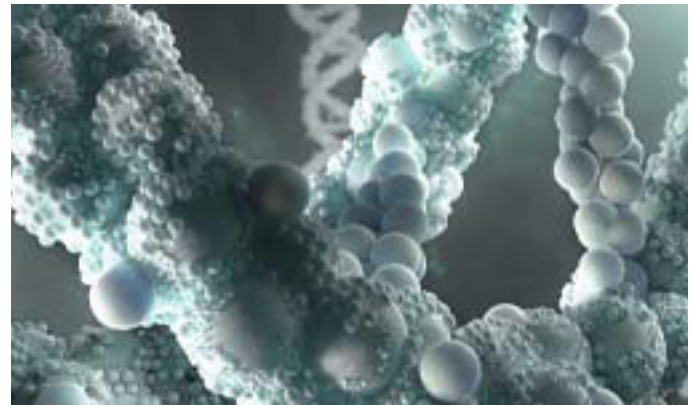
## Applied Biosystems™ TaqPath™ 1-Step RT-qPCR Master Mix, CG

- High sensitivity to detect low-copy targets with reproducible CT results
- 6 logs of dynamic range with RNA, DNA, and multiplexing applications
- Tolerance of inhibitors commonly found in clinical samples
- Labeled 'For Laboratory Use'
- High Sensitivity



With understanding of the importance of reproducible detection for low-titer pathogen or transcripts in clinical diagnostic testing, TaqPath™ 1-Step RT-qPCR Master Mix, CG, has been optimized as a higher-concentration 4X master mix that allows you to input more sample into each reaction, increasing sensitivity even in low-volume reactions.

Cat. No	Product	Pack qty
15420704	Applied Biosystems™ TaqPath™ 1-Step RT-qPCR Master Mix, CG	10ML
15410704	Applied Biosystems™ TaqPath™ 1-Step RT-qPCR Master Mix, CG (1 mL)	5



Products for your Microbiology Workflow

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Ensure Traceability and Quality with SureTRACE Products



TaqPath™ BactoPure™ Detection Master Mix is optimized for rapid low-level microbial detection even in the presence of PCR inhibitors. ROX™ dye acts as a passive reference, recommended for singleplex and up to triplex reactions

## Applied Biosystems™ TaqPath™ BactoPure™ Microbial Detection Master Mix

- TaqPath™ BactoPure™ Microbial Detection Master Mix is optimized for rapid low-level microbial detection even in the presence of PCR inhibitors
- Contains ROX™ dye which acts as a passive reference and is recommended for singleplex (1 probe), or up to triplex (3 probes) reactions
- Consistent low-level detection of bacterial, fungal, mammalian, viral DNA, and antibiotic resistance markers
- Tolerant of PCR inhibitors typically found in biopharmaceutical, molecular diagnostic, and research applications from both purified samples and crude lysates



TaqPath™ BactoPure™ Microbial Detection Master Mix is optimized for rapid low-level microbial detection even in the presence of PCR inhibitors. ROX™ dye acts as a passive reference, recommended for singleplex (1 probe) and up to triplex (3 probes) reactions.

Cat. No	Volume	Pack qty
17636885	1 x 1 mL	1
17646885	1 x 5 mL	1
17656885	5 x 1 mL	5
17666885	1 x 50 mL	1



The MagMAX Microbiome Ultra Nucleic Acid Isolation Kit enables efficient, high-throughput nucleic acid extraction from stool and soil, which are some of the most challenging to extract RNA and DNA from, until now

## Applied Biosystems™ MagMAX™ Microbiome Ultra Nucleic Acid Isolation Kit, with Bead Tubes

Enables efficient, high-throughput nucleic acid extraction from stool and soil.

Stool and soil are often the sample types of choice for scientists in the microbiome field.

However, these samples also happen to be some of the most challenging to extract RNA and DNA from, until now.



Cat. No	Pack qty
17180796	100RXN



Up to 100 mg of stool can be processed per well in a KingFisher 96-deep well plate. When the extraction process is performed using a KingFisher Flex system, 96 samples can be processed in ~60 minutes

## Applied Biosystems™ MagMAX™ Microbiome Ultra Nucleic Acid Isolation Kit, with Bead Plate

Enables efficient, high-throughput nucleic acid extraction from stool and soil.

Stool and soil are often the sample types of choice for scientists in the microbiome field.

However, these samples also happen to be some of the most challenging to extract RNA and DNA from, until now.



Cat. No	Pack qty
16656836	1



The MagMAX Wastewater Ultra Nucleic Acid Isolation Kit enables reproducible recovery from wastewater samples of high-quality nucleic acid compatible with a broad range of applications, including qPCR and next-generation sequencing

## Applied Biosystems™ MagMAX™ Wastewater Ultra Nucleic Acid Isolation Kit

- The MagMAX Wastewater Ultra Nucleic Acid Isolation Kit enables efficient, high-throughput nucleic acid extraction from wastewater samples
- The kit utilizes MagMAX magnetic-bead technology, ensuring reproducible recovery of high-quality nucleic acid compatible with a broad range of applications
- Wastewater and sewage surveillance is a useful tool for monitoring the regional spread of viral and bacterial pathogens
- Surveillance at different levels of operation has been shown to be a reliable way to detect the SARS-CoV-2 virus before it becomes widespread in a population

The MagMAX™ Wastewater Ultra Nucleic Acid Isolation Kit enables efficient, high-throughput nucleic acid extraction from wastewater samples. The kit utilizes MagMAX magnetic-bead technology, ensuring reproducible recovery of high-quality nucleic acid compatible with a broad range of applications.



