PALL Laboratory

www.pall.com/lab

MicroFunnel™ Filter Funnels

Increase laboratory efficiency with ready-to-use, disposable filter funnels

- **Certified:** Each lot is certified for microbial analysis to provide added assurance and reliable results with self-serve certificates and other regulatory information available online.
- **Single-use:** Prevent cross-contamination with individually bagged, disposable units that are gamma-irradiated, and avoid the need to clean, package and sterilize.
- **Easy to Use:** Unique squeeze separation of cylinder from base allows easy access to membrane for simple removal for culturing on agar or broth.
- **Flexible Options:** Choose from a variety of membranes in 0.2-0.8 µm pore sizes, 100 or 300 mL volumes and multiple packaging options.
- **Instill Confidence:** With gamma irradiation, there is no potential toxic extractables sometimes present with EtO sterilization and molded-in measurements on the inside of the funnel ensure all liquid is filtered and reduces the possibility for false negatives.

Applications

- Test any aqueous solution for microbial contamination using MicroFunnel filter funnels and the principles of the Membrane Filter Technique (MF). Convenient and ready to use, these disposable filter funnels increase the productivity and efficiency of busy laboratories that do not have time to clean and sterilize reusable hardware.
- Ideal for quality control analysis of aqueous fluids used in pharmaceutical production, water and food & beverage applications. Individually bagged for added assurance of sterility. Individually labeled for lot traceability. Disposable filter funnels eliminate the possibility of sample cross contamination. All of these features increase the reliability and efficiency of analysis in pharmaceutical laboratories.

- Convenient for last-minute samples at the end of a day or work week. Maintain a supply of MicroFunnel filter funnels in case the autoclave breaks down and reusable hardware cannot be sterilized.
- The 300 mL funnel is ideal for processing larger samples without the “pour and wait” of smaller funnels. Processing larger samples can improve sensitivity and confidence in the results.
- Test for a variety of bacterial contaminants, such as Total Coliforms or Pseudomonas species, by choosing between the 0.45 and 0.2 µm pore sizes.
- Yeasts, molds and other light-colored organisms can be easily identified by selecting MicroFunnel filter funnel with Metricel® Black membrane in 0.45 or 0.8 µm pore size.

Specifications

Membrane Selection

GN-6 Metricel membrane

A 0.45 µm mixed cellulose ester membrane ideal for use in most applications

Supor® membrane

A 0.2 µm polyethersulfone membrane ideal for its low binding characteristics and superior retention of small organisms such as *Pseudomonas sp*

Metricel Black membrane

A 0.45 µm modified polyethersulfone membrane ideal for yeast and mold analysis or providing good contrast for light colored colonies

Materials of Construction

Filter Media

PN 4800, 4801, 4804, 4807, 4810, 4811, 4812, 4815, 4829: GN-6 Metricel membrane (mixed cellulose ester)

PN 4750, 4751, 4803, 4806, 4809, 4814, 4818, 4823, 4828, 4844, 4852, 4853, 4857: Supor membrane (hydrophilic polyethersulfone)

PN 4805, 4808, 4819: Metricel Black membrane (hydrophilic modified polyethersulfone)

Support Pad

Cellulose

Cylinder, Base, Lid Petri Dish Base

Polypropylene

Cover

Polystyrene

Plug

Polyethylene

Funnel Adapter

Polyethylene (not autoclavable)

Effective Filtration Area

13.46 cm^2

Maximum Vacuum

635 mm Hg (25 in. Hg)

Dimensions

100 mL MicroFunnel

Height

8.05 cm (3.17 in.) with lid Petri dish
7.62 cm (3.00 in.) with cover

Diameter

6.40 cm (2.52 in.) with lid Petri dish
6.05 cm (2.38 in.) with cover

300 mL MicroFunnel

Height

9.09 cm (3.58 in.) with cover

Diameter

8.84 cm (3.48 in.) with cover

Funnel and Membrane Qualifications

Bag Seal Integrity

No Leaks <15 mins

Dynamic Pressure

Leak: 15 seconds @ 0.5 psi

Diffusional Flow

<1.0 sccm @ 20" Hg vacuum

Biological Tests Growth Promotion

MicroFunnel filter funnel samples demonstrated typical growth characteristics and colony formation when challenged with 100 CFU of the microorganisms listed below.

