

MicroFunnel™ Plus and MicroFunnel Plus AP Filter Funnel

Revolutionize the way you monitor your water system and eliminate the risk of contamination with a combined filter funnel and sample cup.

- Product includes sample container and filter funnel all in one. No need to transfer sample from cup to disposable funnel and risk introducing contamination.
- New MicroFunnel Plus AP allows for aseptic collection of your sample through the lid sample port on the filter funnel. No need to remove the lid.
- New MicroFunnel Plus products with Supor® membrane are designed to allow sampling of hot water up to 90 °C.
- Lid snaps to a liquid-tight seal and allows filtration without having to open the funnel and risk exposure of your sample.
- Vent filter on lid ensures no airborne contamination is drawn into the funnel during filtration.
- Product is designed to attach directly to a standard laboratory manifold or use with adapter and stopper.
- Gridded GN-6 Metrical® membrane is ideal for analysis of ambient water by MF Technique. Supor membrane is used for hot water testing.
- Volume graduations are clearly marked for ease in measuring your sample volume.
- Each unit is individually bagged, gamma sterilized, and labeled for added assurance of lot traceability.



Applications

Routine monitoring of water systems is a significant part of quality control. Any improvements you can make to your protocol can free up time, space, and money in a busy laboratory. The proven design of MicroFunnel filter funnels has been taken one step further to improve the efficiency of monitoring water systems with increased protection from the introduction of contamination. Remove lid and collect water sample in the MicroFunnel Plus filter funnel and snap the vented lid to a liquid-tight seal for transporting the protected sample back to the laboratory. Or, with the new MicroFunnel Plus AP, you can aseptically collect your sample by attaching the sterile sampling tube (sold separately, PN 4845) from the funnel directly to the sample port on a water line. The vented lid allows filtration without ever having to open the filter funnel.

These combined features reduce the supplies needed for water monitoring and eliminate steps that could potentially contaminate your sample. A separate sample cup is no longer necessary for collection, and there is no need to transfer your sample into a disposable funnel for concentration. The vent filter prevents airborne contamination that could be drawn into the funnel during filtration. Simply collect your sample, then filter and plate the membrane.

Now for Hot Water Applications

The MicroFunnel Plus and MicroFunnel Plus AP with 0.45 or 0.2 µm Supor membrane is designed for sampling hot water such as found in hot loop WFI systems. When used with our hot water filter funnel holder, the same sampling procedure is followed as used in our other MicroFunnel filter funnels.

To help prevent contamination of your sample, the MicroFunnel Plus and MicroFunnel Plus AP filter funnel features a combined sample cup and filter funnel, air-tight lid, hydrophobic vent, and the ability to place the funnel directly onto the filter manifold. This helps eliminate time-consuming and costly investigations of out-of-specification results.

The MicroFunnel Plus filter funnel can be used to sample and test any liquid products, whether hot or cold, including water from any point in the production process, raw materials, intermediates, and final product.

Specifications

Materials of Construction

Filter Media:

GN-6 Metrice[®] (mixed cellulose ester) membrane
(PN 4807, 4829)

Metrice Black (modified polyethersulfone) membrane,
black (PN 4808)

Supor[®] (polyethersulfone) membrane, white
(PN 4809, 4813, 4814, 4823, 4843, 4844)

Support Pad: Cellulose

Funnel and Base: Polypropylene

Adhesive Gasket: Urethane (PN 4809, 4813, 4814, 4823,
4829, 4843, 4844)

Funnel Cover: Polyethylene with hydrophobic Versapor[®]
(acrylic copolymer on a non-woven support) membrane

Bag: Polyethylene

Adapter: Polyethylene

Shrink Band: Polyvinylchloride with polypropylene
reinforced strip (PN 4807, 4808)

Lid Plug: Polypropylene (4843, 4844)

Maximum Vacuum

63.5 cm Hg (25 in. Hg)
(Vacuum Use Only)

Maximum Operating Temperature

PN 4807, 4808, 4829: Ambient

PN 4809, 4813, 4814, 4823, 4843, 4844: 90 °C (194 °F)