Cat. No	Pack qty
17321909	100RXN



# Microbial Identification & Enumeration



Staying compliant with confidence: Thermo Scientific™ Quanti-Cult Plus™ Quality Control Organisms have a film of preserved microorganisms on the inside of the cap on a plastic vial for use in quality control procedures

## Thermo Scientific™ Quanti-Cult Plus™ Aspergillus Brasiliensis ATCC™



- No serial dilution required
- Delivers <100 colony forming units (CFUs) in a single 0.1mL inoculum

Obtain fast and accurate identification of microbiological organisms with real biological organisms growing on fresh enriched microbiological culture media.

Cat. No	Description	Pack qty
12965993	Aspergillus brasiliensis ATCC™ 16404™	10TEST
12975993	Aspergillus brasiliensis ATCC™ 6633™	10TEST
12995993	Aspergillus brasiliensis ATCC™ 10231™	10TEST
12956027	Aspergillus brasiliensis ATCC™ 9027™	10TEST

## SARTORIUS



## Sartorius Microsart Manifold the filtration stands that adapts to your needs

Depending on the number of daily tests you can choose between different sizes of manifolds, from single branch to multi-branch. The different manifold sizes are connectable with each other by quick connection to enable the manifold to adapt to your daily workload. Standardized quick connectors at both sides of the manifolds enable fast connections of either tubing, another manifold or end caps.

Depending on your application and criticality of product to be tested, choose between different funnel and filtration units, from complete reusable to single sterile solutions. Simply connect the filter onto the manifold by using the correct adaptor.

Simply push the filter adapter into the manifold to fix it and choose your favorite between 3 different working positions. This new and fast way to connect the respective filter adapter (base support) to the manifold eliminates the need of additional tools.

### Your Benefits:

- 100% Stainless steel for minimized cleaning effort full autoclavability without disassembly
- Sterile venting in critical applications reduced risk of secondary contamination
- Quick connection adapters for fast connection of tubing and fast interconnection of 2 manifolds
- Low working height for ergonomic working in laminar flow

[Learn More](#)



The Agilent BioTek LogPhase 600 microbiology reader is in a class of its own, designed for measuring microbial growth curves in up to four standard 96-well microplates at a time

## Agilent BioTek LogPhase 600 Microbiology Reader



The BioTek LogPhase 600 microbiology reader is designed for measuring microbial growth curves in up to four standard 96-well microplates. This microbiology plate reader features purpose-built robust shaking and consistent temperature controls, which are critical to optimal bacteria and yeast cell growth.

LogPhase 600 is controlled with a software application that provides a simple, yet powerful, user experience. The software controls the reader to acquire data and perform microbiology-focused analysis for all plates.

Cat. No	Wavelength Range	Pack qty
17207819	560 nm	1
17227819	580 nm	1
17247819	600 nm	1
17267819	620 nm	1
17287819	640 nm	1



Prepare samples efficiently with the Thermo Scientific™ KingFisher™ Apex Purification System, which offers highly versatile, automated magnetic-particle processing for DNA/RNA, protein or cell purification from virtually any source

## Thermo Scientific™ KingFisher Apex Benchtop Sample Prep



- Purify 24 or 96 samples in a single run
- Easy to use interface with touch screen empowering the user to control all details of the application and purification process
- Free Bindx PC software for added convenience
- Extensive selection of validated protocols for different type of applications

KingFisher Apex is the most user-friendly and versatile benchtop sample prep instrument in the lab for 24 and 96 samples per run. Consistent high-throughput extraction of DNA, RNA, proteins and cells with extensive selection of validated application protocols.

Cat. No	Description	Pack qty
16592442	KingFisher Apex with 96 PCR head	1
16502452	KingFisher Apex with 96 Combi head	1
16512452	KingFisher Apex with 96 DW head	1
16522452	KingFisher Apex with 24 Combi head	1





QuantStudio 7 Pro RT PCR System adds innovative smart features to real-time PCR (qPCR) workflow, all in a compact footprint: facial authentication, voice commands, Smart Help, and other nice features facilitating your work

## Applied Biosystems™ QuantStudio™ 7 Pro Real-Time PCR System Extended Warranty Package, 96-well, 0.2 mL



- Adds innovative smart features to the real-time PCR (qPCR) workflow, all in a compact footprint
- The QuantStudio 7 Pro system offers exceptional reproducibility with minimal well-to-well and instrument-to-instrument variation
- Designed for ultimate ease-of-use, the system offers high quality, high throughput, and excellent reliability
- Easy and convenient hands-free operation with facial authentication and voice commands

The Applied Biosystems QuantStudio 7 Pro Real-Time PCR System adds innovative smart features to the real-time PCR (qPCR) workflow, all in a compact footprint. Package includes the QuantStudio 7 Pro Real-Time PCR System, SmartSmart Orientation, and a 1 or 3 year extended warranty.

