



Product info

Application

Services

Sustainability

Ordering
Information

Contact

unMatched COMFORT

in microbial testing with the Milliflex Oasis[®] system



Millipore[®]

Preparation, Separation,
Filtration & Monitoring Products

The life science business of Merck
operates as MilliporeSigma in the
U.S. and Canada.

MERCK



Product info

Application

Services

Sustainability

Ordering
Information

Contact



Product
Presentation
Video



Key Benefits



DataSheet



Top Features



Photo Gallery

Millipore[®]

Preparation, Separation,
Filtration & Monitoring Products

MERCK



product presentation





TOP FEATURES



- + Milliflex Protact®
- + Milliflex Azure®
- + Milliflex Trace®
- + Milliflex Microlite®
- + Milliflex Rack & Stack®

Milliflex Oasis® key features

Together with our customers we have developed a myriad of innovative features that will optimize your microbial testing workflow. Discover how each of them ease your daily work.





TOP FEATURES



+ Milliflex Protact®

+ Milliflex Azure®

+ Milliflex Trace®

+ Milliflex Microlite®

+ Milliflex Rack & Stack®



Milliflex Protact® feature

Reliability of microbial analysis is challenging for two main reasons: secondary contamination can produce false-positive results, and improper contact between the filter and the culture media can lead to false negative results. The Milliflex Protact® sum of features is designed to protect your samples from extrinsic microbial contamination and optimize your membrane-to-media contact for the most reliable results.



TOP FEATURES

+ Milliflex Protact®

+ Milliflex Azure®

+ Milliflex Trace®

+ Milliflex Microlite®

+ Milliflex Rack & Stack®

Milliflex Azure® feature

The Milliflex Azure® feature is a collection of features that allows the analyst to see that the accurate volume of sample is filtered as it should be.

The Milliflex Oasis® funnel material is crystal clear making it easy to visualize while the sample is poured, thanks to the colored contrast font on the pump, and the design of the funnel and its hydrophobic material ensures that no residual liquid remains unfiltered.





TOP FEATURES

+ Milliflex Protact®

+ Milliflex Azure®

+ Milliflex Trace®

+ Milliflex Microlite®

+ Milliflex Rack & Stack®



Milliflex Trace® feature

The Milliflex Trace® feature offers complete traceability and comprises detachable labels, 2D codes that can be scanned for direct access to documentation, and unique identification for each funnel and each media plate. Traceability from A to Z: identification and 2D codes on primary packaging, secondary packaging and on each single unit, along with color coding to avoid mistakes. All-in-all, data integrity is brought to a higher level.



TOP FEATURES

- + Milliflex Protact®
- + Milliflex Azure®
- + Milliflex Trace®
- + Milliflex Microlite®
- + Milliflex Rack & Stack®

Milliflex Microlite® feature

The Milliflex Microlite® feature makes the hardware intuitive for both daily use and maintenance. It is composed of quick connections for both the power and the drain tubing, one button to both start and stop the pump, a small footprint, low weight, and many other ergonomic features that make the workflow so comfortable.





TOP FEATURES

- + Milliflex Protact®
- + Milliflex Azure®
- + Milliflex Trace®
- + Milliflex Microlite®
- + Milliflex Rack & Stack®



Milliflex Rack & Stack® feature

The Milliflex Rack & Stack® innovation will streamline your workflow: funnel trays can be stacked offering more space in the working area. Plates can be stacked and locked on the same trays for safe transportation and incubation.



Key Benefits

Comfort on every level

- + Productivity
- + Result Reliability
- + Regulatory Compliance

When your day-to-day tasks are under control, your mind is free for other activities. We have taken the time to closely observe your complete workflow to identify improvements to simplify and secure your microbial testing process. Enjoy the comfort that Milliflex Oasis® system brings to your lab.