E. coli ATCC 8739 acceptable growth:
3 days @ 30 °C – 35 °C

S. aureus ATCC 6538 acceptable growth:
3 days @ 30 °C – 35 °C

*C. albicans** ATCC 10231 acceptable growth:
5 days @ 20 °C – 25 °C

**Metricel Black in 0.8 µm pore size is only tested with C. albicans.*

Certifications

Regulatory Qualifications

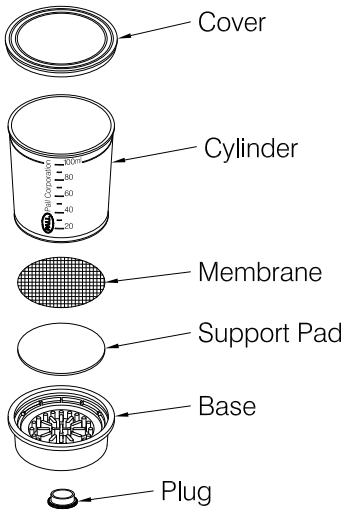
These products are validated and monitored for compliance to ISO 7704.
These products are manufactured in a Pall facility under a Quality Management System and Environmental Management program approved by an accredited registering body to ISO 9001 and ISO 14001, respectively.

Irradiation Details

All MicroFunnel Filter Funnels are gamma irradiated with a maximum dosage of 30 kGy. A Quarterly Dose Audit on the MicroFunnel Filter Funnels product family is conducted to demonstrate continued effectiveness of the dose delivered as required in ANSI/AAMI/ISO 11137-2.

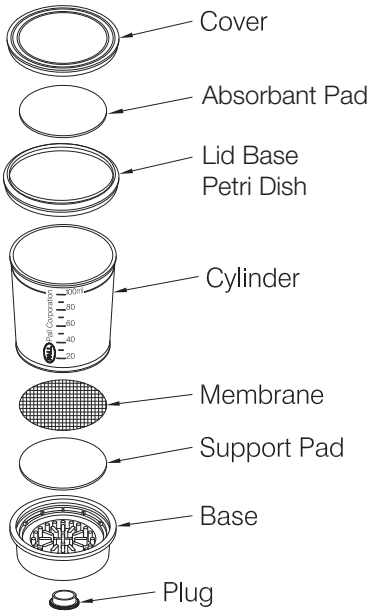
MicroFunnel Filter Funnel Component Diagrams

100 mL MicroFunnel standard filter funnel



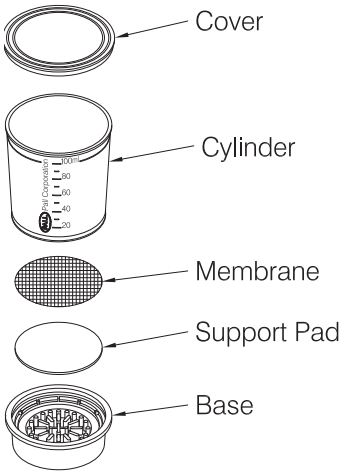
Part Number	Description
4800	0.45 µm GN-6, gridded
4801	0.45 µm GN-6, gridded (50 pk)
4804	0.45 µm GN-6, gridded (200 pk)
4803	0.2 µm Supor, gridded
4852	0.45 µm Supor, gridded
4806	0.2 µm Supor, no grid
4805	0.45 µm Metricel black, gridded