Sterilization

Sterilized by gamma irradiation

Dimensions

100 mL Funnel

Height:
7.6 cm (3.0 in.) with cover

Diameter:
6.1 cm (2.4 in.) with cover

300 mL Funnel

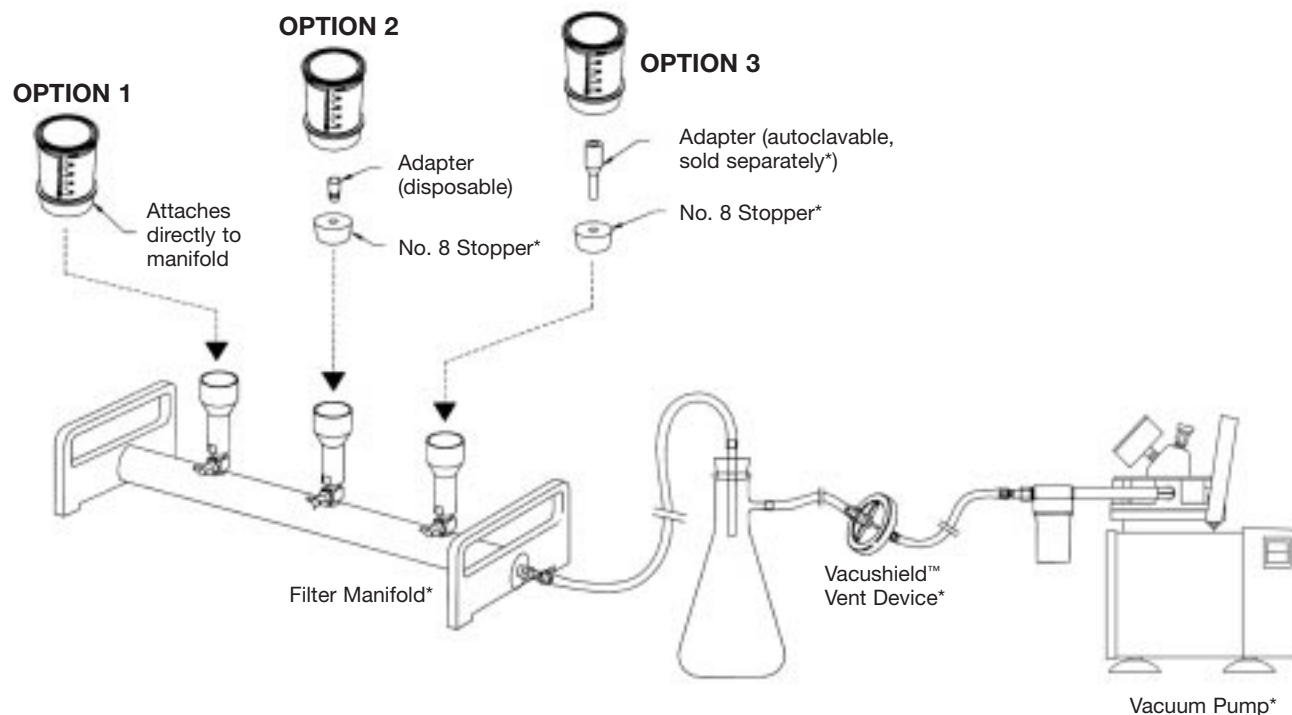
Height:
8.9 cm (3.5 in.) with cover

Diameter:
8.7 cm (3.4 in.) with cover

Effective Filtration Area

13.46 cm²

MicroFunnel™ Plus Filter Funnel System Setup



*See Complementary Products list for product ordering information.

Instructions for Use

Sampling Ambient Water Using the MicroFunnel™ Plus Filter Funnel



1. Carefully remove the vented lid and collect the sample.



2. Securely snap lid in place to prevent sample loss. Transport sample to laboratory for filtration.



3. Remove plug or vent tab from base, place funnel directly onto manifold and filter the sample.



4. Gently grasp funnel then remove and discard lid.



5. Release cylinder from base by firmly squeezing the midpoint of the cylinder.*



6. Remove the membrane, plate the filter, and incubate.

*For products 4807 and 4808, remove shrink band by pulling down on the reinforced tab prior to removing cylinder from base.