Key Benefits

- + Productivity
- + Result Reliability
- + Regulatory Compliance

The comfort of productivity

- Fast hardware set-up and 50% faster filtration time (vs. previous Milliflex® product)
- Hardware scalability: attach up to three pumps and filter 6 samples with a single push of a button
- Fastest possible touch-free membrane transfer
- Barcode and detachable labels replace manual, time-consuming record keeping
- Reduced decontamination time and maintenance, no need for autoclaving





Key Benefits

- + Productivity
- + Regulatory Compliance
- + Result Reliability

The comfort of reliability

Unique features help to prevent secondary contamination of samples:

- Operator independent system
- Touch-free membrane transfer
- Perfect contact between the membrane and the media plate
- A check valve situated in the pump head prevents backflow contamination
- Color-coded funnels, media plates and labels aid identification and minimize the risk of errors





Key Benefits

+ Productivity

+ Result Reliability

+ Regulatory Compliance



The comfort of regulatory compliance

Pharmaceutical regulatory compliance is a key topic for QC labs to ensure accurate results and safe products for patients. Membrane filtration using the Milliflex Oasis[®] system reduces secondary contamination risks and maintains compliance with USP, EP and JP recommendations.

- Labels with 2D Code on the packaging, on each funnel and each media plate: lot number and

expiration date can be checked and recorded as mentioned in USP<117> microbiological best laboratory practices

- Detachable label on primary/secondary package for easy transfer to log books.
- Unique identification for each funnel and each media plate type (R2A-TSA-SDA).



Data sheet

Milliflex Oasis[®] system Data Sheet

[DOWNLOAD](#)

Not only comfortable to use, the Milliflex Oasis[®] system is relaxing for your mind:

96 new features take care of all that matters for lab productivity, reliability of results and regulatory compliance. We offer you a total solution for your workflow with secured steps and high throughput capabilities.

Three components (and services) combine to give you a complete solution:

- All-in-one filtration equipment
- Ready-to-use sterilized filtration units
- Pharmacopeia compliant culture media



photo gallery



Funnel

Pump

Media

System

Crystal clear funnel material



Integrated membrane support



Stackable funnel trays



Convex membrane shape for perfect contact with the agar



Effortless funnel separation by pinching





photo gallery



Funnel

Pump

Media

System

Quick connections



Check-valve prevents cross-contamination



Small footprint and low height



Scalability for high throughput



photo Gallery



Funnel

Pump

Media

System



Locked lid



Lockable assembly for safe transportation



Color-coded media plates

Tight lid closure for longer storage





photo gallery



Funnel

Pump

Media

System

The Milliflex® platform



2D codes on each box



Color-coding on boxes, funnels and media plates



Application

Pharmaceutical
industry

Membrane
Filtration Method

Membrane type

Regulations

During the manufacturing of a drug, the quantity of microorganisms must be monitored according to regulations, methods, or country directives that may apply. The objective is to ensure that the water, raw materials, in-process samples and finish-products meet the required specifications

to demonstrate that each process is in a state of microbial control. Bioburden testing or microbial testing is routinely performed, usually via membrane filtration, which is considered the standard method for any sample that is filterable.

Application

Pharmaceutical
industry

Membrane
Filtration Method

Membrane type

Regulations

Membrane filtration is the method of choice endorsed by regulatory bodies to produce analytical results of known quality. It allows for the retention and recovery of microorganisms on culture media which generates a quantitative result. The liquid sample is filtered and then the microorganisms are retained on the membrane. This membrane is then

transferred onto a media selected for the application and incubated at a specific temperature for a period of time depending on the type of microorganism. The microbes will begin to replicate under incubation to form colony forming units (CFU). Each colony is then counted as one microorganism.

Application

Pharmaceutical industry

Membrane Filtration Method

Membrane type

Regulations

Membrane filters with a 0.45 μm pore size have long been recognized as the standard for optimum growth of microorganisms. Among all the available membrane pore sizes for microorganism enumeration, membranes of 0.45 μm pore size are the best choice for microbial analysis considering the flow rate, throughput, and microbial recovery.

0.45 μm mixed cellulose ester (MCE)

membrane filters are one of the most widely used membranes for bioburden applications. For samples with anti-microbial activity (i.e., antibiotics) or solvents, polyvinylidene difluoride (PVDF) membranes are often used because of their very low protein binding property. Durapore[®] membranes minimize sample interaction and maximize recovery of microorganisms for these bioburden applications.