100 mL MicroFunnel standard filter funnels with lid kit



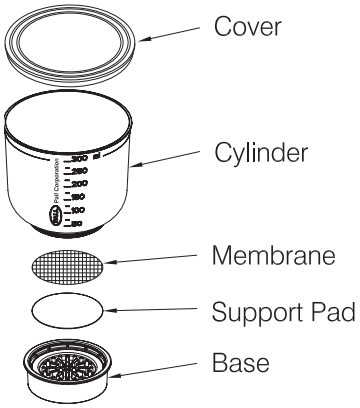
Part Number	Description
4810	0.45 µm GN-6, gridded

100 mL MicroFunnel ST filter funnels



Part Number	Description
4811	0.45 µm GN-6, gridded
4750	0.45 µm Supor, blank
4851	0.8 µm Supor, gridded

300 mL MicroFunnel standard and ST filter funnels

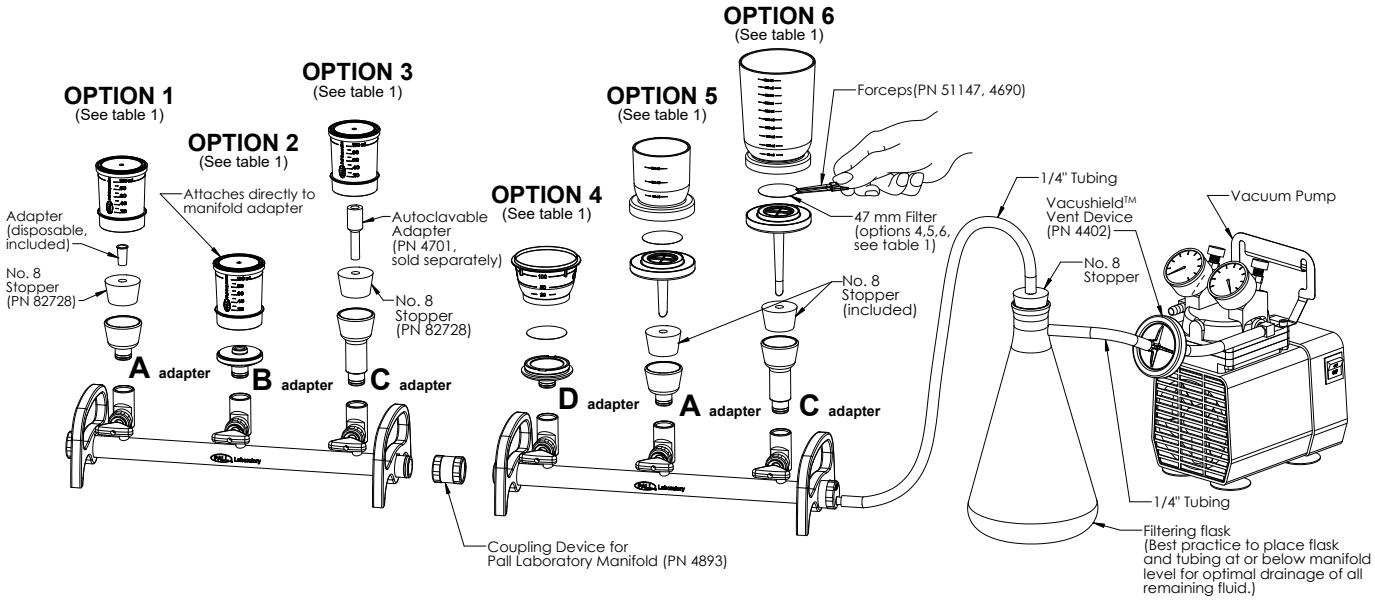


Part Number	Description
4815	0.45 µm GN-6, gridded
4812	0.45 µm GN-6, gridded*
4818	0.2 µm Supor, gridded
4853	0.2 µm Supor, gridded*
4751	0.45 µm Supor, no grid*
4819	0.8 µm Metricel black, gridded

*ST packaging style with second layer packaging

How-to-Use

Filter Funnels in Use



Adapter Key

A	Standard adapter	PN 4892
B	Microfunnel adapter	PN 4890
C	Elongated adapter	PN 4959
D	Sentino adapter	PN 4891