Sampling Hot Water Using the MicroFunnel Plus Filter Funnel



1. Place funnel into holder with graduations visible through the viewing slot. Carefully remove the vented lid and collect the hot water sample.



2. With funnel and holder resting on a firm, level surface, securely snap lid in place to prevent sample loss. Remove funnel from holder and transport sample to laboratory for filtration.

(go to steps 3-6 above, same as for ambient water)

Note: When using this product for sampling hot water loops, observe safety precautions which include the use of insulated rubber gloves, safety glasses, and Pall Life Sciences Funnel Holder for critical sample sites (PN 4824 for 100 mL funnels and PN 4825 for 300 mL funnels).

Sample Collection Using the MicroFunnel Plus AP Filter Funnel



1. Remove the lid plug on the MicroFunnel Plus AP sample port. Open the sampling tube bag at one end and place the tube on the sample port.



2. Remove the sampling tube bag and connect the other end of the tube to the sanitized sample port.



3. After the sample is collected, remove the tube and replace the lid plug. Transport sample to laboratory for filtration.
(go to steps 3-6 above, same as for ambient water)

Ordering Information

MicroFunnel™ Plus Filter Funnel

Product No.	Description	Packaging	Product No.	Description	Packaging
4807*	MicroFunnel Plus, 0.45 µm GN-6 Metrical® membrane, white, gridded, sterile, individually bagged, 100 mL capacity	50/pkg	4814	MicroFunnel Plus, 0.45 µm Supor membrane, white, gridded, sterile, individually bagged, 300 mL capacity, designed for hot water	20/pkg
4808*	MicroFunnel Plus, 0.45 µm Metrical Black membrane, gridded, sterile, individually bagged, 100 mL capacity	50/pkg	4829*	MicroFunnel Plus, 0.45 µm GN-6 Metrical membrane, white, gridded, sterile, individually bagged, 300 mL capacity	20/pkg
4809	MicroFunnel Plus, 0.2 µm Supor® membrane, white, gridded, sterile, individually bagged, 100 mL capacity, designed for hot water	50/pkg			
4823	MicroFunnel Plus, 0.45 µm Supor membrane, white, gridded, sterile, individually bagged, 100 mL capacity, designed for hot water	50/pkg			
4813	MicroFunnel Plus, 0.2 µm Supor membrane, white, gridded, sterile, individually bagged, 300 mL capacity, designed for hot water	20/pkg			

MicroFunnel Plus AP Filter Funnel

Product No.	Description	Packaging
4843	MicroFunnel Plus AP, 0.2 µm Supor membrane, white, gridded, sterile, individually bagged, 100 mL capacity, designed to sample up to 90 °C	50/pkg
4844	MicroFunnel Plus AP, 0.45 µm Supor membrane, white, gridded, sterile, individually bagged, 100 mL capacity, designed to sample up to 90 °C	50/pkg

* PN 4807, 4808 and 4829 are not compatible with hot water applications.

Complementary Products

Filter Funnel Manifolds

Product No.	Description	Packaging
15408	1-Port Aluminum	1/pkg
15402	3-Port Aluminum	1/pkg
15403	6-Port Aluminum	1/pkg
82728	#8 Rubber Stopper	1/pkg
4701	Manifold Adapter	3/pkg

Holder**

Product No.	Description	Packaging
4824	Funnel Holder, 100 mL	1/pkg
4825	Funnel Holder, 300 mL	1/pkg

Miscellaneous Product

Product No.	Description	Packaging
13157	Vacuum/Pressure Pump, 115 V	1/pkg
13158	Vacuum/Pressure Pump, 230 V	1/pkg
4402	Vacushield™ Vacuum Pump Protection Filter	3/pkg
51147	Stainless Steel Forceps, black grips	1/pkg
4690	Stainless Steel Forceps, multi-colored grips	3/pkg
4845	MicroFunnel Plus AP Sampling Tubes, individually bagged, sterile	50/pkg

** Always use holder when sampling hot water.



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