Application

Pharmaceutical industry

Membrane Filtration Method

Membrane type

Regulations

The unique features of Milliflex Oasis® filtration units allow users to follow the regulations that apply:

USP <1227> Validation of Microbial recovery from Pharmacopeial Articles (PVDF membranes are cited to avoid residual antimicrobial effects).

USP <61> & EP 2.6.12 & JP 4.05 part 1 (Fully Harmonized) Microbiological examination of non-sterile products: microbial enumeration

tests (Milliflex Oasis® filtration units are designed to reduce contamination risk to the minimum).

ISO 8199 Water quality — General guidance on the enumeration of microorganisms by culture (filtration and transfer of the membrane onto the media are designed to optimize user's workflow).

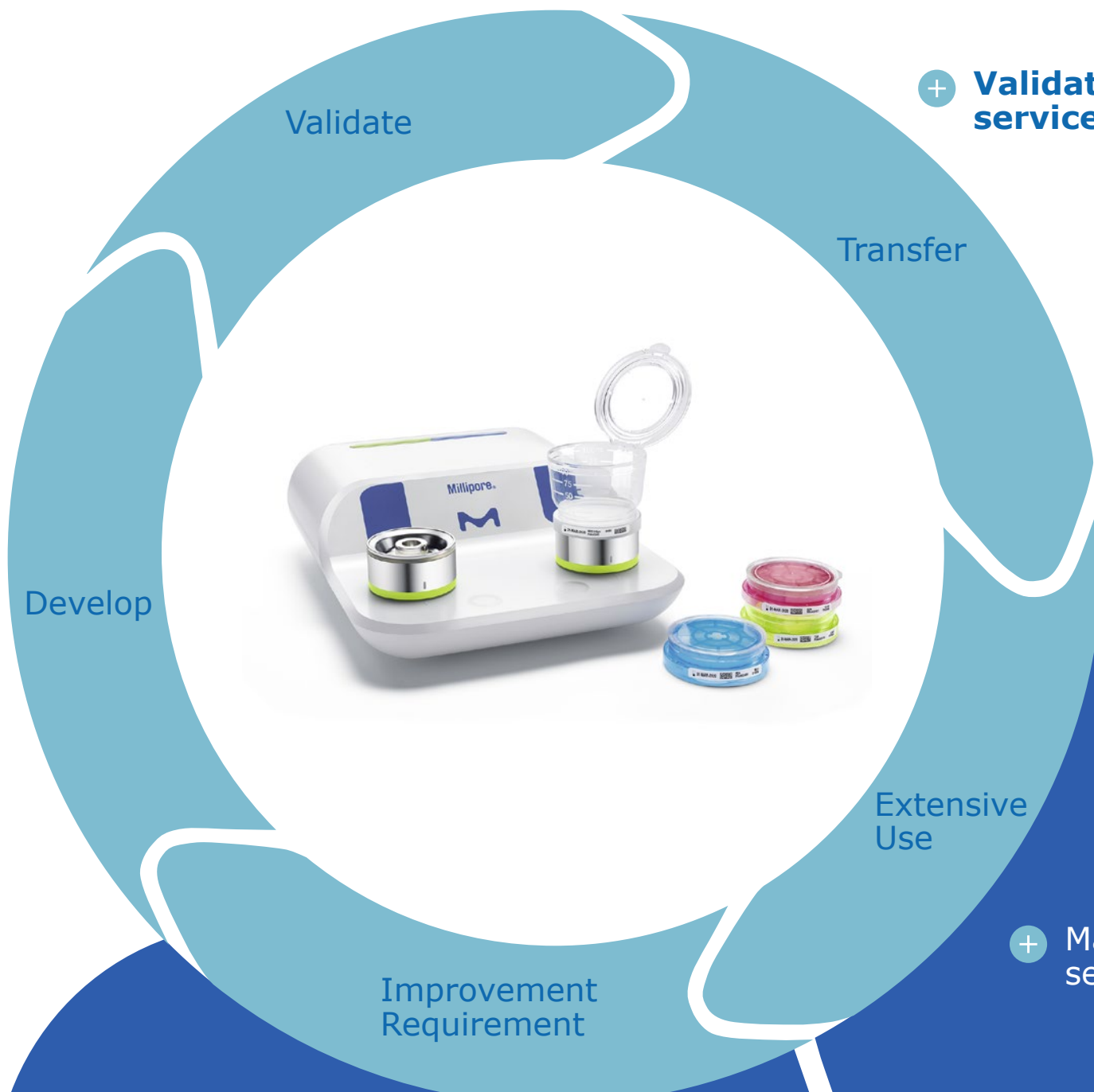
Milliflex Oasis[®] System Services

To request a quote for a method development, IQ/OQ service, PQ consultancy, preventive maintenance, service plan or training, please contact your local sales representative.

+ **Validation protocols**

+ **Method development**

+ **Validation services**



Method development

Consider it done

When a microbial test method (SOP) is to be set up for a new product, or improved for a product that demonstrates antimicrobial effects and/or filtration issues, our application scientists can develop a method that is compliant with international regulations (pharmacopoeias).

Whether you need help with a new pharmaceutical test method, or optimizing an existing method, we are ready to lend a hand.



validation protocols

Ready-to-use validation protocols

Validation workflow

Validation Protocols



Leave it to us

cGMPs and cGLPs require equipment and test methods to be validated before routine use. Our ready-to-use validation protocols for pharmaceutical testing are based on our internal product qualification test methods. These extensive protocols will enable the QC/QA lab to quickly initiate your Validation Master Plan and perform IQ, OQ and PQ (suitability of the test methodology) with ease.

validation protocols

Ready-to-use validation protocols

Validation Master plan

- Defined structure, responsibilities for qualification



operational Qualification (oQ)

- Verification of product's functionality (hardware, software, devices)



Final report

- Summarizes all testing performed for final approval of validation



Validation workflow

Installation Qualification

- Verification identification of the equipment
- Verification of product's utilities and operating environmental requirements