Option	Description	Compatible Funnel PNs	Compatible Membrane PNs	Other Accessories Needed
1	Microfunnel filter funnel for use with Laboratory manifold (PN4889) with standard adapter (PN 4892)	All Pall Microfunnel filter funnels (standard, ST, Plus, and MicroCheck®)	N/A	Stopper (PN 82728)
2	Microfunnel filter funnel for use with Laboratory manifold (PN4889) with Microfunnel adapter (PN 4890)	All Pall Microfunnel filter funnels (standard, ST, Plus, and MicroCheck)	N/A	N/A
3	Microfunnel filter funnel for use with Laboratory manifold (PN4889) with elongated adapter (PN 4959)	All Pall Microfunnel filter funnels (standard, ST, Plus, and MicroCheck)	N/A	Stopper (PN 82728), Adapter (PN 4701)
4	Sentino filter funnel for use with Laboratory manifold (PN4889) with Sentino adapter (PN 4891)	4871, 4871	All Pall 47 mm membranes (Supor, GN-6, Metricel Black)	N/A
5	Sentino magnetic filter funnel for use with Laboratory manifold (PN4889) with standard adapter (PN 4892)	4271, 4273, 4277	All Pall 47 mm membranes (Supor, GN-6, Metricel Black)	Stopper (PN 82728)
6	Magnetic filter funnel for use with Laboratory manifold (PN4889) with elongated adapter (PN 4959)	4241, 4238, 4243, 4247	All Pall 47 mm membranes (Supor, GN-6, Metricel Black)	N/A

Filter The Sample

1. Remove the funnel from the bag and place directly onto a Pall Laboratory manifold. If you do not have a Pall Laboratory aluminum manifold, insert funnel adapter into #8 stopper, then place stopper/adapter assembly into manifold or flask.

2. Remove funnel cover without touching the inner surface of the funnel, and pour sample into the funnel. Replace cover and turn on the vacuum to draw the entire sample through the filter.

3. Rinse the inside walls of the funnel with 60 mL of sterile buffer solution. Allow the vacuum to remain for 30 to 45 seconds, then turn off the vacuum.

Culture The Sample

Top Loading the Media

1. Remove the cover of the funnel and dispense the contents of an ampoule of culture medium onto the membrane surface. Use caution to avoid excessive splashing and subsequent loss of the media onto the inside of the funnel cylinder. Allow media to be drawn in by residual or momentary vacuum.

2. Separate the funnel from the base by removing funnel cover and gently squeezing near the top of the funnel cylinder. Place funnel cover directly onto the base to create a Petri dish.

3. Invert and incubate.

Transferring the Membrane

1. Separate the funnel from the base by removing funnel cover and gently squeezing near the top of the funnel cylinder.

2. Using aseptic technique, carefully remove the membrane filter from the base with smooth-tipped forceps.

3. Place the membrane filter on a prepared agar plate or Petri dish with absorbent pad soaked with broth.
4. Cover, invert, and incubate.

For MicroFunnel LP, Product No. 4810

1. Dispense the contents of an ampoule of culture medium onto the absorbent pad in the Petri dish lid kit, supplied only with MicroFunnel LP, PN 4810.

2. With Petri dish lid kit removed, filter the sample, rinse, then access the membrane by gently squeezing near the top of the funnel cylinder.

3. Using aseptic technique, carefully remove the membrane filter from the base with smooth-tipped forceps.
4. Place the membrane filter onto the broth-soaked absorbent pad in the Petri dish lid kit.
5. Cover, invert, and incubate.

