

# Thermo Scientific Nalgene Reusable Bottle Top Filter Unit

Cat. Nos. DS0320-2533, -2545, -5033, -5045

## Warranty

Nalgene® Reusable Bottle Top Filter Units are guaranteed for one year from date of receipt by the purchaser.

### If filter holders are purchased in the U.S. or Canada:

Thermo Fisher Scientific will repair or replace, F.O.B. Rochester, New York, any product found, upon our inspection, to be defective in workmanship or material, or at its opinion, refund the purchase price, provided the product is returned, freight prepaid, to us with prior written approval.

Thermo Fisher Scientific liability with respect to the products is expressly limited to the remedies set forth above. Such remedies are exclusive, and Thermo Fisher Scientific shall, under no circumstances, be liable for incidental or consequential damages.

We warrant that the products are free of defects in material and workmanship and are merchantable within the meaning of the Uniform Commercial Code.

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### If filter holders are purchased outside the U.S. or Canada:

Thermo Fisher Scientific will repair or replace any product found, upon inspection, to be defective in workmanship or material, provided the product is returned to an Authorized Nalgene Labware Dealer.

This product is sold with no other warranty.

## Description

These instructions apply to the following products:

Nalgene Reusable Bottle Top Filter Holders, Cat. No. DS0320-2533, -2545, -5033, -5045.

All holders are designed for membrane filtration of liquids using vacuum. **The holders are suitable for applications requiring cold sterilization or clarification.**

The major holder components are made of polysulfone (PSF). This extremely durable, transparent plastic has excellent chemical resistance to bases and weak acids. It exhibits good resistance to strong acids, aliphatic alcohols and hydrocarbons and strong oxidizing agents. It has limited resistance to aldehydes, esters, aromatic and halogenated hydrocarbons, and ketones. (For additional chemical resistance data, consult the current Nalgene Labware Catalog, visit [www.thermoscientific.com](http://www.thermoscientific.com) or contact Technical Service.)

In addition, PSF is nontoxic and can be repeatedly autoclaved without harm to the components. It exhibits low protein-binding and has low levels of trace metals and organic leachables.

Nalgene filterware is for research use only, not for *in vitro* diagnosis or parenterals.

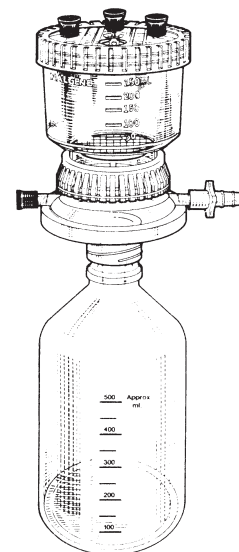
## Important!

The chemical resistance of the filter unit housing may differ from that of the membrane. Refer to chemical resistance data in the current Nalgene Labware Catalog.

Holder components are illustrated on the other side of these instructions.

All holders include an interchangeable upper section which accommodates a 47 mm membrane filter. This upper section consists of:

- A graduated upper chamber with screw-on cover
- Three cover ports\* for aseptic addition of sample or tubing connection for in-line rinsing, or venting
- Three thermoplastic elastomer (TPE) cover port caps
- An independent locking ring which protects the membrane filter from damage when the unit is assembled
- A one-piece sterilization support plate which provides maximum throughput and high flow rates. It is suitable for clarification or cold sterilization of culture media, reagents and solvents compatible with the holder and membrane materials



## The reusable bottle top filter holder also includes:

- Two TPE side-arm caps (identical to the cover port caps)
- A tubing adapter which can be plugged with cotton for sterile venting. This fits 1/4 in. to 5/16 in. (6.4 to 8.0 mm) I.D. vacuum tubing, and can be used to attach a side-arm to a vacuum line or a cover port to a pressure source

\*Cover ports and receiver side-arms accommodate male slip-outlet of appropriate syringe filter for bacterial air venting or 1/4 in. to 5/16 in. (6.4 to 8.0 mm) I.D. tubing. Tubing with over 1/4 in. I.D. requires tubing adapter.

## Replacements kits

Kit No. 71-0300-0001 (assorted parts for 250 mL upper chamber)

2 cover O-rings  
4 support plate O-rings

Kit No. 71-0300-0003 (sterilization plate)

2 sterilization support plates  
2 support plate O-rings

Kit No. 71-0300-0004 (assorted parts for 500 mL upper chamber)