- Equipment and personnel preparation

Performance Qualification (PQ)

- Test method suitability verification (microbiology validation procedures)

validation services

We have experienced and trained validation engineers who are skilled to assist in validation protocol implementation within the QC microbiology laboratory, so the QC/QA departments do not have to allocate resources. A basic technical training on your installed equipment is also provided during the validation engineer's visit. Rely on our expertise in various situations such as:

- New lab equipment
- New product or reformulated product to be tested
- Compliance with updated regulations: EP, USP, JP, etc.

After the IQ/OQ has been completed we can support with PQ consultancy, advanced operator training and requalification services on a yearly basis.



Maintenance & service plans

Annual preventive
maintenance

Breakdown and spare parts

Service plans

Efficient operation

Preventive maintenance and system verification enables efficient operation of critical testing equipment. Every Milliflex Oasis® pump should be serviced regularly to ensure its performance remains compliant with the specifications, as per GLP and GMP.

We recommend checking and calibrating the pump on an annual basis. Upon completion of the service, we will provide you with a report defining the service performed on your pump as well as our recommendations.



Maintenance & service plans

Annual preventive
maintenance

Breakdown and spare parts

Service plans

Reduce the risk

Annual preventive maintenance will reduce the risk of breakdown and ensure that your Milliflex Oasis® pump works within system specifications. However, in case a breakdown does occur on your pump, our service team will repair it as diligently as possible at your site or in our local service center. Depending on your service plan level spare parts and labor are covered during the service plan validity period (Total plans only).



Maintenance & service plans

Annual preventive
maintenance

Breakdown and spare parts

Service plans

You have the choice between 3 coverage levels

	Service Essential™	Service Advanced™	Service Total™
Preventive maintenance	Yes (1/ year)	Yes (1/ year)	Yes (1/ year)
Maintenance kit (quoted separately)	Yes	Yes	Yes
Number floating repair (labor and shipment/ travel)	No	Yes (1/ year)	Yes (unlimited)
Spare parts	No	No	Yes
Shipment Basic travel zone*	Yes	Yes	Yes
Options	To be ordered separately		
Second preventive maintenance	Yes	Yes	Yes

* Return shipment only. Additional travel may be quoted separately.