Ordering Information

MicroFunnel Filter Funnels

Part Number	Description	Pkg
4800	100 mL, 0.45 µm GN-6 white gridded membrane individually bagged, gamma irradiated	50/pkg
4801	100 mL, 0.45 µm GN-6 white gridded membrane, bulk, gamma irradiated	50/pkg
4804	100 mL, 0.45 µm GN-6 white gridded membrane, individually bagged, gamma irradiated	200/pkg
4803	100 mL, 0.2 µm Supor white gridded membrane, individually bagged, gamma irradiated	50/pkg
4852	100 mL, 0.45 µm Supor white gridded membrane, individually bagged, gamma irradiated	50/pkg
4806	100 mL, 0.2 µm Supor white ungridded membrane, individually bagged, gamma irradiated	50/pkg
4805	100 mL, 0.45 µm Metricel black gridded membrane, individually bagged, gamma irradiated	50/pkg
4815	300 mL, 0.45 µm GN-6 white gridded membrane, individually bagged, gamma irradiated	20/pkg
4818	300 mL, 0.2 µm Supor white gridded membrane, individually bagged, gamma irradiated	20/pkg
4828	300 mL, 0.45 µm Supor white ungridded membrane, individually bagged, gamma irradiated	20/pkg
4819	300 mL, 0.8 µm Metricel black gridded membrane, individually bagged, gamma irradiated	20/pkg

MicroFunnel Filter Funnels with Lid Kit

Part Number	Description	Pkg
4810	0.45 µm, GN-6 white gridded membrane, individually bagged, gamma irradiated	50/pkg

MicroFunnel ST Disposable Filter Funnels

Part Number	Description	Pkg
4811*	100 mL, 0.45 µm GN-6 white gridded membrane, gamma irradiated	40/pkg
4851*	100 mL, 0.2 µm Supor white gridded membrane, gamma irradiated	40/pkg
4750*	100 mL, 0.45 µm Supor white ungridded membrane, gamma irradiated	40/pkg
4812**	300 mL, 0.45 µm GN-6 white gridded membrane, gamma irradiated	20/pkg
4853**	300 mL, 0.2 µm Supor white gridded membrane, gamma irradiated	20/pkg
4751**	300 mL, 0.45 µm Supor white ungridded membrane, gamma irradiated	20/pkg

**100 mL funnels (40 units total per box): 10 individually bagged funnels within an ST overpack bag, 4 overpack bags per box.*

***300 mL funnels (20 units total per box): 5 individually bagged funnels within an ST overpack bag, 4 overpack bags per box.*

Complementary Products

Part Number	Description	Pkg
4701	Autoclavable adapters for vacuum manifold when using rubber stopper	3/pkg
4713	Vacuum pump adapter	1/pkg

Microbiological Media

2 mL Plastic Ampoules

Part Number	Description	Pkg
4302	M-FC Broth with rosolic acid, Fecal Coliforms	50/pkg
4306	Pseudomonas Broth, *Pseudomonas sp.*	50/pkg
4307	Trypticase Soy Broth – USP, Total Bacteria	50/pkg
4352	HPC Media with TTC Indicator, Total Bacteria	50/pkg
68105	MF-Endo Broth, Total Coliforms	50/pkg
68106	M-TGE Broth, Total Bacteria	50/pkg
68107	M-Green YM Broth, yeast and mold	50/pkg
68108	KF-Streptococcal Broth, Fecal *Streptococcus*	50/pkg
68109	Orange Serum Broth, *Lactobacillus sp.*	50/pkg
68111	M-TGE with Indicator, Total Bacteria	50/pkg

2 mL Wide-mouth Glass Ampoules

Part Number	Description	Pkg
68100	M-FC Broth, Fecal Coliforms	20/pkg
68101	M-FC Broth with rosolic acid, Fecal Coliforms	20/pkg
68102	MF-Endo Broth, Total Coliforms	20/pkg

100 mL Bottle

Part Number	Description	Pkg
4313	MF-Endo Broth, Total Coliforms, Bottle RG	1/pkg

Filter Funnel Manifolds

Part Number	Description	Pkg
4889	3 Place Manifold including 3 valves, 1 end cap, 1 hose barb cap	1 set/pkg
4890	MicroFunnel filter funnel adapter	3/pkg
4891	Sentino funnel adapter	3/pkg
4892	Standard adapter	3/pkg
4959	Elongated standard adapter	3/pkg
4993	Coupling device	1/pkg
4878	Spare O-ring kit	1 set/pkg
4894	Manifold valves	1/pkg

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