Cat. No	Pack qty
17192096	1



## BioPharma Solutions

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# Environmental Monitoring

Environmental microbial monitoring plays a fundamental role in reducing the risk of microbial contamination. It includes both surface and personnel testing to collect, detect and characterize the levels of microorganisms in production areas to monitor the efficiency of disinfection routines



★ Carry out environmental monitoring in your most regulated environments using Triple Wrapped Plates, for passive and active air sampling

★ Specifically engineered for environmental monitoring in pharma industries. Designed for the most sterile environments, the plates feature the latest quality assurance technology, triple-wrapped and irradiated ready for use

## Thermo Scientific™ Triple Wrap Sterile Pack w/VHP Indicator Tryptone Soya Agar w/ 2D Barcode



- Primary film with moisture control patch
- Secondary film VHP barrier with immobilized desiccant sachet
- Tertiary film dust cover
- Conveniently sold in packs of 100 which are sealed for security. The incorporation of novel elements enhance moisture control by permitting the passage and absorption of excess moisture

Using plates with an improved shelf life and room temperature storage offers a cost-effective solution, minimizing new batch validation and refrigeration costs. Not all products are available for sale in all territories. Please enquire.

Carry out environmental monitoring in your most regulated environments using Triple Wrapped Plates, for passive and active air sampling.

## Thermo Scientific™ Triple Wrap Sterile Pack w/VHP Indicator Tryptone Soya Agar w/ Lecithin, Polysorbate 80, Sodium Thiosulphate, L-Histidine



- Primary film with moisture control patch
- Secondary film VHP barrier with immobilized desiccant sachet
- Tertiary film dust cover

The incorporation of novel elements enhance moisture control by permitting the passage and absorption of excess moisture.

Not all products are available for sale in all territories. Please enquire.

Carry out environmental monitoring in your most regulated environments using Thermo Scientific™ Triple Wrapped Plates for passive and active air sampling applications.

Cat. No	Pack qty
17677745	100

Cat. No	Format	Pack qty
15436030	90mm Monoplate	100PK
15476030	55mm Contact Plate	100PK

fisher scientific

## Safety Starts Here

Keep your people, processes, and facilities safe.

[Learn More](#)



Safety | Protecting What Matters Most





Triple wrap plates are easily transported through each step of the production facility without the risk of introducing contaminants.

## Thermo Scientific™ Triple Wrap Sterile Pack w/VHP Indicator Tryptone Soya Agar w/Inhibitor and 2D Barcode w/ Neutralizers



- Primary film with moisture control patch
- Secondary film VHP barrier with immobilized desiccant sachet
- Tertiary film dust cover
- Conveniently sold in packs of 100 which are sealed for security

Cat. No	Format	Pack qty
17657745	55 mm plates	100
17667745	85 mm plates	100



Wheaton™ sterile 30 mL polypropylene universal containers offer sample security and user safety with leak free performance.

## Wheaton™ 30 mL Polypropylene Universal Container



- For general sample collection, transport, and storage
- Wide container range to suit most user needs

Sterile sample container offers sample security and user safety with leak free performance.

Cat. No	Label	Pack qty
16424959	Plain	400
16434959	No Label	400
16444959	Printed	400



## Agilent BioTek LogPhase Microbiology Reade



### Four microplate capacity

The LogPhase 600 allows users to read up to four microplates in a single run. You no longer need multiple instruments, multiple PCs, and a vast amount of bench space for your microbial growth assays.

### Keep your cells in suspension for optimal growth

The shaking mechanism in LogPhase 600 is specifically designed for microbial growth assays; its robust and superior shaking ensures that your cells will not settle, even during long-term kinetic assays.

### Optimized incubation

Consistent temperature control is essential to successful microbial growth assays. Incubation in the LogPhase 600 is controlled by several sensors to ensure even heating throughout, without edge effect or evaporation.

### Condensation Control

Condensation Control sets a temperature gradient from top to bottom to prevent condensation on the sealed plates that can cause light scatter and reading artifacts.

### Consistent growth conditions = consistent data

Optimized shaking, temperature, and condensation control provide consistent, robust kinetic growth data amongst replicates and between varying test samples.

[Learn More](#)



WHEATON™ LDPE Pasteur pipettes are designed for simple and safe liquid transfer and measurement

## Wheaton™ 1 mL Graduated LDPE Pasteur Pipette



- For liquid transfer
- Designed to ensure safe sample transfer

Pasteur pipette for simple and safe liquid measurement and transfer.

Cat. No	Packaging Type	Pack qty
16494989	Bulk Bag	3000
16475009	Individually Wrapped	500
16464999	10/Pk	1500
16474999	20/Pk	1500





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