Training

Milliflex® School and advanced operator training

We offer 2 courses. Both provide an in-depth review of the regulatory requirements of pharmaceutical testing, its validation and practical implementation. The advanced operator training will offer an additional individual practical session with final examination.

Why take chances?

Be confident of your results with our comprehensive pharmaceutical testing solutions. To discuss a specific pharmaceutical testing application, please contact your local sales representative.

Your benefits

- Take preventive actions to avoid false positive or false negative test results
- Develop and optimize pharmaceutical testing procedures
- Understand and identify root causes for common handling issues

sustainability

Responsible Waste Management with Milliflex Oasis[®] consumables



DOWNLOAD

We are committed to sustainability, and we recognize that every product we make also has an environmental impact. Therefore, we investigate new and alternative waste management solutions for our products, including our Milliflex Oasis[®] devices. Our fact sheet gives you suggestions to consider on how you can dispose of Milliflex Oasis[®] consumables responsibly after use, considering different levels of access to appropriate waste management practices.

Millipore[®]
Preparation, Separation,
Filtration & Testing Products

Fact Sheet

Responsible Waste Management with Milliflex Oasis[™] consumables

We are committed to sustainability, and we recognize that every product we make also has an environmental impact. We therefore investigate new and alternative waste management solutions for our products, including our Milliflex Oasis[™] consumables. These consist of a disposable filtration unit along with an associated media plate, for bioburden testing of liquid samples including water, raw materials, in-process samples, and final products.

The pre-assembled and sterilized funnels are designed, manufactured, and packaged to optimize microbial recovery and minimize cross-contamination, while setting new standards for ease-of-use. However, this poses huge constraints on the design of the funnel and, in particular, the construction materials that are suitable.

Nevertheless, we take responsibility for our products across their entire life cycle. This fact sheet gives you suggestions to consider how you can dispose of Milliflex Oasis[™] consumables responsibly after use, considering different levels of access to appropriate waste management practices.

How do I dispose of the plastic parts responsibly?

The most important issues to consider are the materials the product is made of, which parts become bio-hazardous during use, and the available waste streams for each component.

The materials of which the product components are made

Listed on the right are the different types of materials used and why they were selected for Milliflex Oasis[™] filtration funnels and media plates.

Materials : The Challenge

Milliflex Oasis[™] consumables are designed to make microbial testing via membrane filtration as easy as possible. The materials used to compose each Milliflex Oasis[™] consumable must not compromise result reliability and, at the same time, allow convenient and ergonomic handling by the laboratory technician.

- Funnel**
Styrene Butadiene Copolymer (SBC)
 - High transparency to check liquid level
 - Ultrahydrophobicity to prevent liquid residues after filtration
 - Flexibility to ensure easy funnel removal and watertightness
- Lid**
Styrene Butadiene Copolymer (SBC)
 - High transparency for convenient evaluation during culturing
- Ring**
Polyethylene (PE)
 - Flexibility to ensure watertightness and secured transfer on media plate
- Membrane**
Mixed cellulose esters or PVDF
- Support**
Styrene Butadiene Copolymer (SBC)
 - Ultrahydrophobicity to prevent liquid residues after filtration and optimal dry out
- Tray**
Acrylonitrile Butadiene Styrene (ABS)
 - Strength and rigidity for safe shipment, easy transfer to laminar flow hood and to incubator
- Cover**
PS polystyrene
 - High transparency to check the quality of the media
- Solid Agar**
- Body & Base**
Polystyrene (PS)
 - Transparency to check quality of membrane and good agar contact and allow backlight for easier germ counting

The life science business of Merck operates as MilliporeSigma in the U.S. and Canada.