2 cover O-rings  
4 support plate O-rings

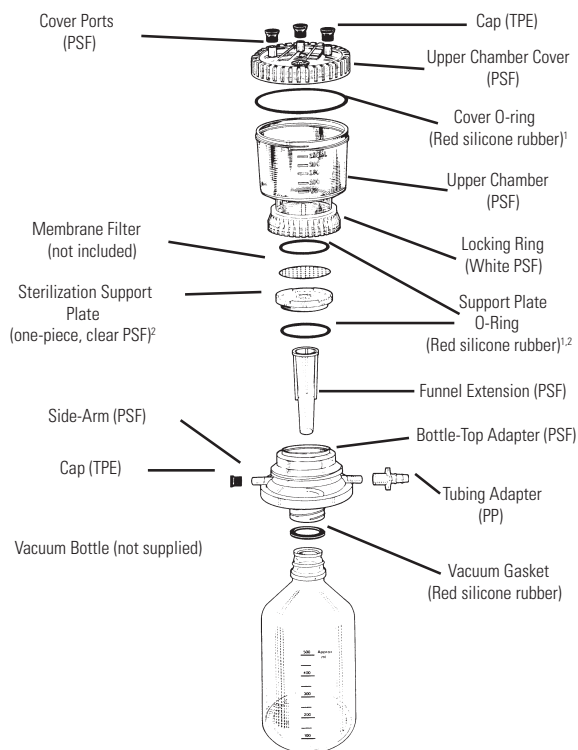
**For individual replacement parts, contact Technical Service at the numbers on the back of this insert**

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Contact us for Sales and Service  
[thermoscientific.com/contactus](http://thermoscientific.com/contactus)

\*Contact information contained within this document may be incorrect.

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1. Included in replacement kit nos. 71-0300-0001 (250 mL upper chamber) and 71-0300-0004 (500 mL upper chamber).

2. Included in replacement kit no. 71-0300-0003.

**Note:** All PSF parts are transparent, with a straw colored cast, except where indicated as white.

**Specifications:** Filter size: accommodate 47 mm diameter membrane filters. Nominal filter area: 13.30 cm<sup>2</sup>

**Assembly Note:** For sterile filtration, please refer first to “Sterilization of filter holders”.

1. Unscrew the locking ring and remove the upper chamber and cover.
2. Make sure that the two support plate O-rings are positioned correctly. One fits into a groove on the underside of the upper chamber, and the other fits onto the underside of the support plate. Leakage will result if O-rings are not seated properly.
3. Place a 47 mm diameter membrane filter on the support plate using smooth-tip forceps, such as Nalgene Cat. No. DS0399-0001/-0002.
4. Place the upper chamber on the bottle-top adapter. Hand tighten the locking ring.
5. Thread assembled unit on the bottle. Hand tighten.

## Vacuum Filtration

**Note:** For sterile filtration, please refer first to “Sterilization of filter holders”.

## Filter Holders

1. Slide 1/4 in. (6.3 mm.) vacuum tubing\* onto one of the bottle-top adapter side-arms. The opposite side-arm must be sealed with one of the TPE caps. Tighten locking ring firmly.

2. Remove the upper chamber cover. Make certain that the cover o-ring is properly positioned above the threads.
3. To minimize wrinkling of the membrane, apply the vacuum a few seconds before adding the sample.
4. Pour the sample into the upper chamber, or inject it by needle through one of the cover port caps.
5. Provide proper venting during filtration by doing **one** of the following:
  - Remove cap from port on upper chamber cover
  - or**
  - Remove the upper chamber cover
  - or**
  - Add a vent filter to one port

**Note:** Cover ports accommodate tubing for flushing procedures, such as rinsing during sterility testing, as well as the appropriate syringe filters for bacterial air venting.

**Caution:** Vacuum should be applied slowly to avoid tearing the membrane or accidentally tipping the bottle.

## Disassembly

- Unscrew locking ring and remove upper chamber.
- Carefully remove membrane filter with smooth-tip forceps; use sterile forceps if aseptic technique is required.
- To remove filtrate, use a pipet.
- To store sterile filtrate, remove assembly with membrane filter. Cover bottle with sterile closure.

## Cleaning

1. Disassemble the holder completely. Remove the O-rings and caps.
2. Soak all parts in a hot detergent solution. Avoid abrasive cleansers. If necessary, use a soft bristle brush or sponge to remove difficult residues. A pipe cleaner may be used to clean the inside of the cover ports and side-arms.
3. Rinse all parts thoroughly. Final rinse should be done with distilled or deionized water.
4. Air dry.
5. Store in a clean, dry place.

## Sterilization of filter holders

All holders can be sterilized with or without membrane filter in place.

- Clean and rinse all parts thoroughly. Close all cover ports with TPE caps.
- Apply a TPE cap to one receiver side-arm. Plug tubing adapter with cotton and attach adapter to the other side-arm.
- Loosen locking ring and upper chamber cover slightly. Wrap entire holder loosely in kraft paper, Tyvek® or aluminum foil.
- Autoclave for 20 minutes at 121°C/15 psig (1.03 bar)
- After unit has cooled, store in a clean, dry place.
- If holder is loaded with membrane filter, always retighten locking ring before using.

\*Tubing with over 1/4 in. and up to 5/16-in. (6.4 to 8.0 mm) I.D. requires the tubing adapter. Insert straight end of tubing adapter onto one of the receiver side-arms or cover ports. Slide tubing onto the tapered end of tubing adapter.

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