MERCK

ordering information

Filtration units

Culture media

Hardware, accessories, spare parts

Filtration units	Qty/ pack	Article number
Milliflex Oasis® 100 mL funnel, 0.45 µm white gridded, mixed cellulose esters (MCE) membrane	24	MMHAWG124
Milliflex Oasis® 250 mL funnel, 0.45 µm white gridded, mixed cellulose esters (MCE) membrane	24	MMHAWG224
Milliflex Oasis® 100 mL funnel, 0.45 µm black gridded, mixed cellulose esters (MCE) membrane	24	MMHABG124
Milliflex Oasis® 100 mL funnel, 0.22 µm white gridded, mixed cellulose esters (MCE) membrane	24	MMGSWG124
Milliflex Oasis® 100 mL funnel, 0.45 µm white plain PVDF Durapore® membrane	24	MMHVWP124
Milliflex Oasis® 250 mL funnel, 0.45 µm white plain, PVDF Durapor® membrane	24	MMHVWP224
Milliflex Oasis® rapid 100 mL funnel, 0.45 µm white plain, PVDF Durapore® membrane	24	MMHVMFX24
Milliflex Oasis® funnel without membrane, growth promotion accessory	24	MMRECOVERY

* Return shipment only. Additional travel may be quoted separately.


[ORDER NOW](#)
Millipore®

 Preparation, Separation,
Filtration & Monitoring Products

MERCK

ordering information

Filtration units

Culture media

Hardware, accessories, spare parts

Culture media	Qty/ pack	Article number
Milliflex Oasis® R2A low nutrient media plates	48	MMSMCRA48
Milliflex Oasis® tryptic soy media plates for detection of aerobic and anaerobic flora	48	MMSMCTS48
Milliflex Oasis® sabouraud dextrose media plates for detection of yeast & molds	48	MMSMCSD48
Milliflex® cassette sabouraud dextrose agar (w/Chloramphenicol)	48	MXSMCSP48
Milliflex® cassette m-Endo agar for the detection of coliforms	48	MXSMEND48
Milliflex® cassette PCA agar for the detection of bacteria in water	48	MXSMPCA48
Milliflex® cassette cetrimide agar with naladixic acid for detection of <i>P. aeruginosa</i>	48	MXSMCET48
Milliflex® cassette TSA and lecithin agar for the detection of heterotrophic microorganisms	48	MXSMTLP48
Milliflex® cassette HPC agar media, for detection of stressed heterotrophic plate count bacteria	48	MXSMHPC48
Milliflex® cassette KF strep agar for the detection of fecal streptococci	48	MXSMKFS48
Milliflex® cassette PIA agar for the detection and recovery of <i>P. aeruginosa</i>	48	MXSMPIA48
Mac Conkey Milliflex® agar for detection of lactose fermenting bacteria and coliforms	24	MXSMCMC24
Milliflex® empty cassette for agar media	120	MXSMC0120
Milliflex® empty cassette for liquid media	120	MXLMC0120

* Return shipment only. Additional travel may be quoted separately.


[ORDER NOW](#)
Millipore®

 Preparation, Separation,
Filtration & Monitoring Products

MERCK

ordering information

Filtration units

Culture media

Hardware, accessories, spare parts
and services

Hardware, accessories, spare parts and services	Qty/ pack	Article number
Milliflex Oasis® filtration pump, one system with two filtration heads and no power supply	1	MMSYSTMM1
Milliflex Oasis® filtration pump without filtration head and no power supply	1	MMSYSTVAC
Milliflex Oasis® power supply for one to three filtration pumps - Australia	1	MMPWRSPAU
Milliflex Oasis® power supply for one to three filtration pumps - Brazil	1	MMPWRSPBR
Milliflex Oasis® power supply for one to three filtration pumps - China	1	MMPWRSPCN
Milliflex Oasis® power supply for one to three filtration pumps - Denmark	1	MMPWRSPDK
Milliflex Oasis® power supply for one to three filtration pumps - Europe	1	MMPWRSPEU
Milliflex Oasis® power supply for one to three filtration pumps - India	1	MMPWRSPIN
Milliflex Oasis® power supply for one to three filtration pumps - Japan	1	MMPWRSPJP
Milliflex Oasis® power supply for one to three filtration pumps - Switzerland	1	MMPWRSPSZ
Milliflex Oasis® power supply for one to three filtration pumps - United Kingdom	1	MMPWRSPUK
Milliflex Oasis® power supply for one to three filtration pumps - United States	1	MMPWRSPUS
Milliflex Oasis® power supply for one to three filtration pumps - South Africa	1	MMPWRSPZA
Milliflex Oasis® filtration head	1	MMHEADMM1

Part 1

Part 2

Part 3

* Return shipment only. Additional travel may be quoted separately.



ORDER NOW

Millipore®

 Preparation, Separation,
Filtration & Monitoring Products

MERCK

ordering information

Filtration units

Culture media

Hardware, accessories, spare parts
and services

Hardware, accessories, spare parts and services	Qty/ pack	Article number
Milliflex Oasis® filtration head gaskets replacement kit, including gaskets removal tool	5	MMGASKTMM
Milliflex Oasis® filtration head cover set	1	MMHEADCV1
Milliflex Oasis® drain tubing	1	MMDRNTUBE
Milliflex Oasis® internal flow sanitization kit, including one vacuum gauge	1	MMSANKIT1
Milliflex Oasis® internal flow sanitization gasket kit	5	MMGASKTSK
Milliflex Oasis® consumables for internal flow sanitization kit	24	MMSANSYFU
Milliflex Oasis® vacuum gauge for pump performance testing	1	MMGAUGEMM
Milliflex Oasis® electrical cable for connecting two pumps	1	MMCABLEMM
Milliflex Oasis® T connectors for tubings for connecting two pumps	3	MMTCONNECT
Milliflex Oasis® guides for electrical cable and tubing	20	MMTUGUIDE
Milliflex Oasis® membrane support removal tool	1	MMSUPREMV
Stickers and filtration head rings for customizing the Milliflex Oasis® pump	4	MMCUSTKIT
Milliflex® Quantum membrane transfer tool for Milliflex Oasis® system	1	MMHEADQU1
Milliflex® Quantum membrane transfer tool for Milliflex Oasis® gaskets replacement kit	5	MMGASKTQU

Part 1

Part 2

Part 3

* Return shipment only. Additional travel may be quoted separately.



ORDER NOW

Millipore®

 Preparation, Separation,
Filtration & Monitoring Products

MERCK

ordering information

Filtration units

Culture media

Hardware, accessories, spare parts and services

Hardware, accessories, spare parts and services	Qty/ pack	Article number
Customer validation protocol format A4	1	MM2PA4VP1
Customer validation protocol format letter	1	MM2PLTVP1
Customer validation protocol format letter	1	MM2PLTVP1

Part 1

Part 2

Part 3



ORDER NOW

Contact

For further information on the Milliflex Oasis® system, please contact your local sales representative or visit our website [MerckMillipore.com/Offices](https://www.MerckMillipore.com/Offices).

CONTACT US



[MerckMillipore.com/Milliflex-Oasis](https://www.MerckMillipore.com/Milliflex-Oasis)



Merck KGaA

Frankfurter Straße 250, 64271 Darmstadt, Germany

To place an order or receive technical assistance in Europe, please call Customer Service:

France: 0825 045 645

Germany: 069 86798021

Italy: 848 845 645,

Spain: 901 516 645 Option 1

Switzerland: 0848 645 645

United Kingdom: 0870 900 4645

For other countries across Europe, please call: +44 (0) 115 943 0840

Buy the right culture medium for you:

[MerckMillipore.com/Biomonitoring](https://www.MerckMillipore.com/Biomonitoring)

For Technical Service, please visit:

[MerckMillipore.com/TechService](https://www.MerckMillipore.com/TechService)

For other countries across Europe and the world, please visit: **[MerckMillipore.com/offices](https://www.MerckMillipore.com/offices)**

© 2019 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved. Merck, the vibrant M, Duapore, Millipore, Milliflex Azure, Milliflex Microlite, Milliflex Oasis, Milliflex Protact, Milliflex Rack & Stack and Milliflex Trace are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.

MK_BR1617EN
03/2019

Millipore®

Preparation, Separation,
Filtration & Monitoring Products

MERCK